Report of Test Embankment Program

Kingston Fossil Plant
Harriman, Roane County, Tennessee

Stantec Consulting Services Inc.
One Team. Infinite Solutions
1409 North Forbes Road
Lexington, KY 40511-2050
Tel: (859) 422-3000 • Fax: (859) 422-3100
www.stantec.com

Prepared for:
TVA Kingston Fossil Ash Recovery Operations
Chattanooga, Tennessee

April 23, 2010

Stantec Consulting Services Inc.
1409 North Forbes Road
Lexington, KY 40511-2050
Tel: (859) 422-3000
Fax: (859) 422-3100

April 23, 2010 rpt_004_175669015

Mr. Michael T. Scott, PE
General Manager
TVA Kingston Fossil Ash Recovery Operations
1134 Swan Pond Road, KFP-1T-KST
Harriman, Tennessee 37748

Re: Report of Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Dear Mr. Scott:

Stantec Consulting Services Inc. (Stantec) has completed requested quality control services during construction of the Test Embankment located at the Kingston Fossil Plant in Harriman, Roane County, Tennessee. These services included construction and instrumentation monitoring, data evaluation, slope stability analyses and related project documentation in accordance with approved program documents.

The following report presents the program background and objectives, a summary of the pre-construction and construction activities along with conclusions and recommendations relative to the verification of geotechnical design parameters and construction methodology in support of planned Dredge Cell closure activities. Supporting appendices consist of the approved program documents and subsequent plan revisions, geotechnical instrumentation borings/installation details, daily field reports, weekly summary reports, meeting minutes, field/laboratory reference and conformance data, contractor submittals, slope stability analyses, as-built drawings and construction photographs.

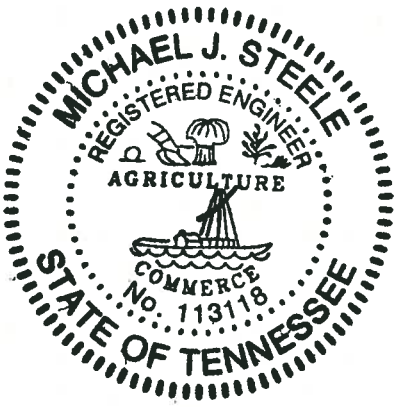
Stantec appreciates the opportunity to provide these services to Tennessee Valley Authority and we look forward to continue working with you toward successful completion of the project. If you have any questions or need additional information, please call.

Sincerely,

STANTEC CONSULTING SERVICES INC.

James W. Andrew, PE
Senior Project Engineer

Michael J. Steele, PE
Associate



Don W. Fuller II, PE
Principal

/cmw

Enclosures: 1

Report of Test Embankment Program

Kingston Fossil Plant
Harriman, Roane County, Tennessee

Prepared for:
TVA Kingston Fossil Ash Recovery Operations
Chattanooga, Tennessee

April 23, 2010

Report of Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Table of Contents

Section **Page No.**

1. Background 1

2. Objectives 1
2.1. Design Parameter Verification 2
2.2. Construction Methodology Verification 2

3. Pre-Construction Activities 2
3.1. Program Development 2
3.2. Geotechnical Instrumentation 2
3.2.1. Piezometers 3
3.2.2. Slope Inclinometers 3
3.2.3. Settlement Plates 3
3.2.4. Monitoring Criteria 3

4. Construction Activities 4
4.1. Subgrade Preparation 4
4.2. Working Platform Construction 4
4.3. Embankment Construction 4
4.4. Construction and Instrumentation Monitoring 5

5. Documentation 6

6. Regulatory Progress Reports 6

7. Conclusions and Recommendations 6

List of Appendixes

Appendix A Test Embankment Program Documents

Appendix B Geotechnical Instrumentation Borings/Installation Details

Appendix C CPT Data

Appendix D Daily Construction Field Reports

Appendix E Daily Instrumentation Field Reports

Appendix F Weekly Summary Reports

Appendix G Summary Instrumentation Data Report

Appendix H Meeting Minutes

Appendix I Material Reference / Conformance Data

Table of Contents
(Continued)

Appendix J Contractor Submittals
Appendix K Stability Analyses
Appendix L As-Built Drawings
Appendix M Photographs

Report of Test Embankment Program

Kingston Fossil Plant
Harriman, Roane County, Tennessee

1. Background

The conditions present within the Dredge Cell limits include hydraulically placed ash deposits, material displaced during the December 22, 2008 incident, and relatively unaffected relics. As part of the future decision process that will be conducted under the Comprehensive Environment Response, Compensation, and Liability Act (CERCLA) as a non-time critical ash removal action, a range of facility closure alternatives are being evaluated. To support a fair evaluation of developing the Dredge Cell as a dry ash disposal facility, sufficient data are required to reduce the number of design assumptions. A relatively large-scale test program was proposed on June 3, 2009 to resemble potentially constructed (or closed) embankment configurations to observe the response within various foundation layers under instrumented conditions. Construction commenced in July 2009 and proceeded in accordance with the approved program documents until completion in April 2010.

Work conducted under this test embankment program was coordinated with the Tennessee Department of Environment and Conservation (TDEC) – Division of Solid Waste Management and the U.S. Environmental Protection Agency (EPA). Designated TDEC and EPA personnel served as the regulatory contacts.

Stantec Consulting Services Inc. (Stantec) personnel served on the Quality Control (QC) Team under the direct supervision of the QC Manager (James W. Andrew, PE). The QC Team was responsible for construction monitoring and instrumentation, testing and related project documentation. The QC Manager determined appropriate test standards and methods for designated field observations and/or laboratory testing and was responsible for data review to assess conformance with program requirements. Additional engineering staff supported the QC Manager with routine data evaluation and slope stability analyses.

Tennessee Valley Authority (TVA) and/or its Designee (Jacobs Engineering Group, Inc. (Jacobs)) were responsible for overall management of construction activities to include but not limited to contracting and administration during the program. Jacobs also served as the Construction Manager and was responsible for construction activities related to the character and sequence of work, coordination and scheduling.

2. Objectives

The Dredge Cell closure engineering group knowledgebase includes significant experience in geotechnical characterization of hydraulically placed ash deposits similar to those present on-site. Conceptual models of ash and other foundation materials identified as part of AECOM's Root Cause Analysis (RCA) contain numerous assumptions relative to the structural integrity in response to embankment loading. The Test Embankment program was intended to verify both geotechnical design parameters and construction methodology.

2.1. Design Parameter Verification

The Test Embankment program was structured to verify key parameters that will facilitate design of Dredge Cell closure in support of the CERCLA decision process. Geotechnical instrumentation was monitored to observe the response of various foundation layers under embankment loading. These results will be used to provide direct correlations for future design efforts to foster stakeholder confidence that the primary failure mechanisms will be addressed. Targeted design parameters included:

- settlement in response to loading;
- horizontal displacement parameters;
- short-term and long-term strength projections;
- pore pressure dissipation characteristics; and
- subsurface drainage methods.

2.2. Construction Methodology Verification

The variable consistency of the recovered ash material and subgrade moisture conditions present within the Test Embankment construction limits were addressed with specific handling, processing and construction methods. The program verified conceptual methods for foundation mitigation, material handling and embankment construction.

3. Pre-Construction Activities

3.1. Program Development

Stantec initiated program development requirements in early 2009 with an evaluation of the controlling geometry (with respect to slope stability) for a range of facility closure alternatives that were being considered at that time. The controlling concept was defined as a dry ash embankment constructed with maximum 4(H):1(V) outslopes to a peak elevation of about 805 feet, which served as the basis for the Test Embankment program. Conventional slope stability calculations were conducted with the results used to prepare embankment grading, geotechnical instrumentation/monitoring and construction QC plans. A copy of the approved program documents dated June 3, 2009 and revised instrumentation monitoring criteria outlined in Section 11.4 of the construction QC plan and dated January 6, 2010 are provided in Appendix A.

3.2. Geotechnical Instrumentation

Geotechnical instrumentation consisting of piezometers, slope inclinometers and settlement plates were installed prior to and during embankment construction in accordance with the approved program documents to meet established construction QC objectives. Details related to these installations are provided in Appendix B.

3.2.1. Piezometers

Vibrating wire, multi-level piezometers were installed at selected locations across the Test Embankment program limits and were monitored to characterize the fluctuations in pore water pressures within ash and native foundation soil layers. These piezometers were installed in clusters of four, with two installed within the foundation ash layer and one each within the clay and silt/sand layers. A total of eight piezometer clusters (PZ-1 through 8) were installed prior to embankment construction and four (PZ-9 and 11 through 13) were installed after construction had commenced. Baseline data was collected prior to embankment loading, with subsequent measurements scheduled daily during embankment filling activities unless otherwise directed by the QC Manager.

Two of the installed piezometer clusters were automated to collect hourly pore water pressure measurements, as well as barometric pressure values used for a correction factor while reducing the data. These piezometers were connected to a data logger that uploaded data via air card technology to a password accessible website, which facilitated review of real-time pore water pressure data.

3.2.2. Slope Inclinometers

Slope inclinometers were installed at selected locations across the Test Embankment program limits and were monitored to characterize horizontal displacements. A total of seven inclinometers (SI-1 through 5, 9 and 12) were installed prior to embankment construction. Two additional inclinometers (SI-6 and 7) were installed after completion of the first embankment tier. Baseline data was collected prior to embankment loading, with subsequent measurements scheduled daily unless otherwise directed by the QC Manager.

3.2.3. Settlement Plates

Settlement plates were installed at selected locations across the Test Embankment program limits and were monitored to characterize vertical displacements. A total of four settlement plates (SP-1 through 4) were installed prior to embankment construction, with subsequent measurements as directed by the QC Manager.

3.2.4. Monitoring Criteria

The instrumentation monitoring plan considered both pore water pressure and displacement ratios. The pore water pressure ratio is defined as the change in pore water pressure, measured by the piezometers, divided by the change in fill pressure, estimated from surveyed cross sections routinely scheduled during embankment filling activities. The displacement ratio is defined as the maximum horizontal displacement, measured by the slope inclinometers, divided by the vertical displacement, measured by the settlement plates. Threshold limits outlined in Section 11.4 of the construction QC plan (initially proposed on June 3, 2009 and subsequently revised on January 6, 2010) were used as monitoring criteria for the program.

4. Construction Activities

The completed Test Embankment has tiers at about mean elevation 777, elevation 794 and elevation 801 feet. These tiers are sloped to drain at approximate one percent so elevations vary. There are two outslope benches with minimum 30-foot widths. The side slope of each tier is about 3H:1V; thus, the overall slope is roughly 5.2H:1V. The final crest elevation of the test embankment is about 802 feet. Details related to individual construction activities are provided below.

4.1. Subgrade Preparation

Prior to construction of the working platform, the existing subgrade across portions of the approved Test Embankment footprint was graded to provide a relatively level surface with positive drainage from south to north. Subgrade preparation primarily consisted of pushing ash material with dozers from the southern perimeter of the footprint toward the north. Two drainage swales were cut across the site to facilitate dewatering of the saturated ash subgrade but were subsequently filled with ash prior to working platform construction. Prepared ash subgrade surfaces varied from firm within southern portions of the site along the relics to very soft toward the north, where material had been pushed out with the dozers.

4.2. Working Platform Construction

The primary function of the working platform was to provide a stable base to support subsequent embankment construction. The constructed components of the working platform consisted of geogrid placed across prepared ash subgrade surfaces overlain by roughly 12 inches to 18 inches of open graded crushed aggregate (maximum 1.5-inch size particles), and about three to six inches of coarse sand. A second layer of geogrid and additional aggregate was placed at the discretion of the QC manager where poor bearing conditions were observed following initial construction activities.

Prior to subsequent embankment construction, completed working platform surfaces were subjected to proofrolls using appropriate heavy equipment as directed by the QC Manager. In most cases, results of these proofrolls indicated acceptable bearing conditions suitable to support subsequent filling activities. In other cases, the subject area was improved with additional geogrid and aggregate. Subsequent proofrolls of reworked areas yielded passing results.

4.3. Embankment Construction

Test Embankment construction methodology largely consisted of conventional heavy equipment excavation, hauling and placement/compaction techniques. Fill material included on-site ash materials recovered from ongoing time-critical removal operations and excavated materials from the relics. Due to established moisture objectives suitable quantities of ash for immediate placement within the Test Embankment were limited. Designated ash materials typically ranged from near optimum moisture content to over five percent above optimum (below saturation values); thus, mechanical processes to include disc harrowing, windrowing and aeration were employed. As construction continued through the fall/winter

months, precipitation became a severe limiting factor to these processes and other techniques were evaluated. One such technique was lime modification, which consisted of mixing lime powder or tablets with wet ash. This technique proved successful and was used often.

The sequence of embankment filling generally commenced at the lowest section (in elevation) within a subject footprint and proceeded upward in maximum 24-inch thick loose lifts in an effort to maintain positive drainage. Ash fill was spread in relatively uniform lifts to reduce the potential for point loads or uneven surcharges, which could trigger localized slope instability.

4.4. Construction and Instrumentation Monitoring

The QC Team observed and documented primary construction activities in accordance with the approved program documents. Data collected through this process were reviewed by the QC Manager to assess conformance with the program requirements.

Embankment compaction and moisture content were documented through routine nuclear field density testing. Random samples of field tested material were collected during construction and subjected to laboratory density and moisture testing in order to calibrate the nuclear density gauge. Installed geotechnical instrumentation was monitored on a regular basis at the frequencies established by the QC Manager. Data obtained from these instruments were reduced, plotted, reviewed and posted weekly to a password accessible website.

A series of cone penetration test borings were performed at five discrete locations (CPT-1 through 5) across three defined stages of embankment construction including both prior to and completion of embankment filling activities. The testing required the use of an instrumented rod with a cone mounted tip that was pushed into the foundation layers to measure the resulting tip resistance, sleeve friction and pore pressure. It was the early intuition of the QC Team that foundation ash layers would not consolidate much under a static overburden load. Shear (or dynamic) stresses are typically required to move the ash particles into a denser configuration. In general, the CPT borings support this assumption by yielding fairly comparable results at subject locations across the various stages of construction, with minor differences likely attributed to material variability.

As part of the established monitoring plan, embankment filling activities were suspended in fall 2009 and again in winter 2010. On October 30, 2009, filling activities across the entire Test Embankment footprint were temporarily halted due to measured pore water pressure ratios above pre-selected thresholds. At that time, Stantec completed an engineering evaluation of the instrument readings and analyzed the stability of the embankment. These analyses, documented in our report dated November 9, 2009, indicated that adequate factors of safety existed for slope stability. The high pore water pressures measured at that time appeared to have been driven by other activities and drainage from adjacent areas of the site. Filling activities were allowed to resume on November 3, 2009, with continued monitoring and data evaluation.

Filling activities were suspended again along the western half of the Test Embankment on February 2, 2010, when factors of safety for undrained slope stability were determined to be inadequate (less than 1.3). This evaluation was based on advanced, three-stage stability analyses to assess the potential of an undrained failure. Erosion of ash surfaces adjacent to

the Test Embankment construction limits likely attributed to the accumulation of measurable shearing strains across the depth of the foundation ash layers, which is consistent with the lower safety factors indicated by the stability analyses. To address and improve slope stability, Stantec recommended constructing a berm around the western half of the Test Embankment. The proposed berm averaged about five feet in thickness and was about 50-feet wide with established outslopes no steeper than 5(H):1(V). Stantec further recommended that all filling activities be restricted to the eastern half of the Test Embankment until the berm was constructed, which was completed on March 18, 2010. Filling activities across the western half of the Test Embankment resumed on March 19, 2010, with continued monitoring and data evaluation.

5. Documentation

Program documentation consisting of daily field reports, weekly summary reports, meeting minutes, field/laboratory reference and conformance data, contractor submittals, slope stability analyses, as-built drawings and construction photographs are provided in Appendices C through M. As stated above, the QC Manager reviewed documentation as part of the monitoring program to assess conformance with established requirements.

It is noted that the as-built drawings illustrate Test Embankment configurations for various stages of construction and were based on TVA field and/or LiDAR aerial mapping surveys provided by Tuck Mapping Solutions, Inc. Included in the drawing set are initial site conditions, base of working platform, top of working platform, multiple interim embankment configurations and final grading. A project specific grid provided by TVA was superimposed on each of the drawings.

6. Regulatory Progress Reports

In addition to routine site discussions and other networking opportunities, Stantec formally presented program status to the regulatory contacts twice during Test Embankment construction. The first of these presentations occurred on September 21, 2009 at the Nashville, Tennessee TDEC office. At that time, the embankment was roughly 25 percent complete, with an estimated 75,000 cubic yards of ash material placed.

The second presentation occurred on March 23, 2010 at the Kingston Fossil Plant. The test embankment was nearly completed at that point, with over 250,000 cubic yards of ash material placed. Program results and preliminary conclusions/recommendations relative to future embankment design and construction activities across the site were presented.

7. Conclusions and Recommendations

The Test Embankment is considered a valuable field demonstration program. It verified the methodologies of constructing an embankment over challenging foundation conditions located across portions of the Dredge Cell. It also demonstrated the importance of using geotechnical instrumentation and monitoring to avoid potential slope failures. The confidence and experience gained from the program will serve as the basis for future embankment design and construction activities across the site.

As stated above, the program was intended to verify both geotechnical design parameters and construction methodology. Conclusions and recommendations relative to these objectives are provided below.

Design Parameter Verification

- Settlement plates installed across the working platform indicated vertical displacements (under full embankment loading) ranging from about two to five inches. It is noted that earlier results indicate rather significant variations in the data with nominal embankment loads. This is likely attributed to limitations with conducting precise field measurements and possibly heaving due to adjacent filling activities. As the embankment height increased, the measured data exhibited a clear, expected trend and relatively uniform settlements were observed.

- Horizontal displacements are generally small, with the maximum movement (about 0.6 inches) measured near the embankment toe (SI-3). Displacements appear to correlate with embankment filling activities. The results do not indicate the development of distinct failure planes, consistent with expectations for shearing within a compressive, granular soil material. The maximum shear strain appears to occur within the ash foundation layer and is estimated to be about 0.1 percent.

- Evaluation of consolidation behavior is an integral part of projecting both short-term and long-term strengths. The installed geotechnical instrumentation provides quantitative foundation performance data due to embankment loading. In situ pore water pressure distributions may be developed from available piezometer data and vertical consolidation stress profiles calculated for use in estimating undrained (short-term) strengths.

  Excessive undrained shear deformations and potential slope failures may be identified by evaluating measured pore water pressures and deformations across an embankment construction period. The measured pore water pressures used in combination with settlement data provide some insight to the consolidation process. While it is suspected that only a relatively small degree of consolidation within foundation ash was realized due to embankment loading (based on little to no change in void ratio with depth), the undrained shear strength would still increase under embankment loads, due to the higher effective stress.

- The pore water pressure ratio is defined as the change in pore water pressure divided by the change in fill pressure. A number of factors (including fluctuations in the groundwater table) make it difficult to develop a distinct correlation between the measured pore water pressure and embankment loading. Available data trends suggest that it takes a minimum of two weeks to dissipate pore water pressures; however, future site monitoring programs should focus on continued instrumentation readings across subject areas to develop appropriate protocols for specific applications.

- In addition to providing a stable base to support subsequent embankment construction and promoting relatively uniform settlement the program also demonstrated the effectiveness of the working platform to collect seepage. Seepage from the working platform was observed by the QC Team on a daily basis during the construction period. The source of this seepage was attributed to infiltration through constructed embankment layers and exfiltration from the ash subgrade due to loading.

  Future site design plans should include a working platform to facilitate seepage conveyance from both infiltration and exfiltration to a defined discharge point. Since exfiltration is an issue, a bottom filter layer is recommended in addition to a top filter. Relatively uniform settlement characteristics realized for the program should facilitate functional design of piping systems resulting in positive flows.

Construction Methodology Verification

- Ash fill material with moisture content well above optimum was found to be unworkable. Mechanical processes to include disc the harrowing, windrowing and aeration were found to be generally effective during the warm, dry summer months. As construction continues through the cool, wet fall/winter months, precipitation will become a severe limiting factor to these processes and other techniques must be considered. One such technique used for the Test Embankment was lime modification, which consisted of mixing lime powder or tablets with wet ash. This technique proved successful and was used often.

- Typically, loose lift thicknesses varied between eight and 24 inches. Ash fill material at or near optimum moisture was placed in maximum 12-inch thick loose lifts and a smooth drum roller (without vibration) was used to provide compaction. The roller was also used to seal exposed ash surfaces to reduce the potential for erosion during significant precipitation events. When the moisture content of the ash fill was above optimum, the material could not be bladed out effectively in lifts less than 12 inches thick. Tracking over the wet material with a dozer was required to bring the moisture to the surface. Several passes were typically required. After tracking the moisture to the surface, equipment was kept off these areas, and the moisture was permitted to evaporate; or was allowed to runoff provided adequate surface drainage existed. Placing ash fill at or near optimum moisture content proved to be most efficient. This material could be spread in relatively thin lifts, compacted with three or four passes of the smooth drum roller, tested for compaction, and prepared for subsequent lifts in a relatively short period of time.

- During embankment construction, filling rates ranged from less than one foot to about three feet per day. These rates varied depending upon availability of suitable ash material, equipment resources, dimensions of the subject footprint, prevailing weather conditions, and foundation responses due to embankment loading. An average daily filling rate of about 3,000 cubic yards per day was estimated based on available load counts provided by the contractor.

- Based on available data, initial filling rates for future site embankment construction activities should be limited to about two feet per day across subject footprints. It is noted that these should be evaluated based on instrumentation monitoring and adjusted accordingly. With a planned daily production rate of about 2,500 cubic yards per day during non-time critical ash removal operations and the initial maximum daily fill limit of two feet, a minimum one-acre footprint will be required to support filling activities. It is noted that when ash material above optimum is handled, a larger surface area will be required for processing activities in combination with embankment construction.

- Erosion rills and surface sloughing occurred along constructed embankment outslopes primarily due to surface water runoff. Various measures were employed to control erosion, including temporary flumes lined with geotextile fabric and check dams, with limited success. Semi-permanent runoff flumes, with collection basins and piping, were found to be the most effective. Ash fills are highly susceptible to erosion and require constant maintenance. Exposed surfaces should be maintained with sufficient grade to allow surface water to flow, but not at high velocities. Program experience indicates a two percent slope is optimum.

In summary, successful completion of the Test Embankment program is primarily attributed to the construction of a working platform, the installation and monitoring of geotechnical instrumentation along with subsequent data evaluation, the development (and refinement) of ash fill placement and compaction methodology including moisture conditioning techniques as detailed in the approved program documents, embankment geometry and surface runoff provisions, and erosion management within adjacent areas. It is recommended that future embankment design and construction activities across the site consider these factors. It is noted that detailed engineering planning and construction QC control are essential for the stable construction of embankments across any type of subgrade conditions.

Appendix A

Test Embankment Program Documents

June 3, 2009 Documents

Stantec

Test Embankment Program

Kingston Fossil Plant
Harriman, Roane County, Tennessee

Stantec Consulting Services Inc
One Team. Infinite Solutions
1409 North Forbes Road
Lexington KY 40511-2050
Tel: (859) 422-3000 • Fax: (859) 422-3100
www.stantec.com

Prepared for
Tennessee Valley Authority
Chattanooga, Tennessee

June 3, 2009

Stantec Consulting Services Inc.
1409 North Forbes Road
Lexington KY 40511-2050
Tel: (859) 422-3000
Fax: (859) 422-3100

June 3, 2009 let_001_kif_175669015

Ms. Julie Pfeffer
TVA Kingston Fossil Ash Recovery Operations
714 Swan Pond Road, Trailer Park
KFP 1A-KST
Harriman, Tennessee 37748

Re: Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Dear Ms. Pfeffer:

Stantec Consulting Services Inc. (Stantec) has developed a revised test embankment program for the above referenced facility. This version addresses the May 19, 2009 Tennessee Department of Environmental and Conservation (TDEC) – Division of Solid Waste Management review comments to the initial program documents dated April 22, 2009. Responses to the TDEC comments are provided herein.

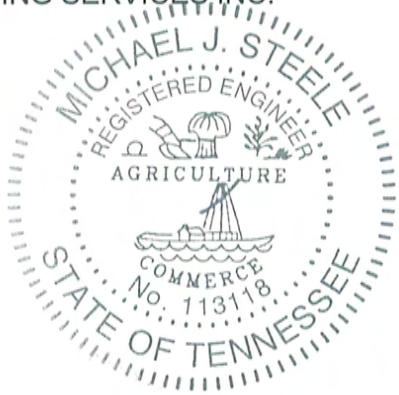
The test embankment program includes two primary areas (test embankment and relic placement areas) as defined herein. Testing of the embankment loading methodology will include instrumentation installation and on-site quality control activities. Instrumentation will consist of piezometers, slope inclinometers and settlement plates to measure pore water pressure, lateral displacement and vertical displacement, respectively, in response to embankment loading. Information collected from the instrumentation, and the subsequent data analysis, will be combined with the visual field observations to evaluate the embankment operations performance.

The following test embankment program includes an introduction, drawings, construction quality control plan, summary of stability analysis and responses to AECOM peer review comments.

Stantec appreciates the opportunity to provide these services and we look forward to continue working with you toward successful completion of the project. If you have any questions or need additional information, please call.

Sincerely,

STANTEC CONSULTING SERVICES INC.



Michael J. Steele, PE
Associate

Don W. Fuller II, PE
Principal

/rdr

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Responses to Review Comments
June 3, 2009

Comments received via e-mail from Glen Pugh with the Tennessee Department of Environment and Conservation (TDEC) – Division of Solid Waste Management dated May 19, 2009. Initial program documents were dated April 22, 2009.

Comment No. 1: The scale of the test makes it appear as a stabilization project. If that is one of the objectives, it is best included in the closure plan.

Response No. 1: Stabilization is not a primary goal, but is a side benefit of test embankments. A relatively large-scale program is proposed to address design and construction challenges associated with potential embankment loads across hydraulically placed ash and native soil foundation materials to include those identified in the Root Cause Analysis as they relate to structural integrity. The program is also intended to assess the effects of loading along portions of Dike D, which may serve as the embankment toe within eastern portions of the site.

It is noted that the revised layout reduces the designated test embankment area capacity by roughly 45 percent (based on digital terrain models), while still maintaining stated program objectives.

Comment No. 2: TDEC prefers that the ash already in the failed landfill be used to construct the test fill.

Response No. 2: Based on recent concerns expressed by TDEC, the test embankment program now includes grading portions of the dredge cell relics located south of the proposed test embankment area. Spoils generated from this effort will be placed within a designated area (referred to herein as the relic placement area) located along portions of Dike D in support of the program. Remaining embankment materials will consist of displaced ash materials obtained from outside the dredge cell limits, preferably from the area east of Dike 2. It is noted that removal of materials from failed portions of the dredge cell is not conducive to facility drainage and would likely impact dredged material processing efforts due to additional moisture conditioning (or dewatering) requirements and impede the overall recovery initiative. Preliminary volume estimates indicate that sufficient quantities of relatively dry displaced ash (situated above normal pool) exist to support the test embankment program and are expected to be suitable for immediate use with little to no moisture conditioning. However, if the material is not available in a timely fashion, the next priority will be to

use material from the top of the relic area. Finally, under the direction of the EPA OSC, material could be brought in from the ash recovery and processing area if needed to meet the objectives of the time-critical removal action.

Comment No. 3: Off site waste material is not acceptable for use.

Response No. 3: Concur. Ash materials from other plants will not be used in the test embankment program. Working platform requirements allow for other materials, which are currently proposed as aggregate and geogrid.

Comment No. 4: Bottom ash already on site may be used for platform (working base) construction.

Response No. 4: See response to Comment No. 3.

Comment No. 5: With concurrence from the EPA on scene coordinator that time critical ash recovery efforts will be delayed without it, TVA may request placement of recovered ash into the test fill (such a request would obviously happen at a latter date..

Response No. 5: Discussions with the EPA OSC have indicated acceptance of this concept. Under the direction of the OSC, ash from the processing area could be used in the test. Please see response to Comment No. 2 for the other material that will be used in the test.

Test Embankment Program

Kingston Fossil Plant
Harriman, Roane County, Tennessee

Table of Contents

Section		Page No.
1.	Background	1
2.	Objectives	1
3.	Methodology	2
4.	Work Sequence and Schedule	3

List of Attachments

Attachment

Attachment 1 Drawings

Attachment 2 Construction Quality Control Plan

Attachment 3 Summary of Stability Analysis

Attachment 4 AECOM Peer Review Comments

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

1. Background

The conditions present within the dredge cell limits include hydraulically placed ash deposits, material displaced during the December 22, 2008 incident, and relatively unaffected relics. As part of the future decision process that will be conducted under the Comprehensive Environment Response, Compensation, and Liability Act (CERCLA) as a non-time critical removal action, a range of dredge cell closure alternatives must be evaluated. Although this range will be developed in the future, it is anticipated to vary from complete removal of above grade ash materials and perimeter dikes to developing the area as an on-site dry ash disposal facility. The reason to develop a range is to allow an evaluation of the alternatives against various criteria and then present that evaluation to responsible stakeholders, including appropriate regulatory agencies and the public so their input is considered in the decision. Alternatives must be protective of human health and the environment and meet applicable regulatory requirements unless a waiver can be granted.

To support a fair evaluation of developing the dredge cell as a dry ash disposal facility, sufficient data are required to reduce the number of design assumptions. A relatively large-scale program is proposed to resemble potentially constructed (or closed) embankment configurations to observe the response within various foundation layers and portions of Dike D under instrumented test conditions. The test embankment program is intended to represent the initial data collection effort required to support the final closure decision. Identifying other data collection efforts for alternative evaluations will occur in early summer 2009 and will be documented in a separate work plan.

Ash material brought into the dredge cell as part of this test will be removed upon completion of the test unless an alternate work plan or decision document supersedes this work plan.

2. Objectives

The closure plan engineering group knowledgebase includes significant experience in geotechnical characterization of hydraulically placed ash deposits similar to those present on-site. Conceptual models of ash and other foundation materials identified as part of the Root Cause Analysis (RCA) along with portions of Dike D contain numerous assumptions relative to structural integrity in response to embankment loading. The test embankment program is intended to verify both geotechnical design parameters and construction methodology.

Design Parameter Verification. The test embankment program is structured to provide key design parameters that will facilitate conceptual design of dredge cell closure in support of the CERCLA decision process. Geotechnical instrumentation will be used to observe the response of various foundation layers and portions of Dike D under embankment loading.

These results will also be used to provide direct correlations in future design efforts, if pursued, to foster stakeholder confidence that the primary failure mechanisms will be addressed. Targeted design parameters include:

- Settlement in response to loading;
- Horizontal (lateral displacement) parameters;
- Short-term and long-term strength projections;
- Pore pressure dissipation characteristics; and
- Subsurface drainage methods.

Construction Methodology Verification. The variable consistency and moisture conditions present within the foundation design limits will need to be addressed with specific handling, processing and construction methods. The test embankment program will verify current conceptual methods for both foundation mitigation and embankment construction.

3. Methodology

The primary ash material recovery and closure design condition is that embankment construction be performed using dry handling methods which specifically comply with structural fill protocols to be developed by the closure plan engineering group. Construction methods will largely consist of conventional heavy equipment excavation, hauling and placement methods. Subgrade stabilization will include trial studies for various methods based on anticipated conditions with modifications developed in association with the work. Material processing such as drying, is anticipated to be addressed through either conventional means to accelerate draining and evaporation or material admixtures.

The program is structured to address design challenges associated with foundation ash and native soil layers to include those identified in the RCA as they relate to structural integrity. The principal challenges associated with these foundation conditions will be addressed through varying embankment test scenarios within the cell.

The test embankment program will include two primary operational areas, one of which is structured to address the varying foundation conditions. These areas (referred to herein as the test embankment and relic placement areas) are located north and east of the remaining dredge cell relic and along portions of Dike D as shown on Sheet 1 in Attachment 1.

Embankment load testing methodology will include the following primary elements as outlined herein:

- Instrumentation;
- On-site quality control documentation;
- Construction planning; and
- Engineered earthwork solutions.

Monitoring Plan. Load test operations will be performance-based conducted under a structured monitoring plan. The primary monitoring guidance protocols are established in the Construction Quality Control Plan provided as Attachment 2. Overall program monitoring input will include documented visual observations and field data sources followed by engineering evaluation of the results obtained from the program.

Geotechnical instrumentation will include the following:

- Settlement Plates;
- Slope Inclinometers; and
- Piezometers.

Settlement plates will be installed at the base of the embankment to provide data sources related to vertical consolidation of the foundation materials with time in response to loading. Slope inclinometers will be installed to provide data to characterize lateral movement of the embankment and foundation materials. Piezometers will be installed at strategic locations to monitor variations in pore water pressure in response to loading. Piezometer monitoring zones will include the embankment base and multiple zones within the ash and native soil foundation materials. Proposed instrumentation locations and typical details are presented as Sheets 2 through 7 in Attachment 1.

Based on recent concerns expressed by the Tennessee Department of Environment and Conservation (TDEC) – Division of Solid Waste Management, the test embankment program now includes grading portions of the dredge cell relics located south of the proposed test embankment area. Spoils generated from this effort will be placed within the designated relic placement area located along portions of Dike D in support of the program. The objective of relic material placement here is to provide necessary drainage around the test area. The relic placement area is not part of the test and no instrumentation or monitoring will specifically occur. Test embankment materials in the test embankment area will preferentially consist of displaced ash materials obtained from outside the dredge cell limits, primarily from the area east of Dike 2. It is noted that removal of materials from failed portions of the dredge cell is not conducive to facility drainage and would likely impact dredged material processing efforts due to additional moisture conditioning (or dewatering) requirements and impede the overall recovery initiative. Preliminary volume estimates indicate that sufficient quantities of relatively dry displaced ash (situated above normal pool) exist east of Dike 2 to support the test embankment program and are expected to be suitable for immediate use with little to no moisture conditioning. If sufficient material east of Dike 2 is not available in a timely manner, the next priority will be to use more of the dredge cell relics located south of the test. Finally, if deemed necessary by the Environmental Protection Agency's On-Scene Coordinator, processed recovered ash from the processing area may be used to alleviate any short-term storage limitations in that area.

4. Work Sequence and Schedule

The work sequence will include the following five major elements for the load test areas:

1) Instrumentation

2) Working platform and base stabilization

3) Material source characterization, processing and placement plans

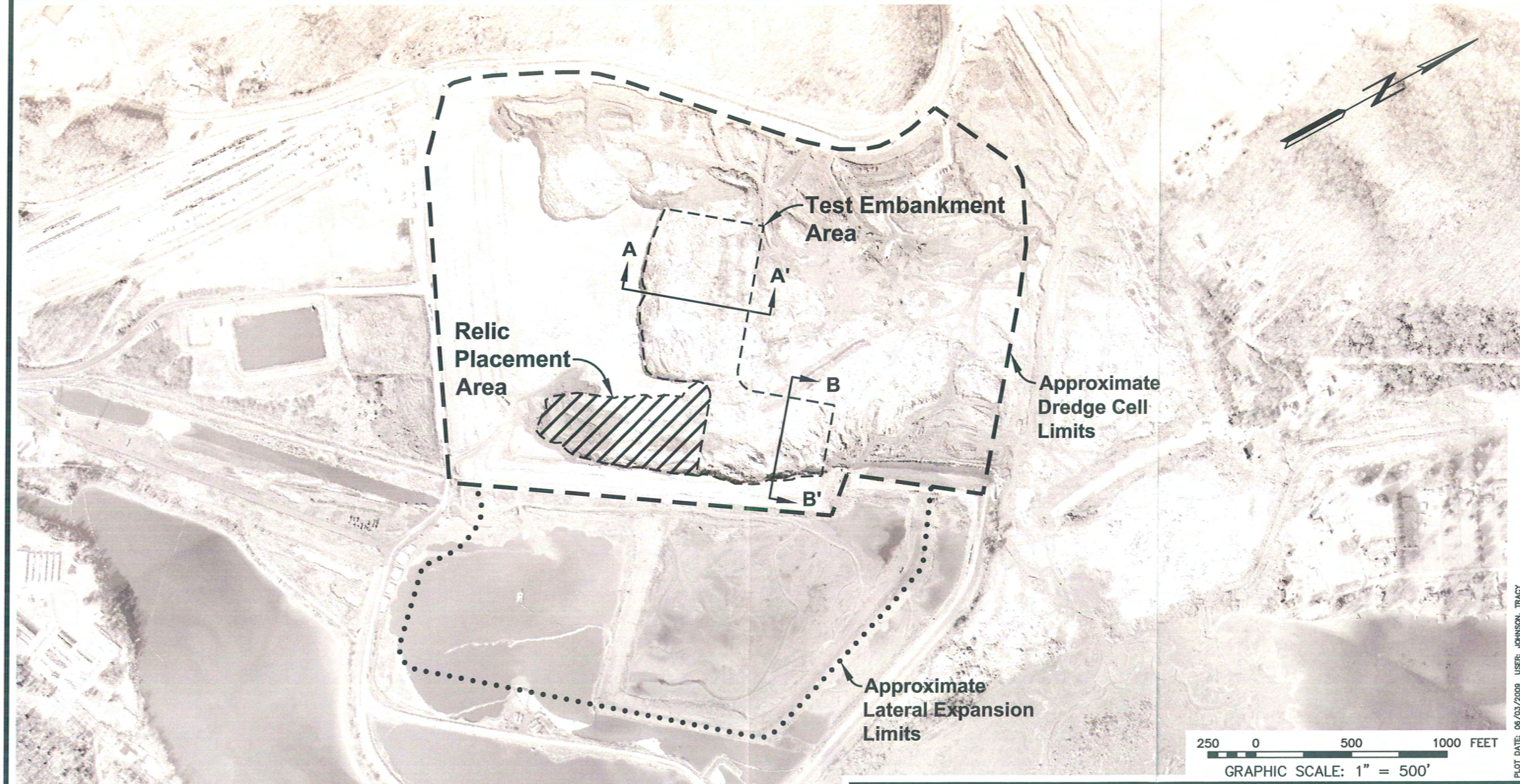
4) Embankment loading

5) Data collection and evaluation

The planned work sequence includes initiating the embankment loading within the test embankment and relic placement areas at roughly the same time.

Attachment 1

Drawings



PLOT DATE: 06/03/2009 USER: JOHNSON, TRACY
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\TEST_EMB\REVI\68117C-KIF-101-PL1.DWG

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

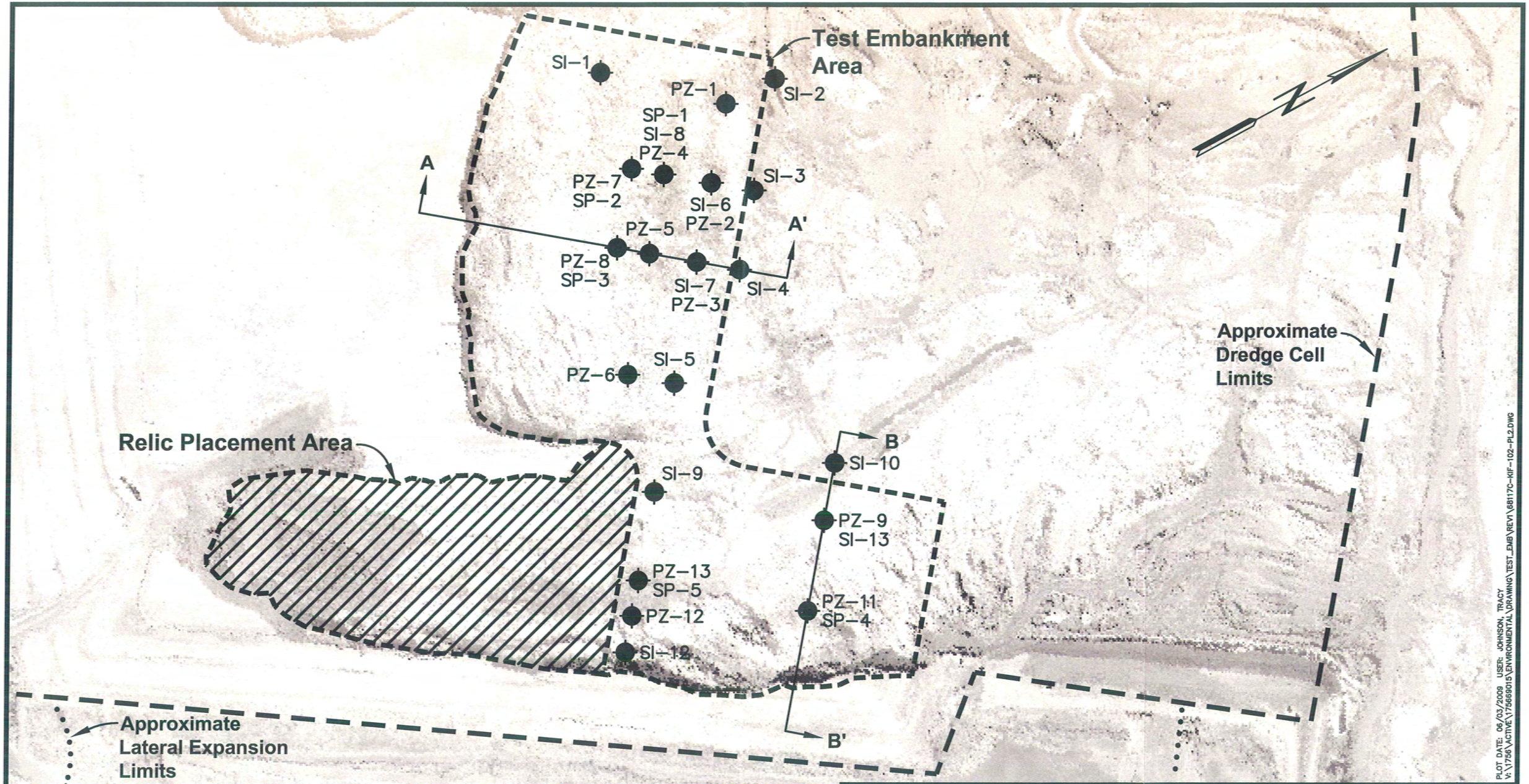
MICHAEL J. STEELE
REGISTERED ENGINEER
AGRICULTURE
6/3/2009
COMMERCE
No. 113118
STATE OF TENNESSEE

PLAN LIMITS
KINGSTON TEST EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

				REVISED		SHEET
DRAWN BY	TJ	DATE	JUNE, 2009			1 OF 7
CHECKED BY	KDL	PROJ. NO.	175669015	1.	3.	
CHECKED BY	MJS	SCALE	1"=200'	2.	4.	



PLOT DATE: 06/03/2009 USER: JOHNSON, TRACY
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\TEST_EMB\REV1\681170-KIF-102-PL2.DWG

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

LEGEND

PZ–1 Piezometer
SI–1 Slope Inclinometer
SP–1 Settlement Platform

100 0 200 400 FEET
GRAPHIC SCALE: 1" = 200'

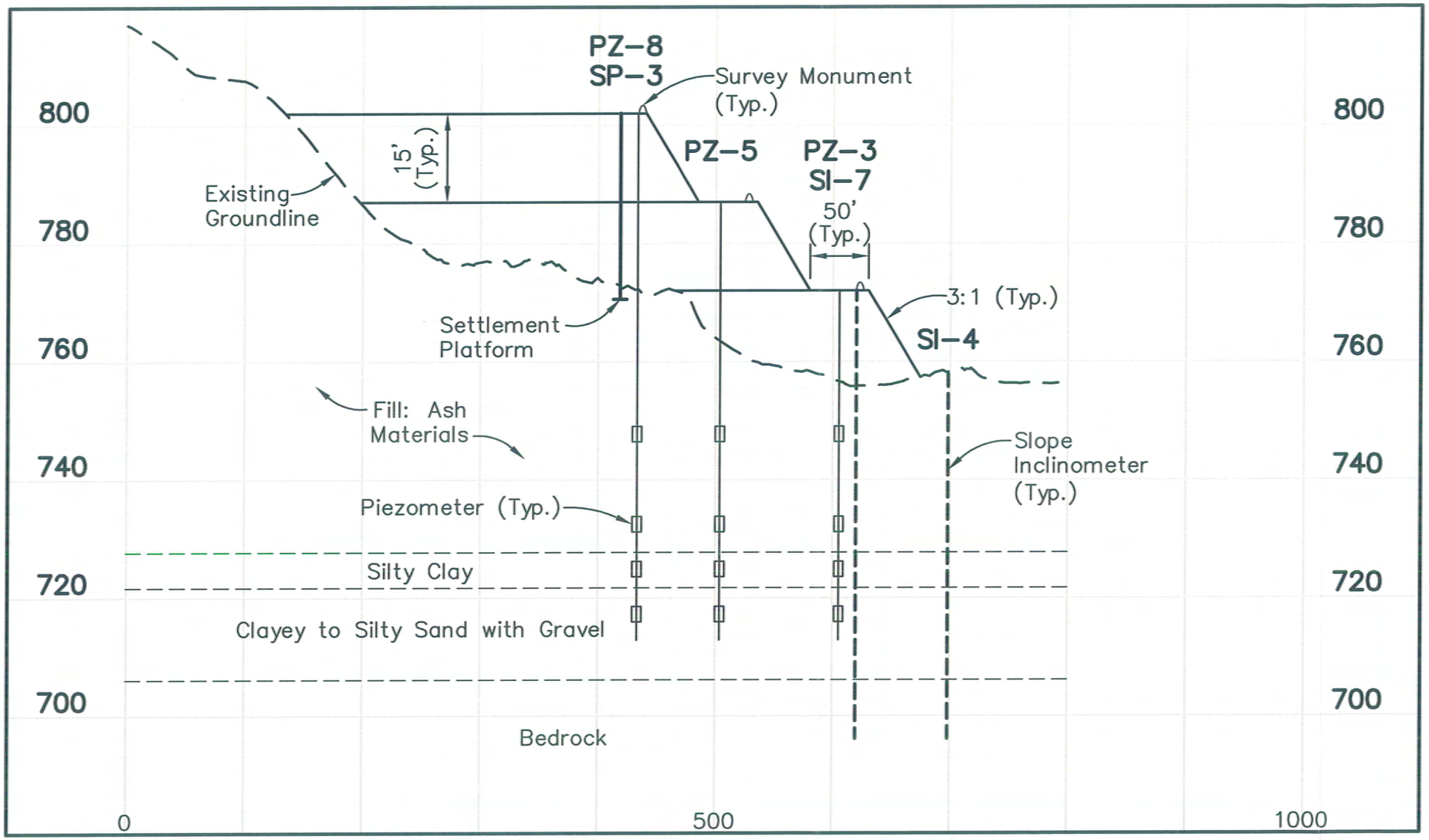
MICHAEL J. STEELE
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 113118
STATE OF TENNESSEE
6/3/2009

INSTRUMENTATION PLAN
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1. 3.	2 OF 7
CHECKED BY	MJS	SCALE	1"=200'	2. 4.	



CROSS SECTION A–A'

SCALE: 1" = 100' (HORIZ.) XSECAA.DWG
1" = 20' (VERT.)

MICHAEL J. STEELE
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 113118
STATE OF TENNESSEE
6/3/2009

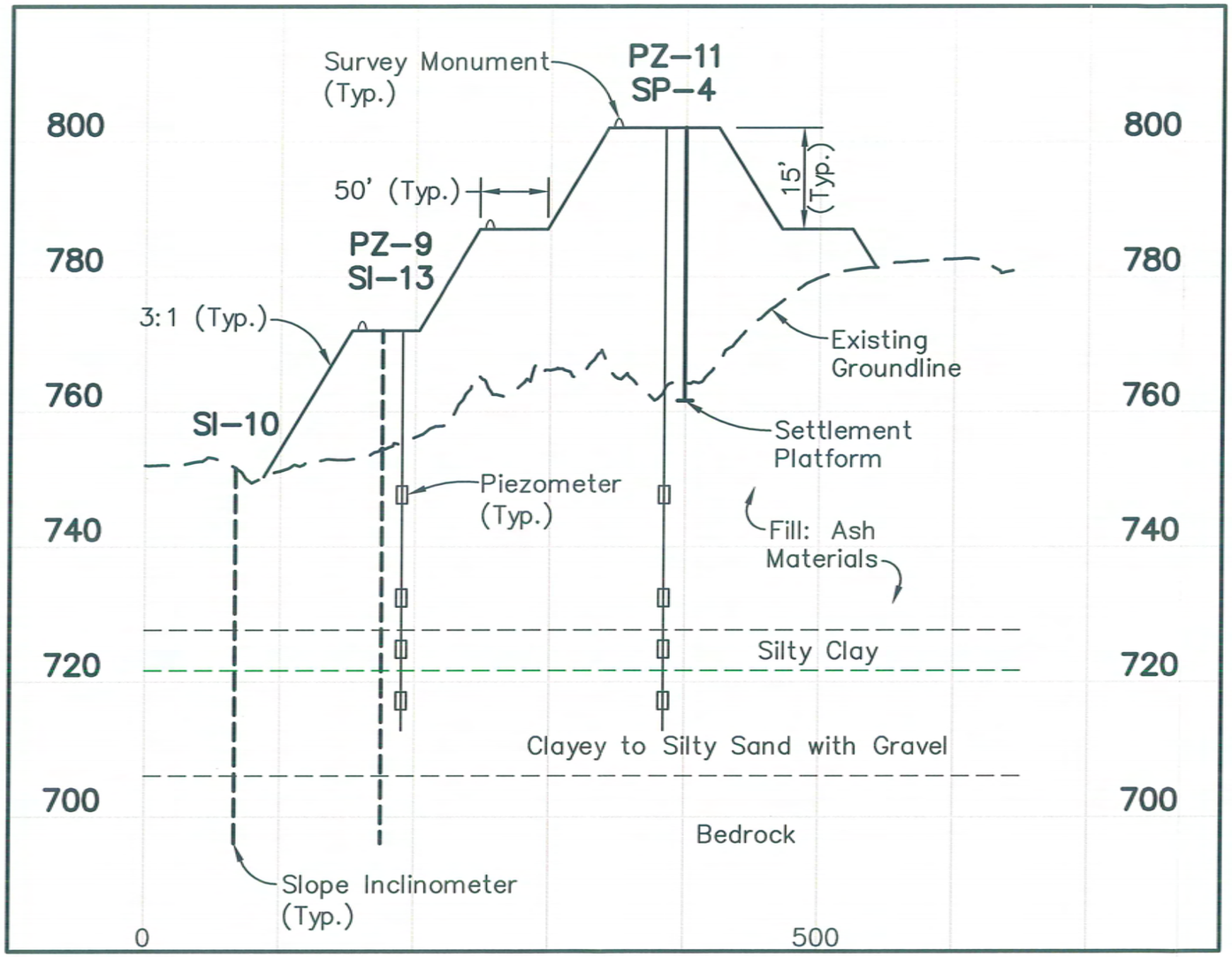
CROSS SECTION
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1. 3.	3 OF 7
CHECKED BY	MJS	SCALE	AS SHOWN	2. 4.	

PLOT DATE: 06/03/2009 USER: JOHNSON, TRACY
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\TEST_EMB\REV1\681170-KIF-301-X01.DWG



CROSS SECTION B–B'

SCALE: 1" = 100' (HORIZ.) XSECBB.DWG
1" = 20' (VERT.)

MICHAEL J. STEELE
REGISTERED ENGINEER
AGRICULTURE
6/3/2009
COMMERCE
No. 113118
STATE OF TENNESSEE

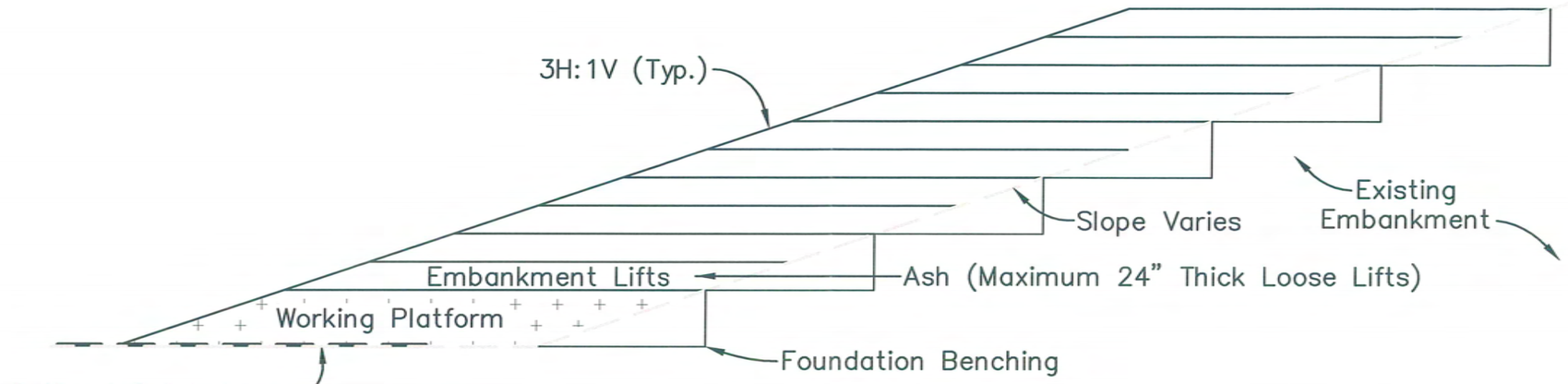
CROSS SECTION
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1. 3.	4 OF 7
CHECKED BY	MJS	SCALE	AS SHOWN	2. 4.	

PLOT DATE: 06/03/2009 USER: JOHNSON, TRACY
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\TEST_EMB\REV1\68117C-KIF-302-X02.DWG



NOTE:
Working platform elevation and associated depth to underlying ash will be established based on proofrolling and foundation response as outlined in the Construction Quality Control Plan.

DETAIL – TEST EMBANKMENT LIFT PLACEMENT

NOT TO SCALE

LIFTPLACE.DWG

PLOT DATE: 06/03/2009 USER: JOHNSON, TRACY
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\TEST_EMB\REV1\681170-KIF-501-D01.DWG

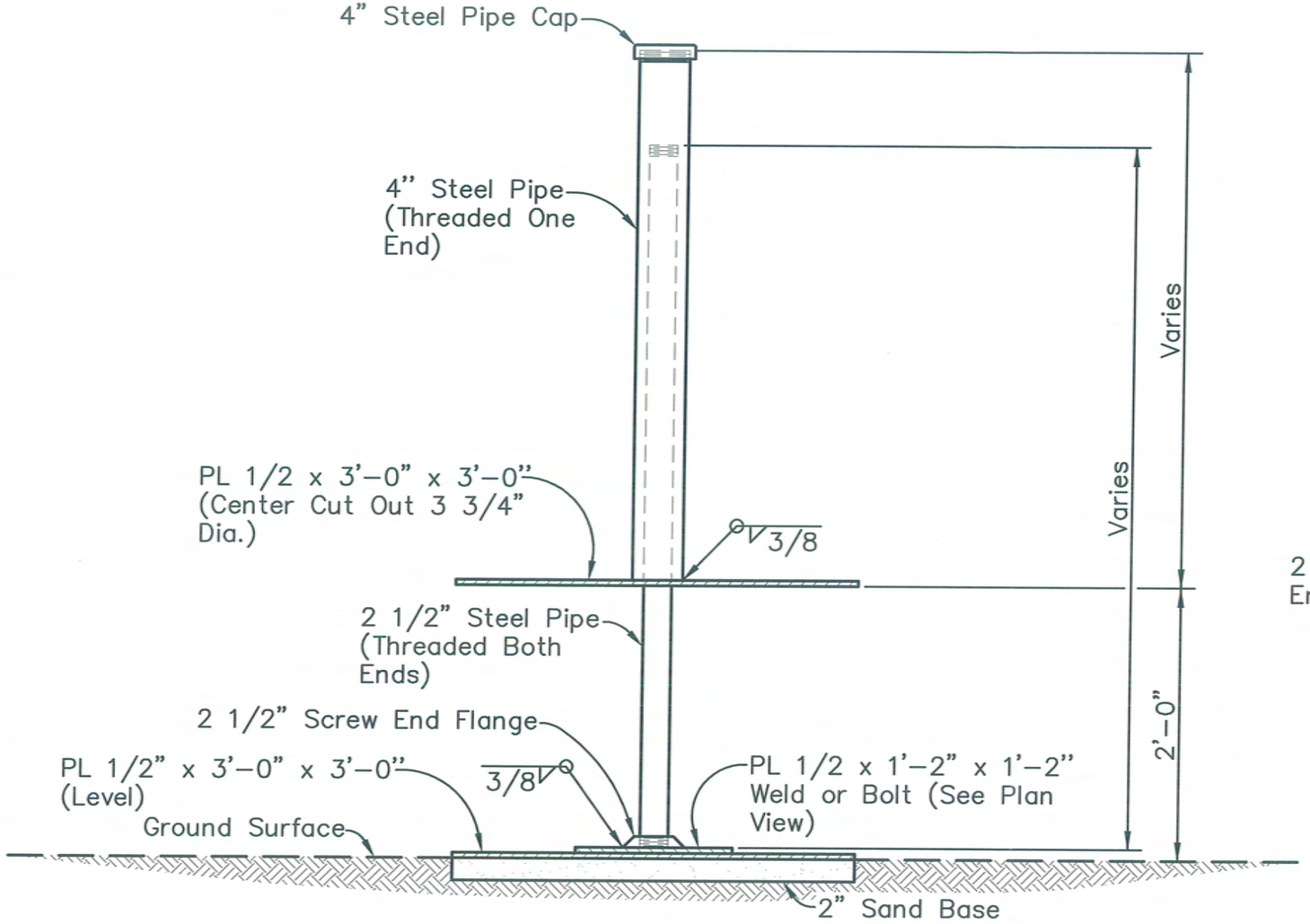
MICHAEL J. STEELE REGISTERED ENGINEER AGRICULTURE COMMERCE No. 113118 STATE OF TENNESSEE
6/3/2009

TYPICAL DETAILS
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

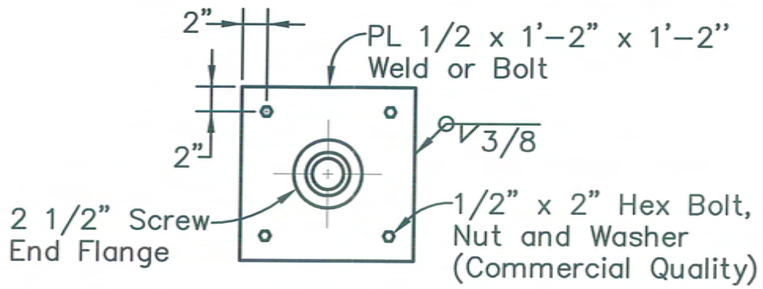
Stantec

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED		SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1.	3.	5 OF 7
CHECKED BY	MJS	SCALE	AS SHOWN	2.	4.	



ELEVATION VIEW



PLAN VIEW

NOTES:

1. Additional pipe shall be furnished in 5'–3" sections (due to commercial pipe lengths of 21'–0") threaded on both ends.
2. Pipe sizes are given in nominal diameters.

DETAIL – SETTLEMENT PLATFORM INSTALLATION

NOT TO SCALE

SETPLAT.DWG

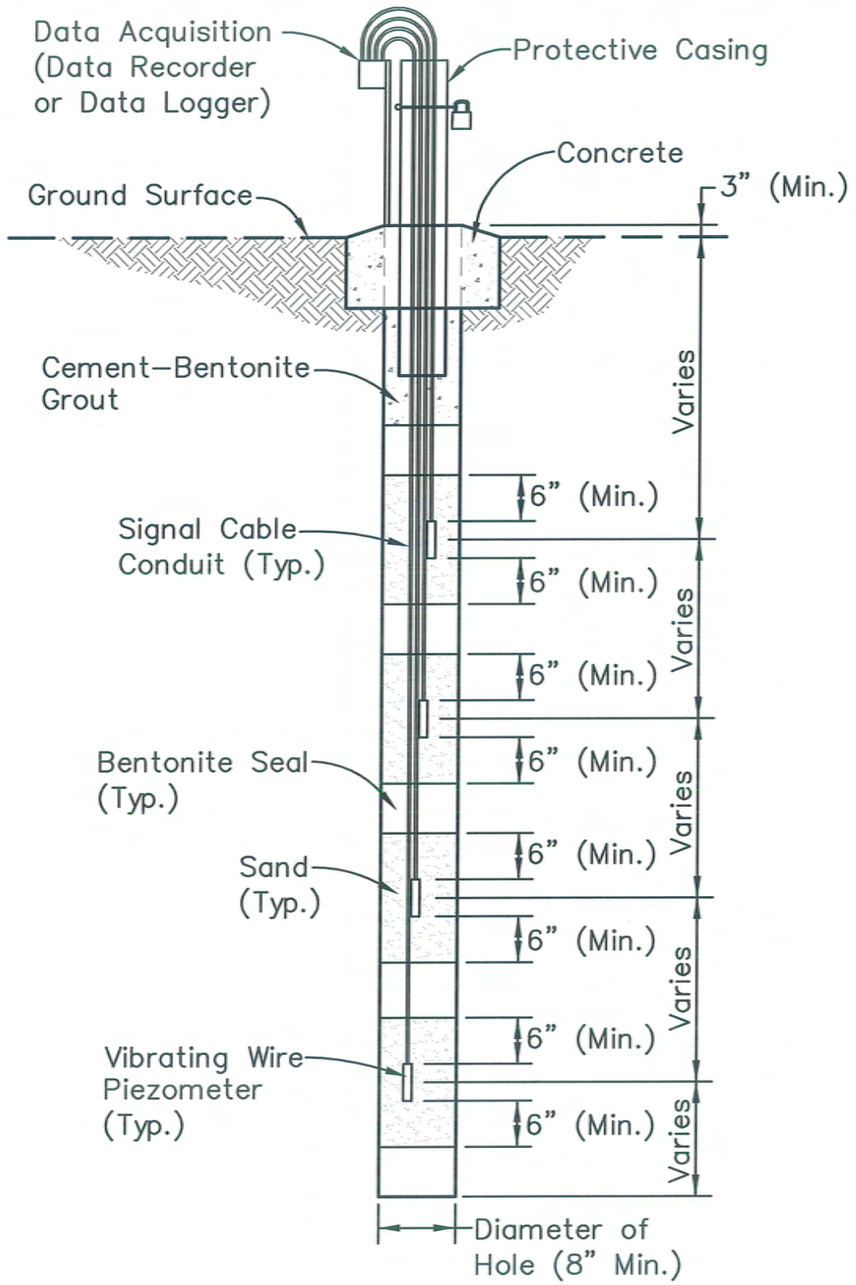
MICHAEL J. STEELE
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 113118
STATE OF TENNESSEE
6/3/2009

TYPICAL DETAILS
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec
Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1. 3.	6 OF 7
CHECKED BY	MJS	SCALE	AS SHOWN	2. 4.	

PLOT DATE: 06/03/2009 USER: JOHNSON, TRACY
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\TEST_EMB\REV1\681170-HIF-502-D02.DWG

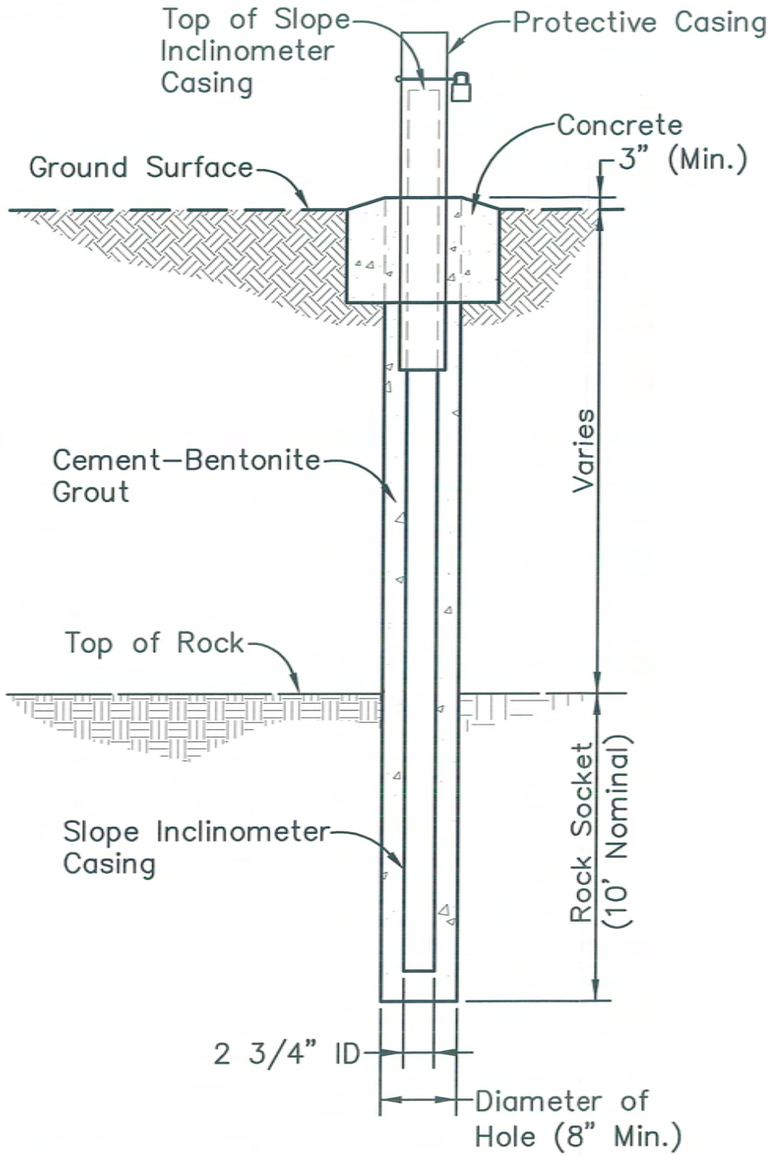


NOTE:
The vibrating wire piezometers shall be set in the ash materials, silty clay and clayey to silty sand with gravel layers. Piezometer tip elevations shall be determined in the field based on encountered subsurface conditions at each instrument location.

DETAIL – VIBRATING WIRE PIEZOMETER INSTALLATION

NOT TO SCALE

TYPPZ.DWG



DETAIL – SLOPE INCLINOMETER INSTALLATION

NOT TO SCALE

SLPINCMTR.DWG

PLOT DATE: 06/03/2009 USER: JOHNSON, TRACY
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\TEST_EMB\REV1\681170-KIF-503-D03.DWG

MICHAEL J. STEELE
REGISTERED ENGINEER
AGRICULTURE
6/3/2009
COMMERCE
No. 113118
STATE OF TENNESSEE

TYPICAL DETAILS
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1. 3.	7 OF 7
CHECKED BY	MJS	SCALE	AS SHOWN	2. 4.	

Attachment 2

Construction Quality Control Plan

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Construction Quality Control Plan

1. Purpose and Scope

This document is a site specific Quality Control (QC) plan that addresses construction and monitoring in association with the test embankment program. The QC plan is intended to present minimum program requirements and shall serve as an outline for use in developing site specific protocols based on conditions encountered during the work.

2. Responsibility and Authority

A summary of QC personnel and associated responsibilities is presented below.

2.1. Regulatory Agency

Work conducted under this test embankment program shall be coordinated with the Tennessee Department of Environment and Conservation (TDEC) – Division of Solid Waste Management and U.S. Environmental Protection Agency (EPA). Designated TDEC and EPA personnel shall serve as the regulatory contacts.

2.2. Quality Control Manager and Team

A qualified engineer shall be designated as the QC Manager and shall be responsible for overall management of construction monitoring, testing and related documentation as outlined herein. The QC Manager shall determine appropriate test standards and methods for designated field observations and/or laboratory testing and shall be responsible for review of QC data to assess conformance with program requirements.

The QC Team shall consist of qualified personnel working under the direct supervision of the QC Manager. The QC Team shall be familiar with the materials used and the functional intent of the respective test embankment components.

The QC Manager, QC Team and/or any designated Tennessee Valley Authority Project Manager(s) shall have the authority to stop the test embankment program for any reason.

2.3. Owner

The plant and its ancillary functions are owned by Tennessee Valley Authority (Owner). The Owner shall be responsible for overall management of construction activities to include but not be limited to contracting, administration and retaining the services of qualified consultants as required during the program.

The Owner and/or their Designee shall appoint one representative to serve as the Construction Manager. The Construction Manager shall be responsible for construction activities to include but not be limited to the character and sequence of work, coordination and scheduling.

The Owner shall also be responsible for providing qualified professionals to establish and enforce safety protocols related to the program.

3. Quality Control Activities

3.1. Meetings

Meetings shall be coordinated and conducted by the QC Manager and/or the Construction Manager on a weekly basis. The primary purpose of these meetings shall be to confirm that all parties involved with the test embankment program are familiar with the program, required procedures and associated QC objectives along with any safety issues related to construction. Specific safety issues shall be the responsibility of designated safety professionals. Minutes of each meeting shall be documented for inclusion with the program records.

Pre-construction meetings shall be held prior to initiating individual phases of construction. The QC Manager and other parties that will actively participate in the construction activities shall attend these meetings.

3.2. Alternative Methods

Consistent with the overall objectives of the program, alternative construction and QC methods may be used during the course of the work. Proposed modifications shall be developed by the QC Manager and submitted to the Owner for review prior to incorporation into the program. Documentation of these alternative methods shall be prepared with copies retained for inclusion with the program records.

3.3. Contractor Submittals

Contractor submittals shall be reviewed and approved by the QC Manager prior to delivery and/or use of the respective construction materials. Copies of all submittals shall be included with the program records.

3.4. Conformance Testing

Conformance testing consists of periodic testing of materials and/or constructed products. Conformance testing shall be conducted by the QC Team as required by this plan and by additional discretion of the QC Manager. Results of conformance testing shall be reviewed by the QC Manager to assess conformance with the program requirements. Copies of all conformance testing results shall be included with the program records.

3.5. Field Observations

The QC Team shall observe and document (as outlined herein) all construction activities associated with the program. Results shall be reported to the QC Manager (with the Owner copied) on a daily basis.

4. Subgrade and Subbase

4.1. General

The term subgrade references existing ground surface to be prepared or in the case of earthwork excavation areas, the exposed ground surface graded in accordance with the test embankment program requirements. The term subbase refers to the surface of structural fill layers to be constructed in accordance with the program requirements. All materials proposed for use as structural fill in subbase construction shall receive prior approval by the QC Manager.

4.2. Placement

Prior to placement of structural fill and/or construction of other embankment components, exposed surfaces shall be stripped of all vegetation, organic soils and vegetative cover soils as well as any other deleterious materials. Once stripping is completed, the existing surface shall be proofrolled as outlined below. The response of the surface shall be observed by the QC Team. Areas that rut, settle or pump shall be corrected as directed by the QC Manager until satisfactory results are attained. Following approval by the QC Manager and prior to placement of structural fill and/or construction of other embankment components, all exposed surfaces shall be scarified to promote lift bonding.

The sequence of filling shall commence at the lowest section (in elevation) of the subject footprint and proceed upward in maximum eight-inch loose lifts in a manner to maintain positive drainage at all times. Positive drainage through minimum two percent cross slopes shall be maintained on all fill surfaces. The fill sequence shall also be performed in a manner that reduces the potential for uncontrolled sediment runoff and adequately controls runoff from the embankment area. For areas with slopes greater than 20 percent, embankment benches shall be provided which are conducive to horizontal lift construction.

4.3. Compaction

Each lift of structural fill shall be compacted with appropriate heavy equipment to minimum requirements established by the QC Manager. Field conformance testing shall include periodic in-place density and device calibration testing to provide documentation of the compaction operations at prescribed intervals as established by the QC Manager. Device calibration/confirmation testing shall consist of in-situ density tests (sand cone, water replacement, etc.) every 10 nuclear field density tests or as established by the QC Manager. Following initial compaction, the surface shall be sealed with a smooth drum roller to reduce the potential for surface water infiltration. Prior to placement of subsequent lifts the surface shall be lightly scarified to promote lift bonding.

Structural fill to achieve subbase shall be compacted as follows:

a. **Type I Material** shall consist of plastic soil materials, free of organic or other deleterious materials that are suitable for the subject application as determined by the QC Manager. Type I material shall be compacted with a tamping foot or sheep foot roller, or equivalent approved by the QC Manager, to a minimum density and moisture content determined by the QC Manager. The compaction equipment shall traverse the entire surface area of each lift a minimum of three full passes.

b. **Type II Material** shall consist of ash materials, free of organic or other deleterious materials that are suitable for the subject application as approved by the QC Manager. Type II material shall be compacted with an appropriate roller as approved by the QC Manager for the subject material to a minimum density and moisture content determined by the QC Manager. The compaction equipment shall traverse the entire surface area of each lift a minimum of three full passes.

4.4. Quality Control Requirements

Prior to construction of any embankment component across completed subgrade or subbase, the QC Team shall verify the following:

a. The subgrade or subbase, where applicable, was constructed in accordance with the program requirements.

b. The exposed surface was inspected to:

   i. confirm the subgrade or subbase, where applicable, is properly compacted and uniform and is suitable to support subsequent embankment construction;

   ii. observe a proofroll using appropriate heavy equipment approved by the QC Manager. Significant pumping or rutting observed during proofrolls shall be corrected as directed by the QC Manager until satisfactory proofroll results are attained. Each proofroll shall be documented for inclusion with the program records;

   iii. confirm that elevations are consistent with the program; and

   iv. confirm that foundation benching has been provided which is conducive to horizontal lift construction in areas with slopes of 20 percent or greater.

5. Working Platform (Optional)

5.1. General

The function of the working platform is to provide a stable base across existing surfaces that do not possess sufficient bearing capacity to support subsequent embankment construction. The working platform shall be constructed from select bottom ash (or other) materials approved by the QC Manager.

5.2. Placement

Working platform placement shall commence at the limit of areas suitable to support construction equipment and proceed outward in a manner deemed appropriate by the Construction Manager and the QC Manager based on encountered conditions. Each lift shall be constructed in maximum eight-inch loose lifts.

Transport of working platform materials shall be performed in accordance with methodology approved by the Construction Manager and the QC Manager. Loaded hauling equipment should be strategically routed over areas requiring additional compaction during construction.

5.3. Compaction

Compaction of working platform materials shall be performed in a manner deemed appropriate by the QC Manager based on encountered conditions. Bearing capacity of compacted surfaces shall be assessed by proofrolls as outlined below.

Remedial measures of areas that do not meet proofroll objectives shall include consideration of drainage and/or base reinforcement (biaxial geogrid, etc.) elements.

5.4. Quality Control Requirements

Prior to construction of any embankment component across completed working platform surfaces, the QC Team shall verify the following:

a. The working platform was constructed in accordance with the program requirements.

b. The exposed surface was inspected to:

   i. confirm the working platform is properly compacted and uniform and is suitable to support subsequent embankment construction;

   ii. observe a proofroll using appropriate heavy equipment approved by the QC Manager. Significant pumping or rutting observed during proofrolls shall be corrected as directed by the QC Manager until satisfactory proofroll results are attained. Each proofroll shall be documented for inclusion with the program records; and

   iii. confirm that elevations are consistent with the program.

6. Test Embankment

6.1. General

The test embankment shall be constructed over approved subgrade, subbase and/or working platform in accordance with the program requirements. Embankment materials shall consist of ash materials, free of organic or other deleterious materials that are suitable for the subject application as approved by the QC Manager.

6.2. Placement

The sequence of filling shall commence at the lowest section (in elevation) of the subject footprint and proceed upward in maximum 24-inch loose lifts in a manner to maintain positive drainage at all times. Positive drainage through minimum two percent cross slopes shall be

maintained on all fill surfaces. The fill sequence shall also be performed in a manner that reduces the potential for uncontrolled sediment runoff and adequately controls runoff from waste disposal areas. For areas with slopes greater than 20 percent, embankment benches shall be provided which are conducive to horizontal lift construction.

The rate of embankment construction shall be varied by the QC Manager as part of the overall program objectives.

6.3. Compaction

Each embankment lift shall be compacted with an appropriate roller as approved by the QC Manager for the subject material. Materials shall be compacted to a minimum of 90 percent of standard proctor maximum dry density at a moisture content within minus four percent and plus two percent of optimum or as established by the QC Manager based on field observations, testing and results of the test pads.

Following initial compaction, the surface shall be sealed with a smooth drum roller to reduce the potential for surface water infiltration. Prior to placement of subsequent lifts the surface shall be lightly scarified to promote lift bonding.

6.4. QC Requirements

Embankment placement and compaction methods shall be monitored by the QC Team to assess conformance with program requirements.

Test pads shall be constructed periodically, as established by the QC Manager, to evaluate material placement and compaction methods. Test pads shall be constructed following the same methodology and with the same equipment proposed for use during site operations and shall be evaluated by the QC Team. Evaluation criteria shall include overall compaction results. Appropriate modifications to embankment placement and compaction methodology shall be developed by the QC Manager if compacted materials do not meet program requirements.

The rate of embankment construction shall be measured by the QC Team every 24-hour period in which work has been performed as well as for a weekly total.

Field conformance testing shall include periodic in-place density and device calibration testing to provide documentation of the compaction operations at prescribed intervals as directed by the QC Manager. Device calibration/confirmation testing shall consist of in-situ density tests (sand cone, water replacement, etc.) every 10 nuclear field density tests or as established by the QC Manager.

7. Non-Woven Geotextile Filter Fabric (Optional)

7.1. General

Geotextile materials shall be unloaded and stored in accordance with manufacturer recommendations. The contractor shall generate a material inventory log during unloading of material shipments to the program site.

Requirements for geotextile are as follows:

a. Geotextile shall be non-woven, polyester or polypropylene fabric meeting the minimum requirements as established by the QC Manager.

b. Geotextile shall be protected from direct sunlight, ultraviolet rays, temperature greater that 140 degrees Fahrenheit, mud, dirt, dust and debris. During storage, geotextile filter fabric shall be wrapped in a heavy duty protective covering.

c. Installation shall be in accordance with manufacturer recommendations.

d. Surfaces to receive geotextile shall be prepared to a relatively smooth condition, free of obstructions, depressions and debris.

e. Geotextile shall be placed with the long dimension parallel with the centerline of ditches and roads, and/or parallel to embankment slopes, as applicable. Geotextile shall be laid smooth, and free of tension, stress, folds, wrinkles or creases.

f. On slopes greater than or equal to four horizontal to one vertical (4H:1V), adjacent strips of geotextile or reinforcing fabric shall be joined by stitching together continuously. All stitched seam strengths shall be greater than 90 percent of the grab tensile strength of the geotextile as determined by ASTM D 1682.

g. On slopes less than four horizontal to one vertical (4H:1V), overlaps shall be at least two feet.

h. Geotextile shall be covered with a minimum of two feet of designated materials within 15 days of deployment for ultraviolet light protection.

7.2. QC Requirements

QC requirements are as follows:

a. Prior to delivery, manufacturer and supplier certifications shall be submitted to the QC Manager indicating that all materials meet, or exceed, the minimum established properties. Certifications shall be accompanied by supporting QC testing.

b. Conformance testing schedule and procedures shall be performed as directed by the QC Manager.

c. Construction monitoring and field acceptance of geotextile installation shall be documented by the QC Team.

8. Drainage Structures (Optional)

Drainage structures shall be installed as directed by the QC Manager. All drainage structures shall comply with project requirements.

8.1. General

Drainage structures shall be unloaded and stored in accordance with manufacturer recommendations. The contractor shall generate a material inventory log during unloading of material shipments to the program site.

8.2. QC Requirements

QC requirements are as follows:

a. Prior to delivery, manufacturer and supplier certifications shall be submitted to the QC Manager indicating that all materials meet, or exceed, the minimum properties established in this section. Certifications shall be accompanied by supporting QC testing.

b. The QC Team shall observe all drainage structures upon delivery. Any structures showing signs of shipment damage or non-conformance to program specifications shall be replaced.

c. Construction monitoring and field acceptance of drainage structure installation shall be documented by the QC Team.

d. Drainage structures shall be installed to the lines and grades shown in the drawings. Any deviation in location shall be subject to the approval of the QC Manager and documented by as-built survey.

9. Durable Coarse Aggregate Materials (Optional)

Coarse aggregate materials shall conform to the gradation and material requirements shown on the drawings.

9.1. General

Coarse aggregates shall be placed to the lines and grades shown in the drawings. Placement shall be performed in such a manner that underlying geotextiles or adjacent structures shall not be damaged.

9.2. QC Requirements

QC requirements are as follows:

a. Prior to construction, aggregate supplier(s) shall submit required material documentation to the QC Manager.

b. Conformance testing schedule and procedures shall be performed as directed by the QC Manager.

c. Construction monitoring and field acceptance of durable coarse aggregate placement shall be documented by the QC Team.

10. Erosion and Sediment Control

Erosion and sediment control measures shall be provided as field conditions dictate and approved by the QC Manager, or as directed by the regulatory agency.

The QC Team shall periodically monitor these structures as well as overall site drainage conditions. Reports shall be prepared weekly, or after each precipitation event exceeding ½ inch, on the condition of sediment structures as documentation of monitoring. Appropriate adjustments to site drainage and related sediment control structures shall be made as necessary based on current site conditions during test embankment construction.

11. Instrumentation

11.1. General

Instrumentation monitoring has been established for the test embankment area to monitor the embankment slopes and the underlying foundation materials. Instrumentation for geotechnical monitoring shall be installed according to the attached Plan and Detail Sheets. The instrumentation program includes the prescribed use of the instrumentation and the specific monitoring of these devices as further detailed.

11.2. Types

a. Piezometers shall be installed and monitored to characterize the increase and dissipation of pore pressures within the existing ash and native cohesive foundation soils due to embankment loading.

b. Slope inclinometers shall be used to measure lateral displacements within the embankment and foundation materials due to loading. The inclinometers shall be anchored a minimum of 10 feet into bedrock.

c. Settlement plates shall be utilized to measure the vertical deformation of the foundation soils due to embankment loading.

If any instruments are damaged during construction, they shall be repaired/replaced as directed by the QC Manager.

11.3. Measurements

Baseline data shall be confirmed prior to embankment loading. Piezometers, inclinometers and settlement plates shall be measured once a day, unless directed otherwise by the QC Manager. One select instrument cluster of four vibrating wire piezometers per test embankment shall be instrumented. The vibrating wire piezometers at these locations shall be connected to a data logger that will upload data via air card technology to a password access website. This website may be accessed by select individuals in order to review real-time pore pressure data. These data acquisition systems will be configured so that they may be moved to different piezometer clusters, if necessary. The rate of embankment construction shall be varied by the QC Manager as part of the overall program objectives. Measured instrumentation responses shall be reviewed and evaluated by the QC Manager.

11.4. Thresholds

Embankment loading models have been analyzed which take into account the existing subsurface conditions and the proposed embankment heights. The following threshold limits shall be used for the test embankments.

a. Piezometers – Embankment filling may continue, with regular monitoring frequency, as long as the ratio of excess pore pressure to the applied embankment load is 10 percent or below. When excess pore pressure ratio ranges from 10 to 15 percent, embankment filling may continue, but with an increase in instrumentation monitoring specified by the QC Manager. All fill placements shall stop immediately when the excess pore pressure ratio is above the 15 percent level. Embankment loading may not resume until the excess pore pressure ratio drops below 10 percent. All excess pore pressure measurements shall be evaluated from baseline data values.

b. Slope Inclinometers and Settlement Plates – Embankment filling may continue with regular monitoring frequency, as long as the displacement ratio of lateral inclinometer movement to vertical settlement plate movement is 20 percent or below. When the displacement ratio ranges from 20 to 30 percent, embankment filling may continue, but with an increase in instrumentation monitoring specified by the QC Manager. All fill placements shall stop immediately when the displacement ratio is above the 30 percent level. Embankment loading may not resume until the displacement ratio drops below 20 percent.

It should be noted that embankment loading may also be restricted and/or modified at the discretion of the QC Manager based on other potentially unstable conditions not outlined herein.

12. Program Documentation

Documentation shall be collected and maintained by the QC Manager (copied to the Owner) during the test embankment program. This documentation shall include but not be limited to the following:

- Daily construction field reports;
- Weekly construction summary reports;
- Observation reports;
- Contractor submittals;
- Material conformance data;
- Photographic documentation;

- Survey data;
- Construction issue and solution reports;
- Plan modifications; and
- Meeting minutes.

Attachment 3

Summary of Stability Analysis

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Summary of Stability Analysis
Test Embankment Program – Area "A"

1. Introduction

A test embankment program is currently planned at the Kingston Fossil Plant. The purpose of this program is to verify geotechnical design parameters and construction methodology.

Geotechnical instrumentation, including settlement plates, inclinometers, and piezometers, will be installed at selected locations to monitor vertical consolidation of foundation soils, lateral movement of embankment and foundation materials, and pore water pressure generated by the embankment loading. The measured data will be used to regulate the rate of fill placement to reduce the potential for global failure of the embankment.

To assist in developing the test embankment program, preliminary slope stability analyses were performed. Presented herein is a summary of the preliminary results for previously defined Area "A" only.

2. Stability Analysis

Two cross sections were analyzed. Section 1A passes through the approximate center of Area "A" and is roughly parallel to Swan Pond Road. Section 2A is perpendicular to Section 1A and cuts through the slope to the west. The geometries of these two sections are summarized in Table 1.

Table 1. Cross Section Geometries

	Section 1A	Section 2A
Slope Crest Elevation, (ft)	El. 802	El. 802
Slope Toe Elevation, (ft)	El. 756	El. 768
Slope Height, (ft)	46	34
Slope Inclination	3H:1V	3H:1V
Intermediate Benches	@ El. 772 and El. 787	@ El. 772 and El. 787
Bench Width, (ft.)	50	50

Soil parameters used in the analyses, as summarized in Table 2, were developed from the preliminary field exploration and laboratory testing performed by AECOM and our experience with similar soils. A total of five consolidated undrained (CU) triaxial tests have been performed by AECOM on remolded fly ash material. The specimens were prepared by drained slurry techniques. Vane shear tests were performed to measure both peak shear strength and remolded shear strength of the native clay soils. The data are scattered and do not indicate any recognizable correlations with depth (i.e. overburden pressure). The undrained clay strengths presented in Table 2 are the "two-thirds" values. This is generally supported by the following USACE recommendations: "Prior Corps of Engineers' practice has been to draw the strength envelope in a position such that data from two-thirds of the tests lie above the failure envelope. This recommendation is reasonable (USACE EM 1110-2-1902, 2003)." Five CU triaxial tests were performed by AECOM on the clay soil. The lowest friction angle was conservatively selected as the drained strength for the clay material. A conservative cohesion (100 psf) was assumed for the compacted ash embankment, such that critical slip surfaces do not occur near the surface. It should be noted that the lab testing program is still a work-in-progress, thus these parameters may be updated or revised in the future.

Table 2. Summary of Soil Parameters

Soil Type	Unit Weight (pcf)		Undrained Strength		Drained Strength	
	Above Ground Water	Saturated	Peak (psf)	Remolded (psf)	Friction Angle (deg.)	Cohesion (psf)
Compacted Ash Embankment	100	110	--	--	28	100
Existing Fly Ash	100	110	--	--	23	0
Native Clay	120	125	1,380	280	22	0
Native Silty Sand	125	130	--	--	26	0
Dense Sand	110	115	--	--	35	0
Bedrock	Very Strong [1]					

Note: [1] – Assumed strong enough that critical slip surfaces do not occur in rock

Stability analyses were performed using the computer program SLOPE/W (GEO-SLOPE International Ltd). The Morgenstern-Price method was used to compute the factor of safety for the considered failure surfaces. An optimization process was then conducted to obtain the critical failure surface.

First, the stability analyses were performed using the undrained clay strengths. The results indicate that the analyzed slopes exceed the minimum required factor of safety of 1.5 with the peak strength (factors of safety of 1.86 and 2.09 for Sections 1A and 2A, respectively); however, the required factor of safety is not met with the remolded strength (factors of safety of 0.90 and 1.28 for Sections 1A and 2A, respectively). Therefore, monitoring program must be implemented for construction of the test embankments.

Subsequent analyses were then performed using the effective stress approach. Excess pore water pressures (P.W.P) generated by the applied embankment load were considered for the native clay and existing fly ash layers. These analyses do not account for shear-induced pore pressures. Lateral shear will be monitored by the inclinometers. The results of the stability analyses are summarized in Table 3. The Excess P.W.P Ratio is defined as "increase in pore water pressure at a location divided by change in vertical stress due to

added embankment weight at the same location." The groundwater level was assumed to be at the existing ground surface. The results indicate the failure mode is generally circular.

Table 3. Results of Stability Analyses

Excess P.W.P. Ratio (%)	Calculated Factor of Safety			
	Section 1A		Section 2A	
	Excess P.W.P. Applied to Clay Only [1]	Excess P.W.P. Applied to Both Clay & Existing Ash [2]	Excess P.W.P. Applied to Clay Only	Excess P.W.P. Applied to Both Clay & Existing Ash
0	1.89	1.89	2.09	2.09
10	1.87	1.79	2.10	2.00
20	1.86	1.67	2.09	1.89
30	1.85	1.57	2.09	1.79
40	1.80	1.49	2.09	1.68
50	1.77	1.37	2.09	1.58
60	1.74	1.27	2.10	1.47
70	1.69	1.18	2.10	1.35
80	1.64	1.06	2.10	1.24
90	1.58	0.93	2.10	1.11
100	1.52	0.82	2.10	0.98

Note: [1] The clay layer is subjected to static pore water pressure plus excess pore water pressure generated by embankment weight; all other layers are subjected to static pore water pressure only.

[2] Both clay layer and existing fly ash layer are subjected to static pore water pressure plus excess pore water pressure generated by embankment weight; all other layers are subjected to static pore water pressure only.

The above data are plotted as the calculated factor of safety vs. Excess P.W.P Ratio in Figures 1 and 2.

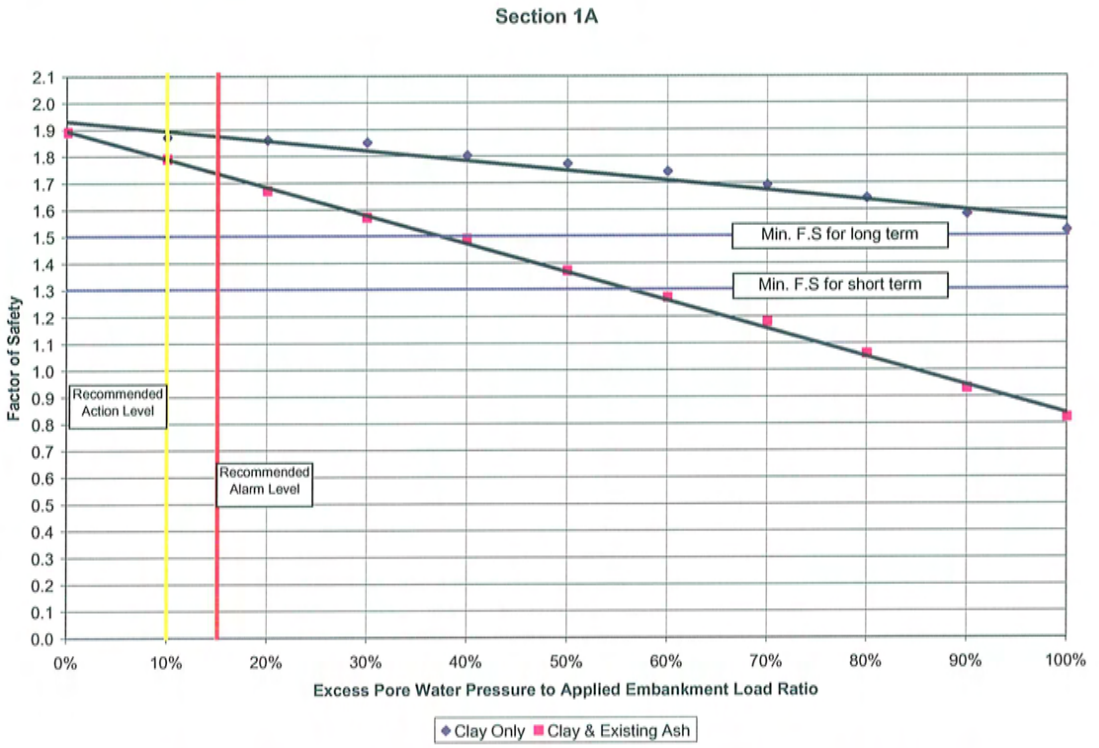


Figure 1 – Factor of Safety vs. Excess P.W.P Ratio (Section 1A)

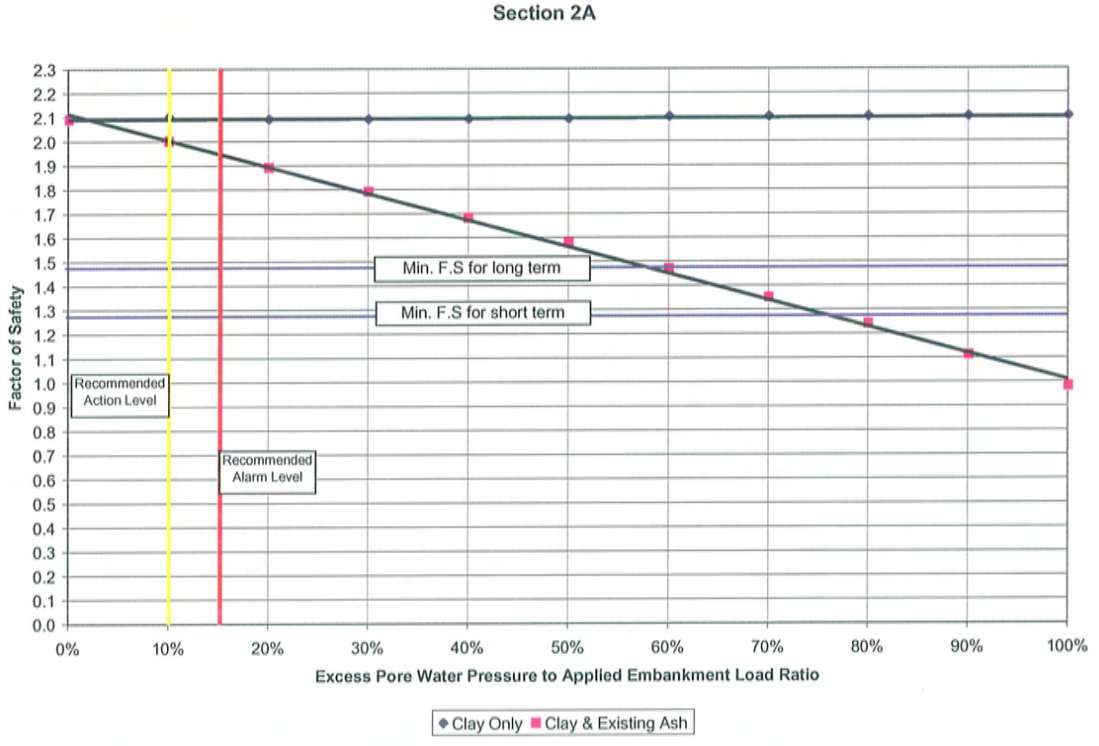


Figure 2 – Factor of Safety vs. Excess P.W.P Ratio (Section 2A)

- The analyzed Sections 1A and 2A slopes exceed the minimum required factor of safety of 1.5 under long-term conditions (excess pore water pressure is zero). Section 1A has lower factors of safety than Section 2A due mostly to differences in embankment height.

- If no excess pore water pressure is built up in the existing ash layer, then both analyzed sections exceed the minimum required factor of safety of 1.3 even for the scenario of the excess pore water pressure equaling the embankment weight.

- If the rate of fill placement is fast enough for the existing ash layer to develop excess pore water pressure, then the test embankments may have a potential to fail. Figure 1 indicates that the factors of safety are 1.5, 1.3, and 1.1 at the Excess P.W.P Ratio of 37, 56, and 75 percent, respectively.

- To reduce the potential for global failure of the embankments, the following criteria are recommended for the monitoring program:

    - Action Level: The Excess P.W.P Ratio reaches 10 percent. If this condition occurs, increased frequency of monitoring and inspections must be implemented.

    - Alarm Level: The Excess P.W.P Ratio reaches 15 percent. If this condition occurs, fill placement should be stopped until the ratio decreases to below 10 percent.

    - In addition to the above Excess P.W.P Ratio criteria, fill placement should be stopped if the inclinometer data, settlements, or other observed deformations indicate movements along a potential failure plane.

    - During fill placement, it is recommended piezometer readings be taken twice a day, and inclinometers and settlement plates be measured once a day. This frequency of measurement may be increased or decreased based on the instrument readings as construction progresses.

3. Limitations

The recommendations presented herein are based on theoretical analyses that reflect current, but limited, information on the subsurface conditions at the site. The validity of the factor of safety relationships depend on the validity and completeness of this information. Unknown subsurface conditions could adversely affect the embankment stability during construction. The reliability of the instrumentation is dependent, in part, in their location in critical areas, which may be difficult to predict. For these reasons, the preliminary analyses presented here and the field monitoring data should be viewed only as indicators of the embankment stability. Field observations during construction will be a necessary component to ensuring the safety of test embankments.

Plots of Stability Analysis

Summary of Soil Parameters

Soil Type	Material No. in Plots		Unit Weight (pcf)		Drained Strength	
	1A Plots	2A Plots	Above Ground Water	Saturated	Friction Angle (deg.)	Cohesion (psf)
Compacted Ash Embankment	6	5	100	110	28	100
Existing Ash	1	1	100	110	23	0
Native Clay	2	2	120	125	22	0
Native Silty Sand	3	3	125	130	26	0
Dense Sand	4	--	110	115	35	0
Bedrock	5	4	Very Strong			

Section 1A Plots

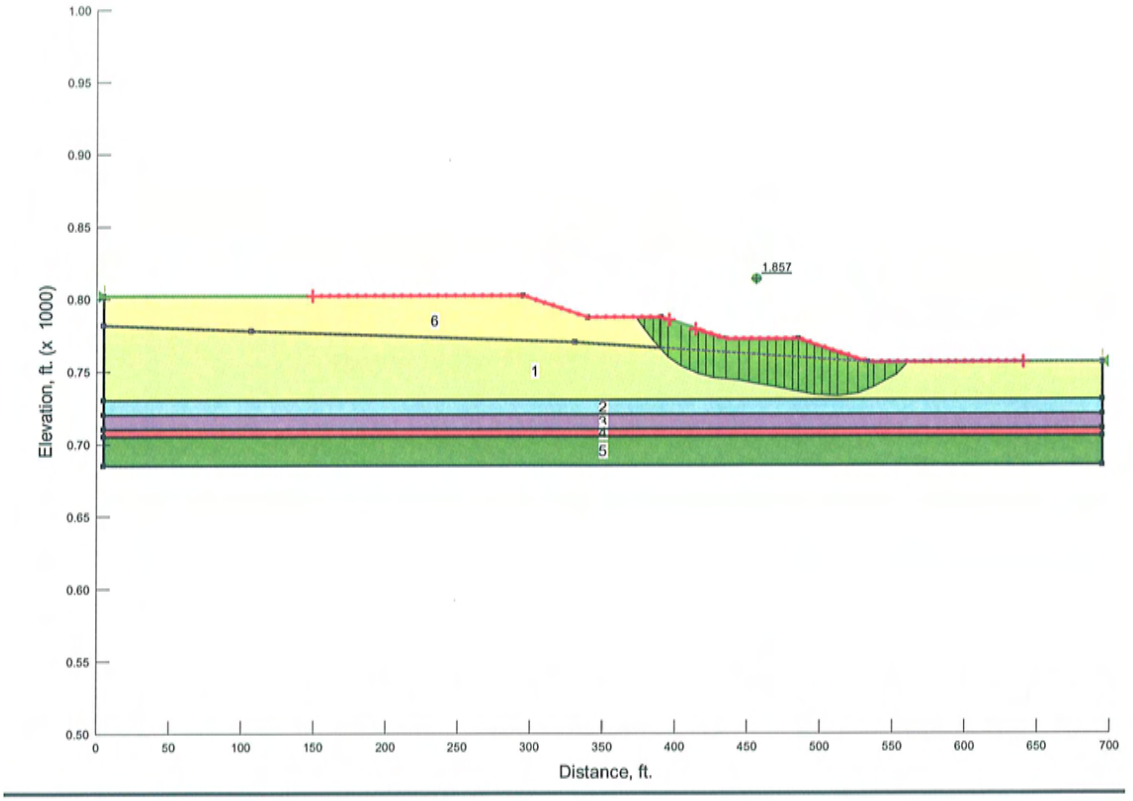


Figure 1A (A) – Peak Undrained Strength for Clay (c=1,380 psf)

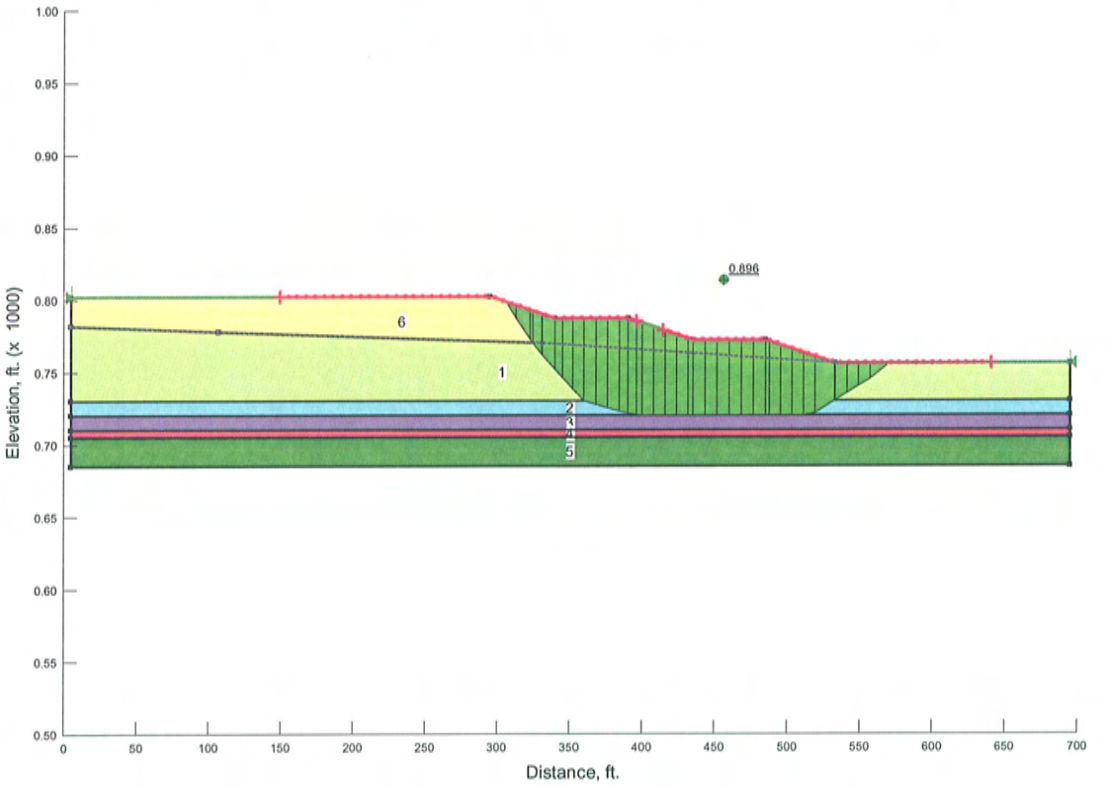


Figure 1A (B) – Residual Undrained Strength for Clay (c=280 psf)

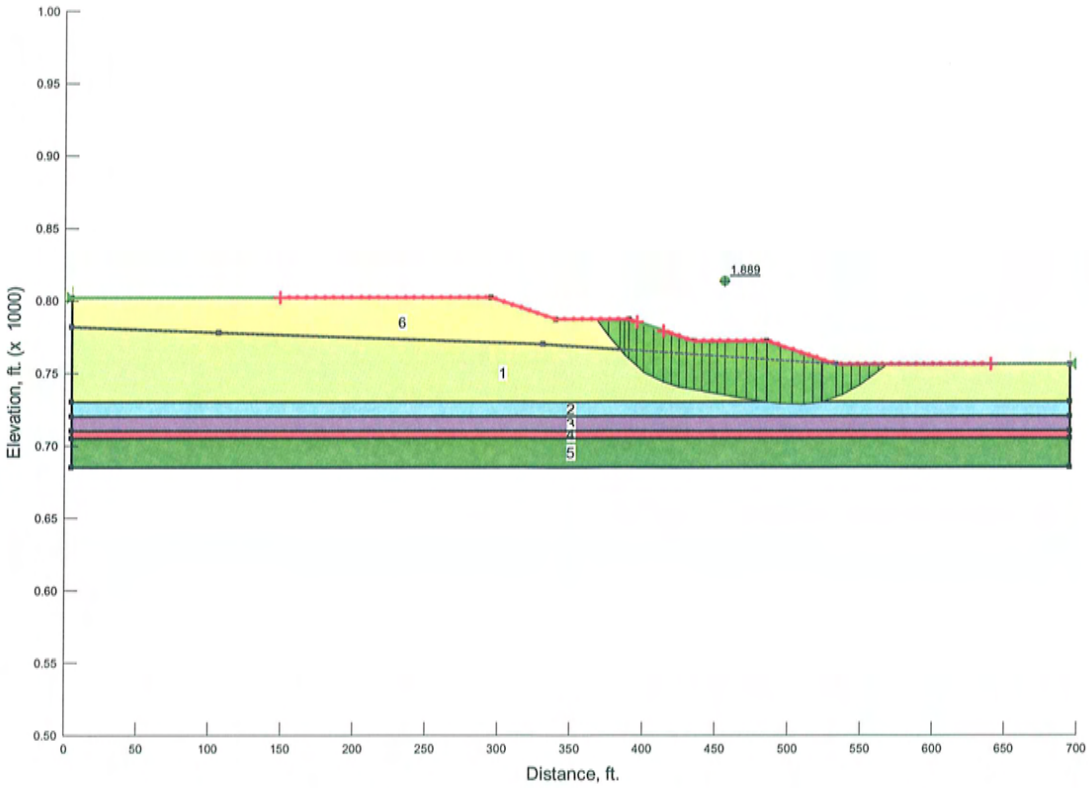


Figure 100 – No Excess P.W.P

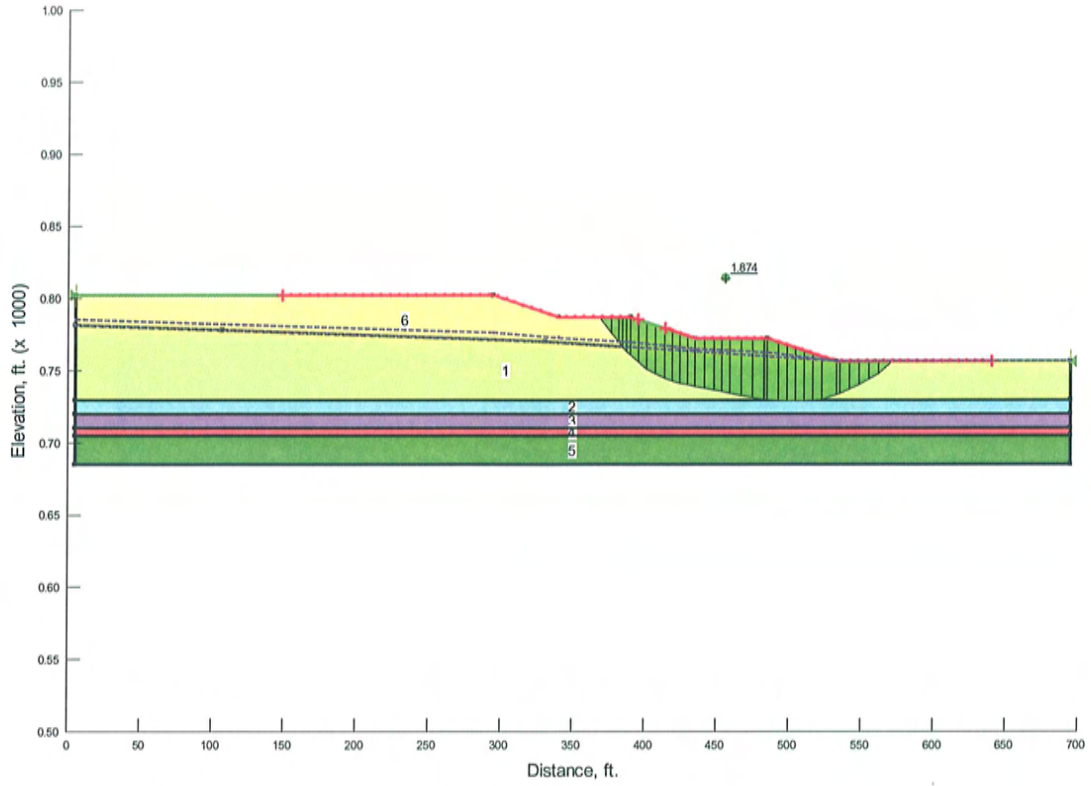


Figure 101 (A) – 10% Excess P.W.P in Clay Only

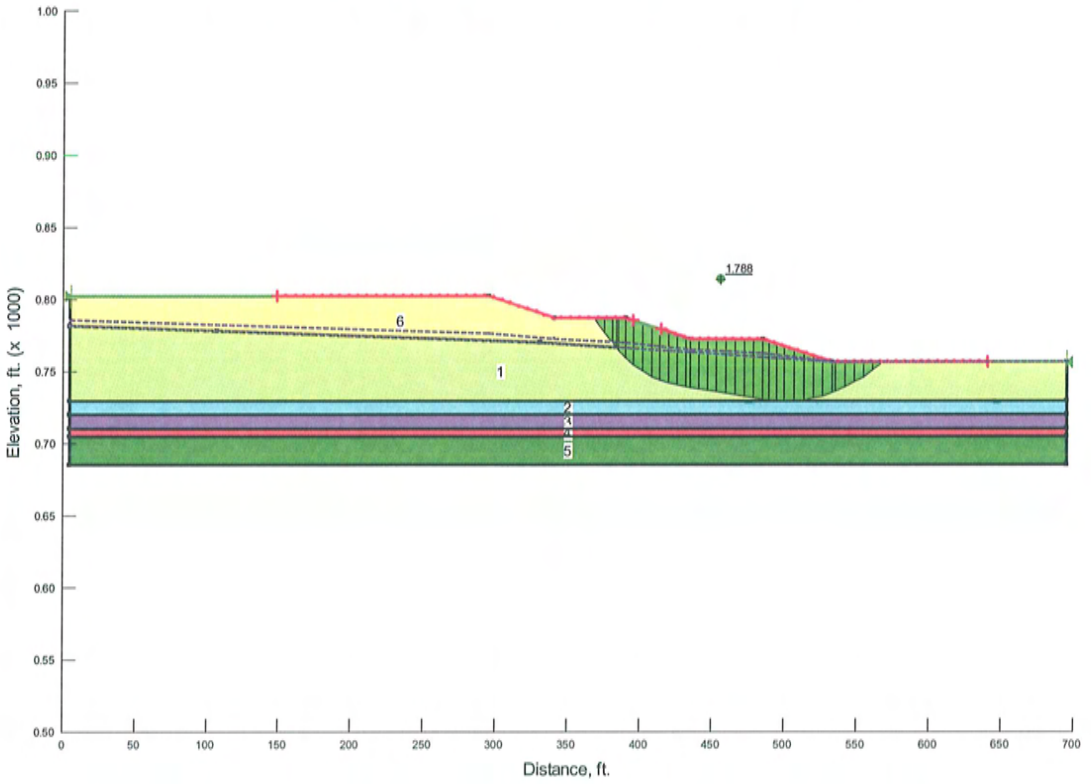


Figure 101 (B) – 10% Excess P.W.P in Both Clay and Existing Ash

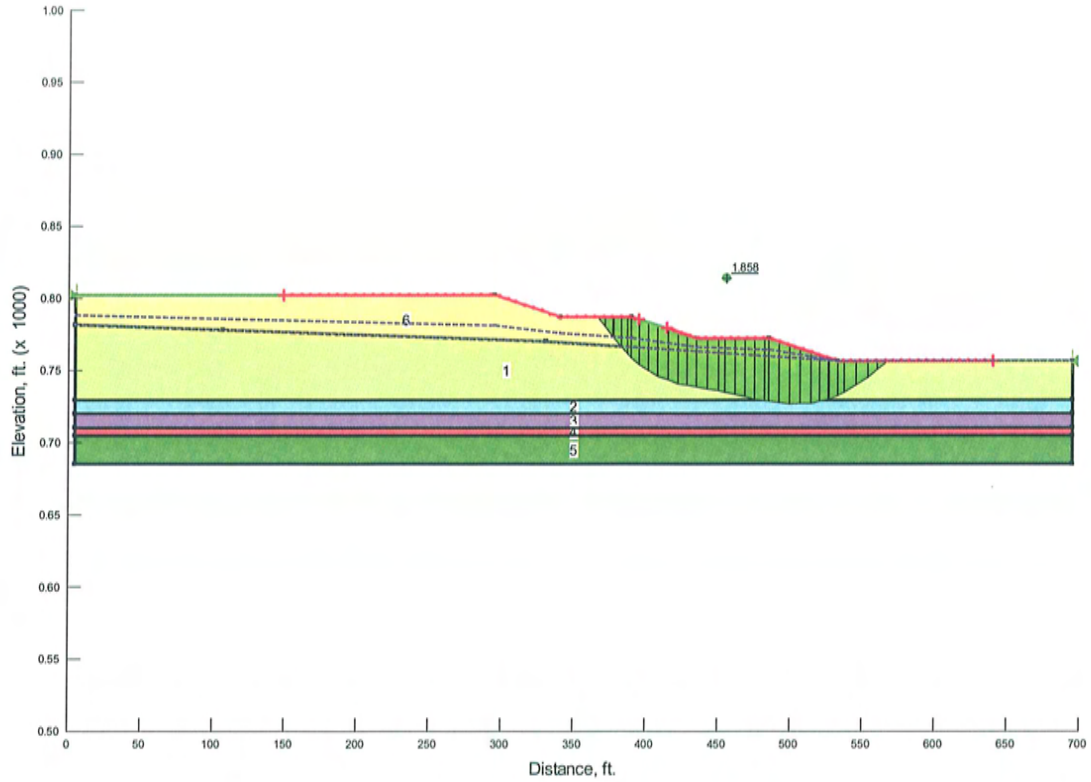


Figure 102 (A) – 20% Excess P.W.P in Clay Only

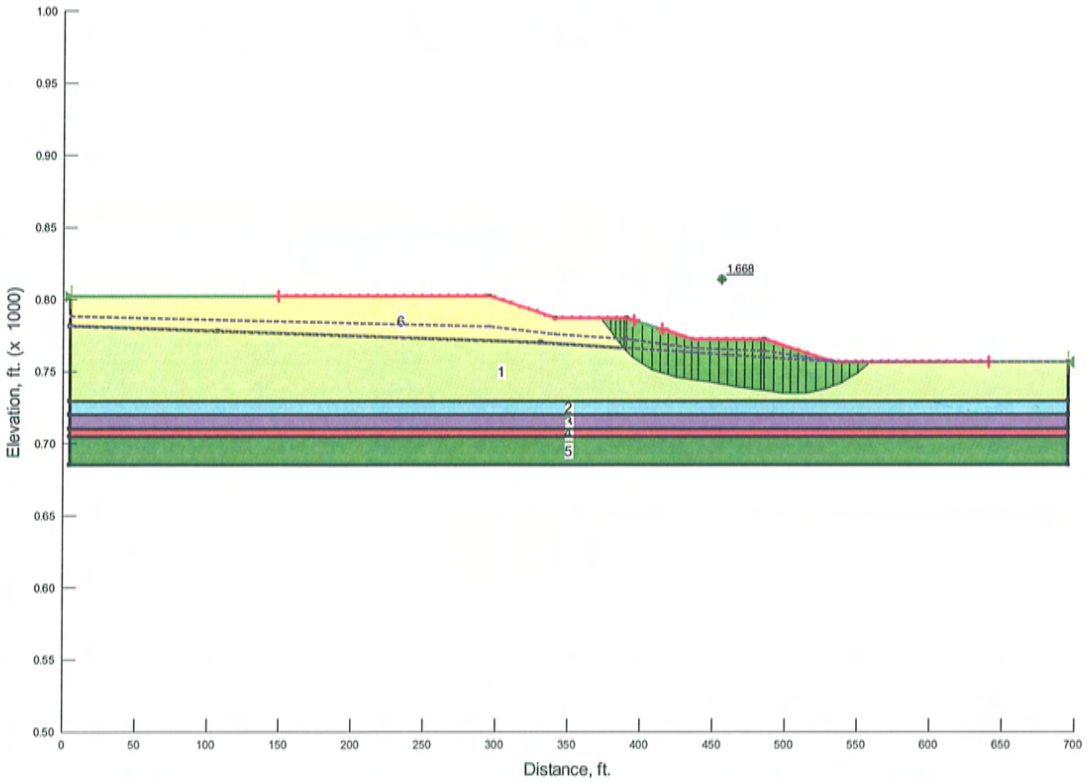


Figure 102 (B) – 20% Excess P.W.P in Both Clay and Existing Ash

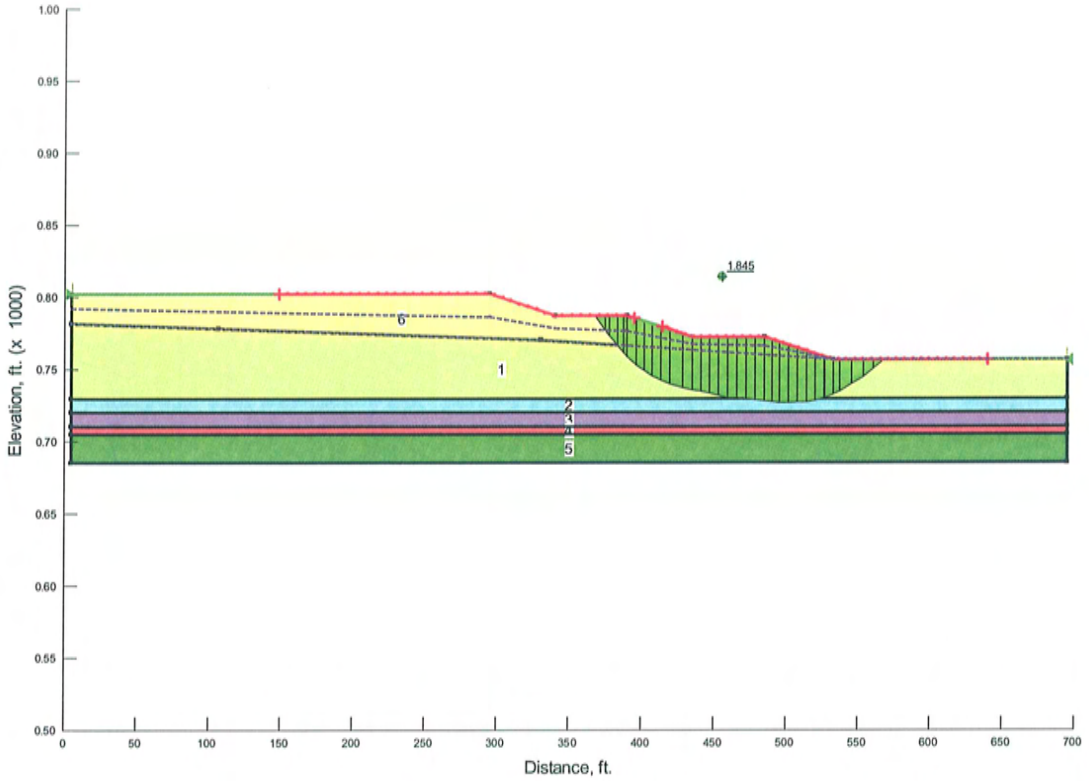


Figure 103 (A) – 30% Excess P.W.P in Clay Only

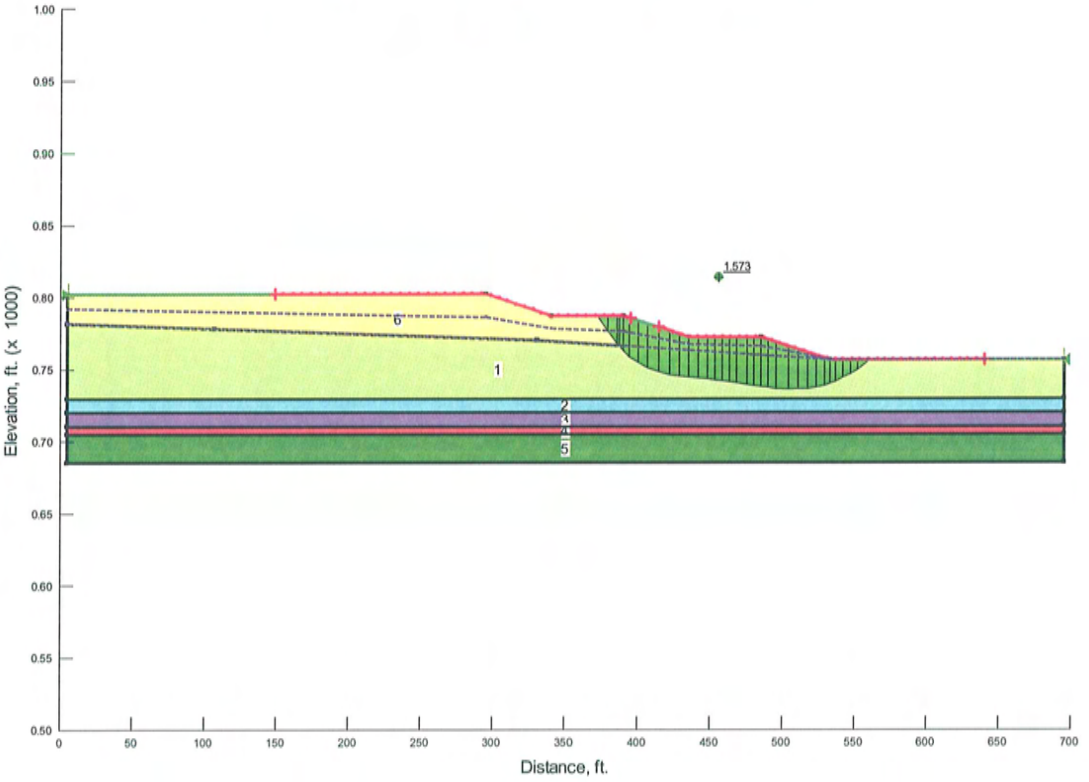


Figure 103 (B) – 30% Excess P.W.P in Both Clay and Existing Ash

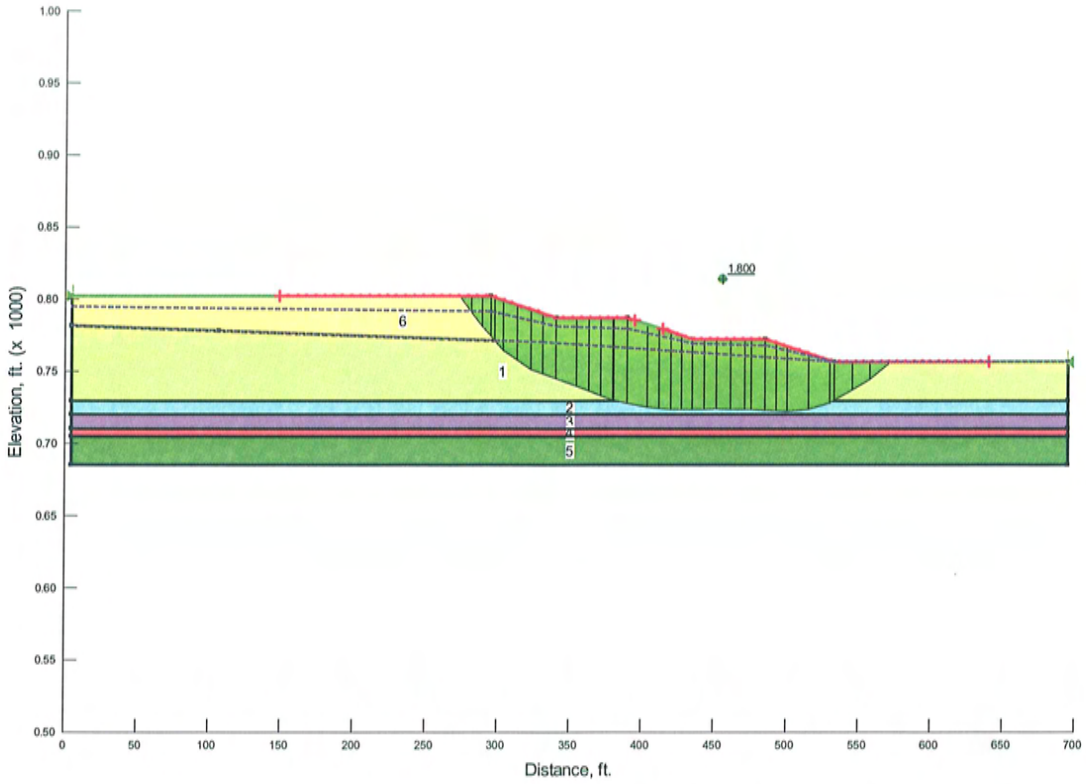


Figure 104 (A) – 40% Excess P.W.P in Clay Only

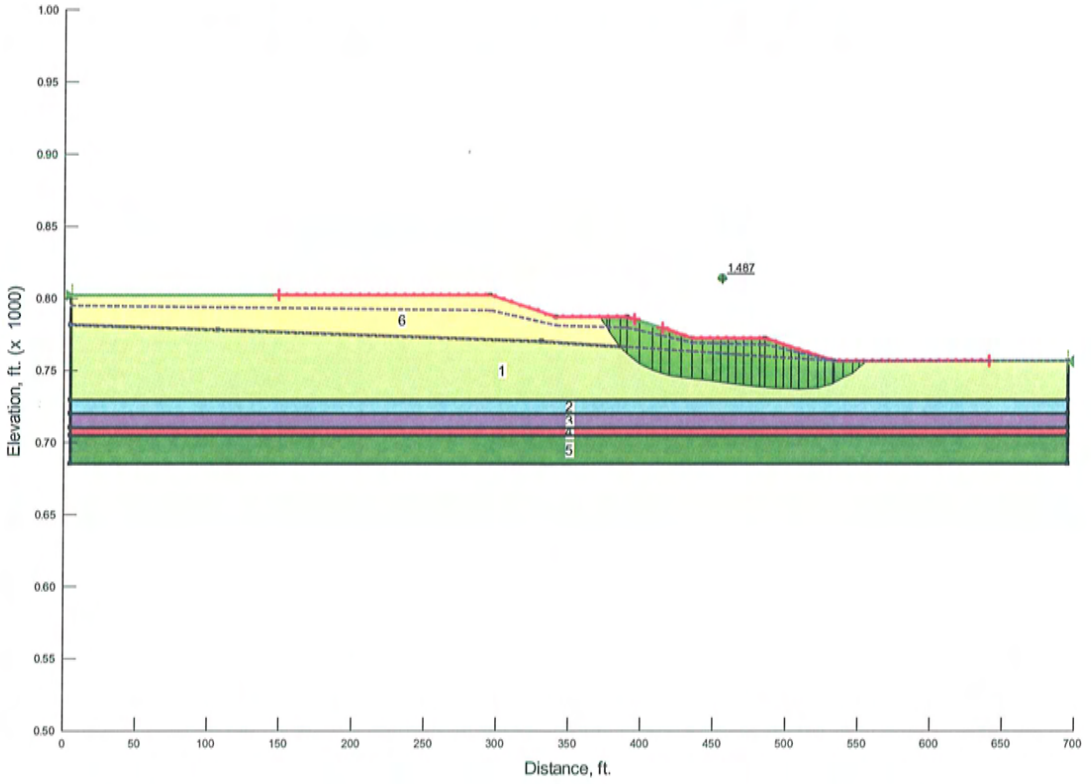


Figure 104 (B) – 40% Excess P.W.P in Both Clay and Existing Ash

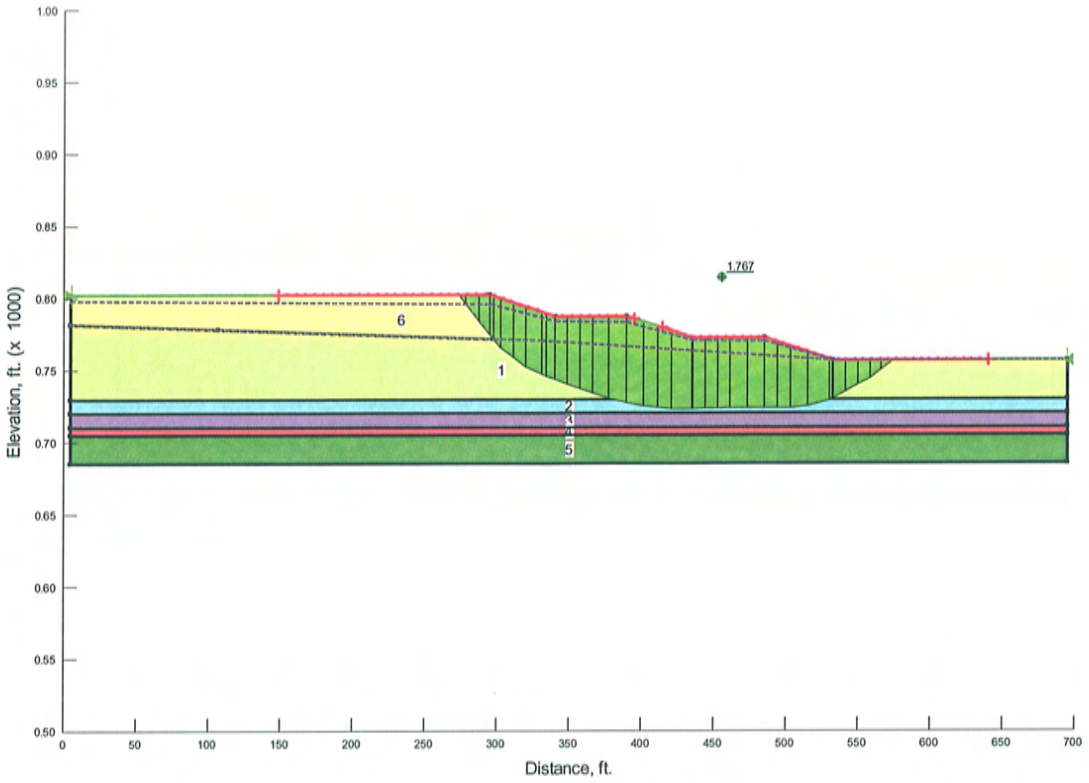


Figure 105 (A) – 50% Excess P.W.P in Clay Only

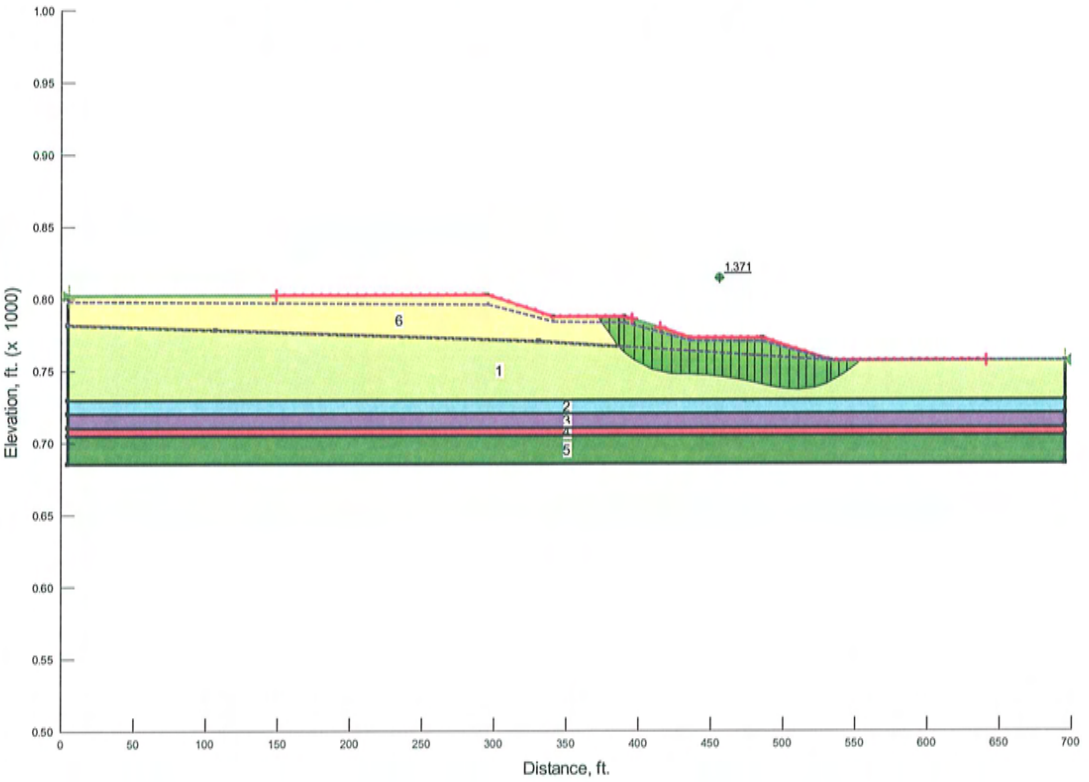


Figure 105 (B) – 50% Excess P.W.P in Both Clay and Existing Ash

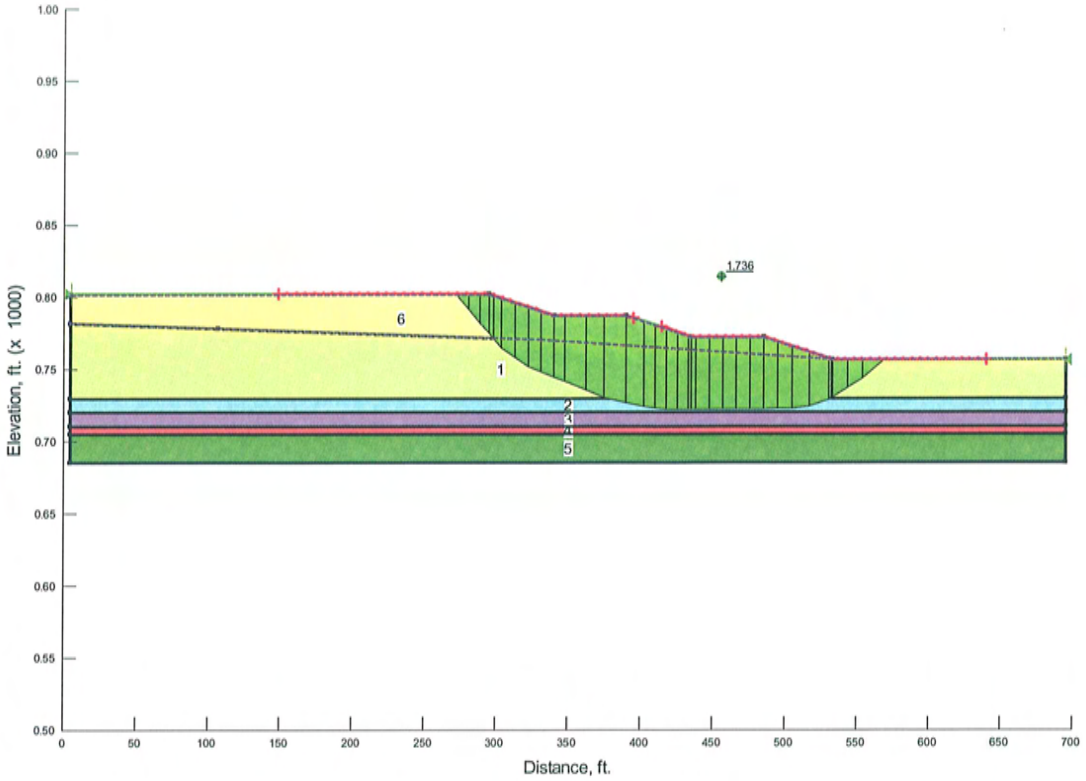


Figure 106 (A) – 60% Excess P.W.P in Clay Only

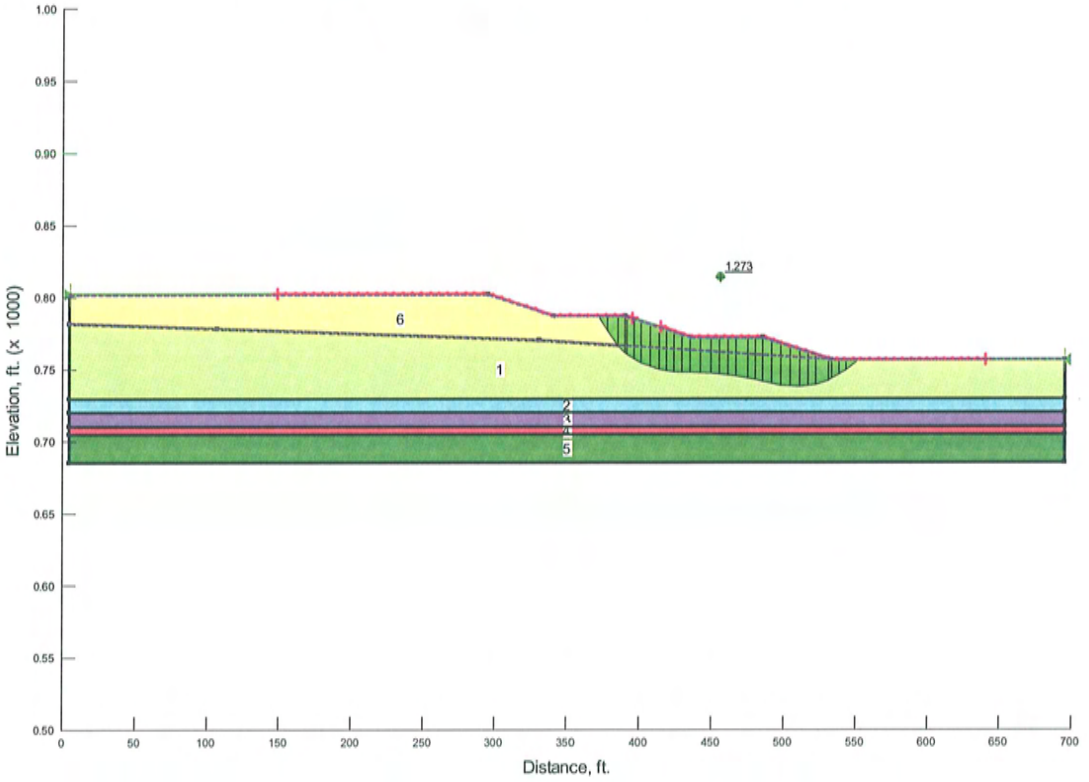


Figure 106 (B) – 60% Excess P.W.P in Both Clay and Existing Ash

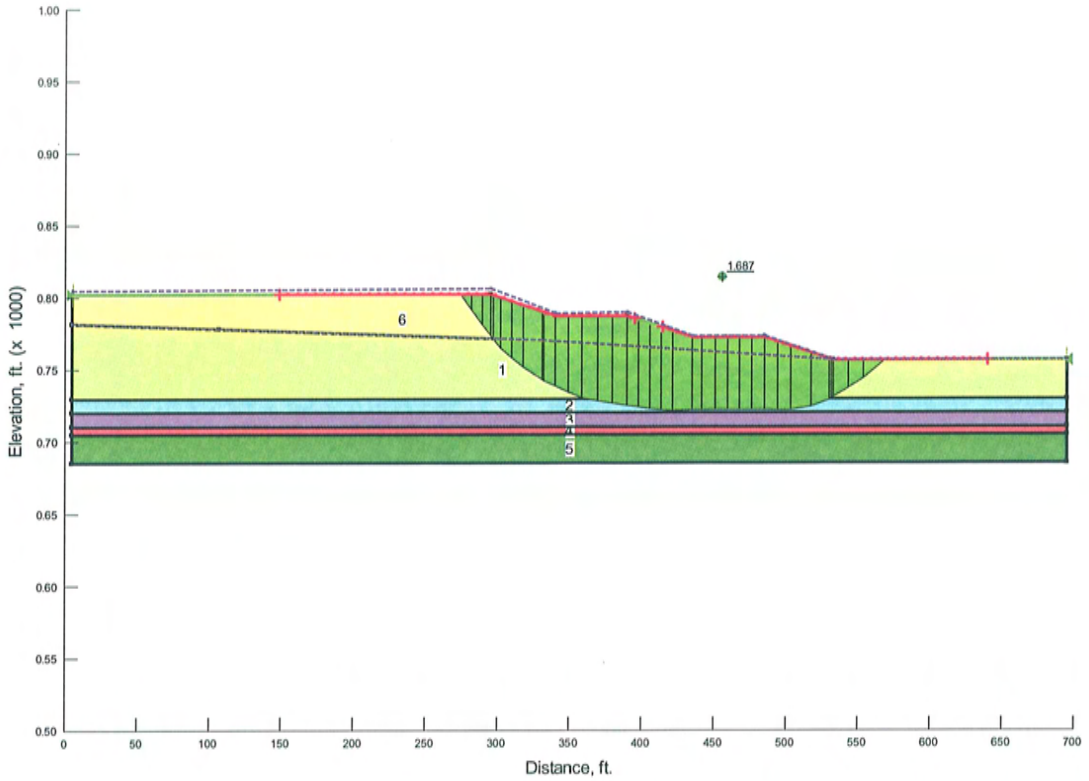


Figure 107 (A) – 70% Excess P.W.P in Clay Only

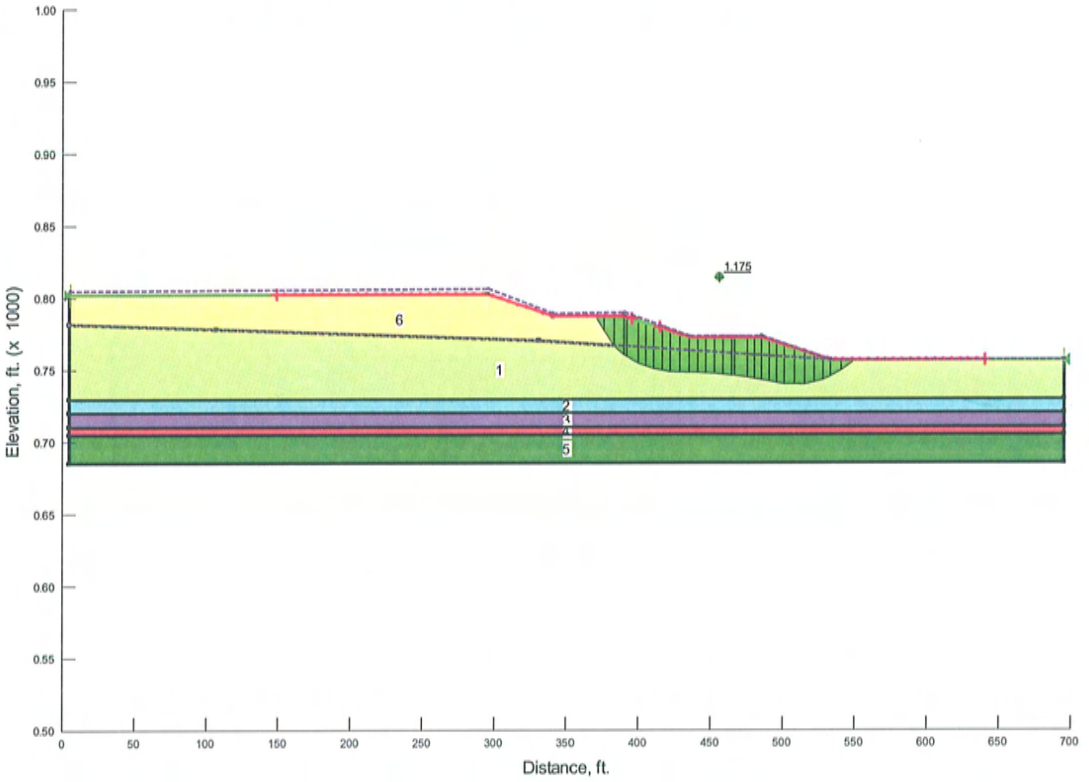


Figure 107 (B) – 70% Excess P.W.P in Both Clay and Existing Ash

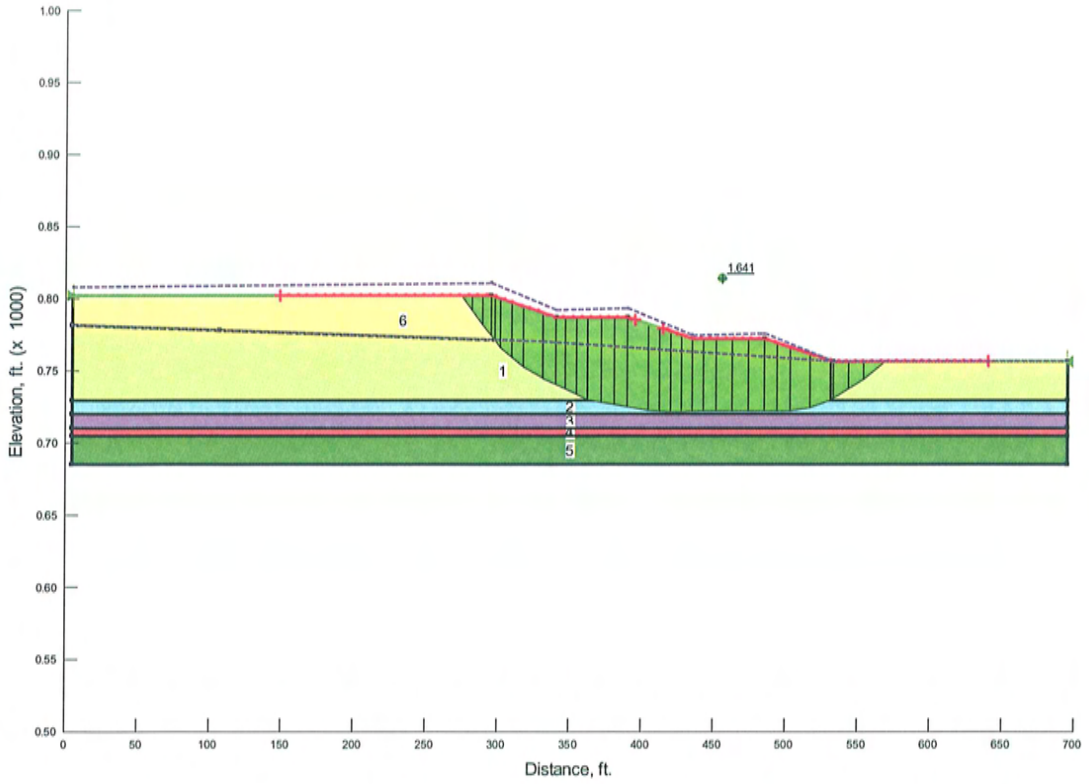


Figure 108 (A) – 80% Excess P.W.P in Clay Only

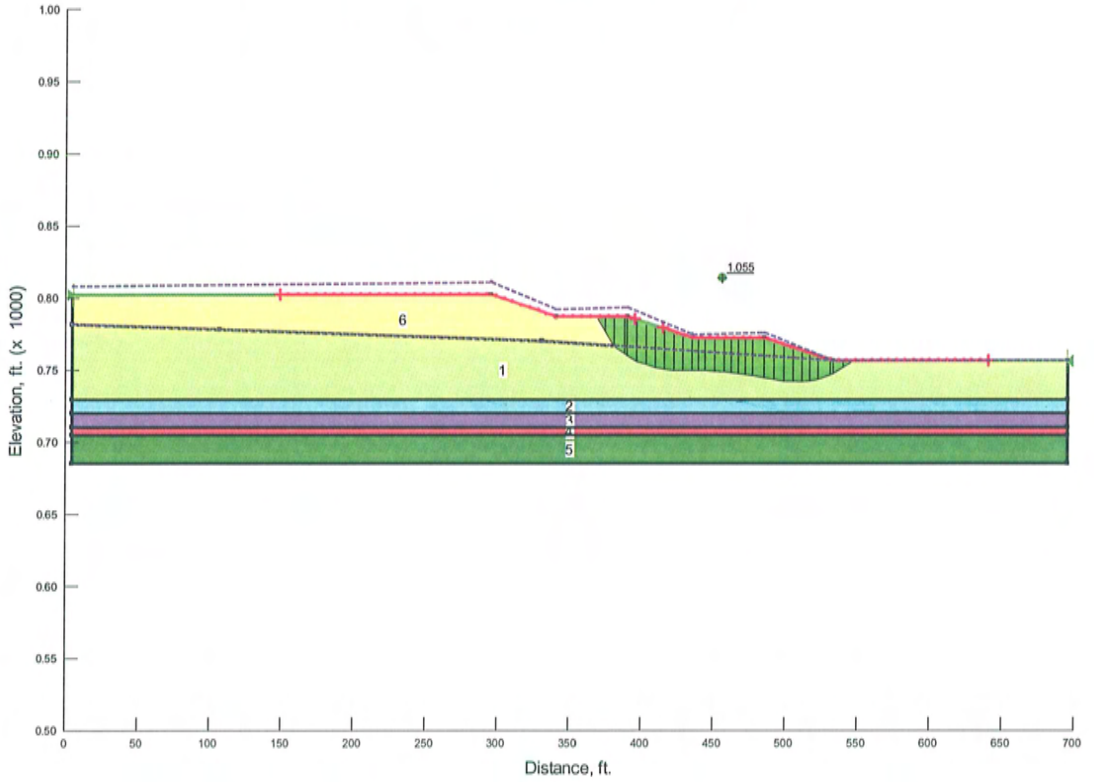


Figure 108 (B) – 80% Excess P.W.P in Both Clay and Existing Ash

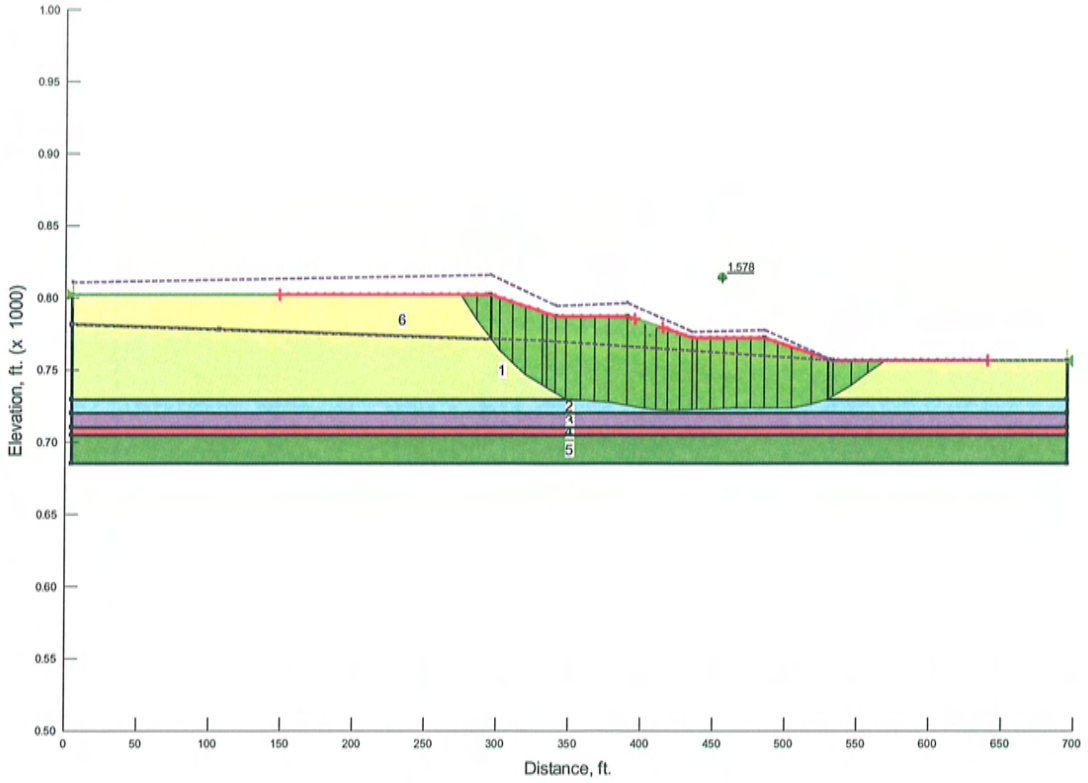


Figure 109 (A) – 90% Excess P.W.P in Clay Only

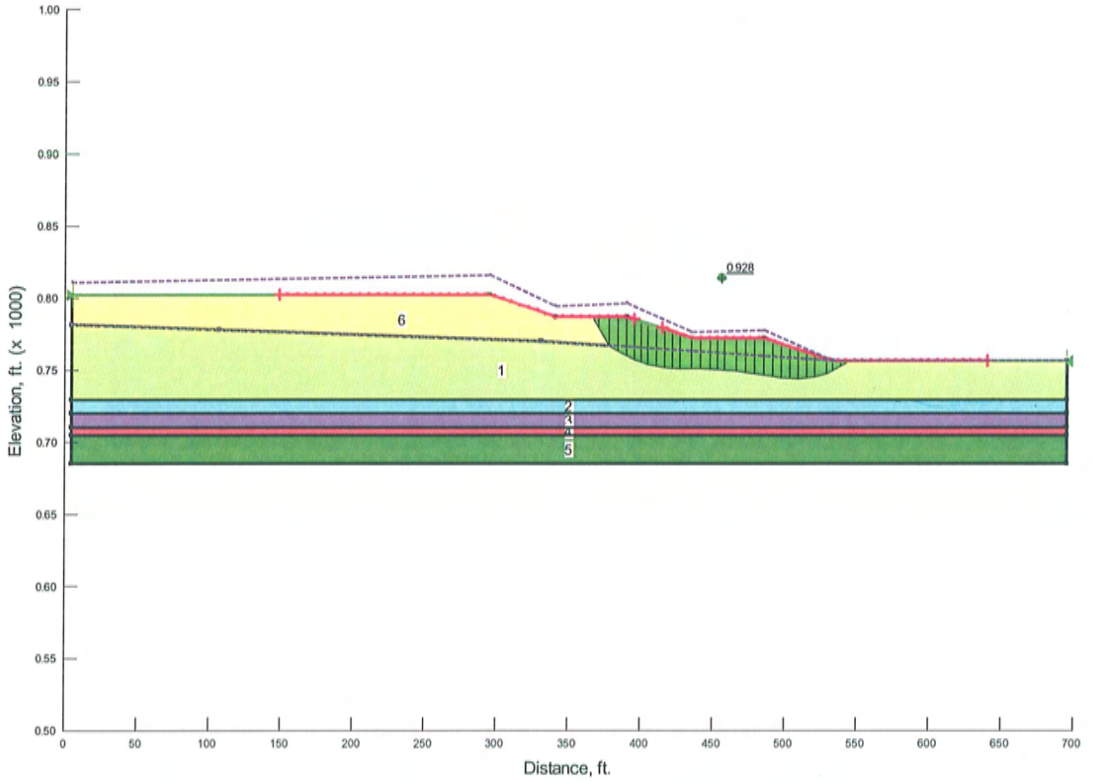


Figure 109 (B) – 90% Excess P.W.P in Both Clay and Existing Ash

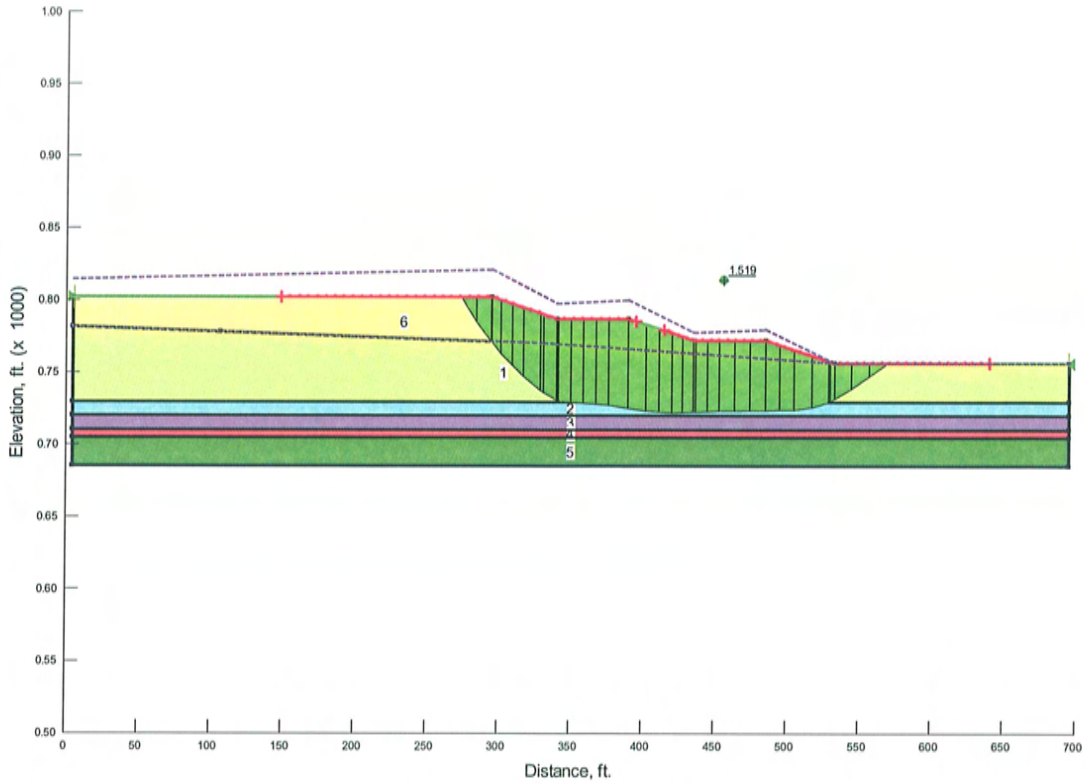


Figure 110 (A) – 100% Excess P.W.P in Clay Only

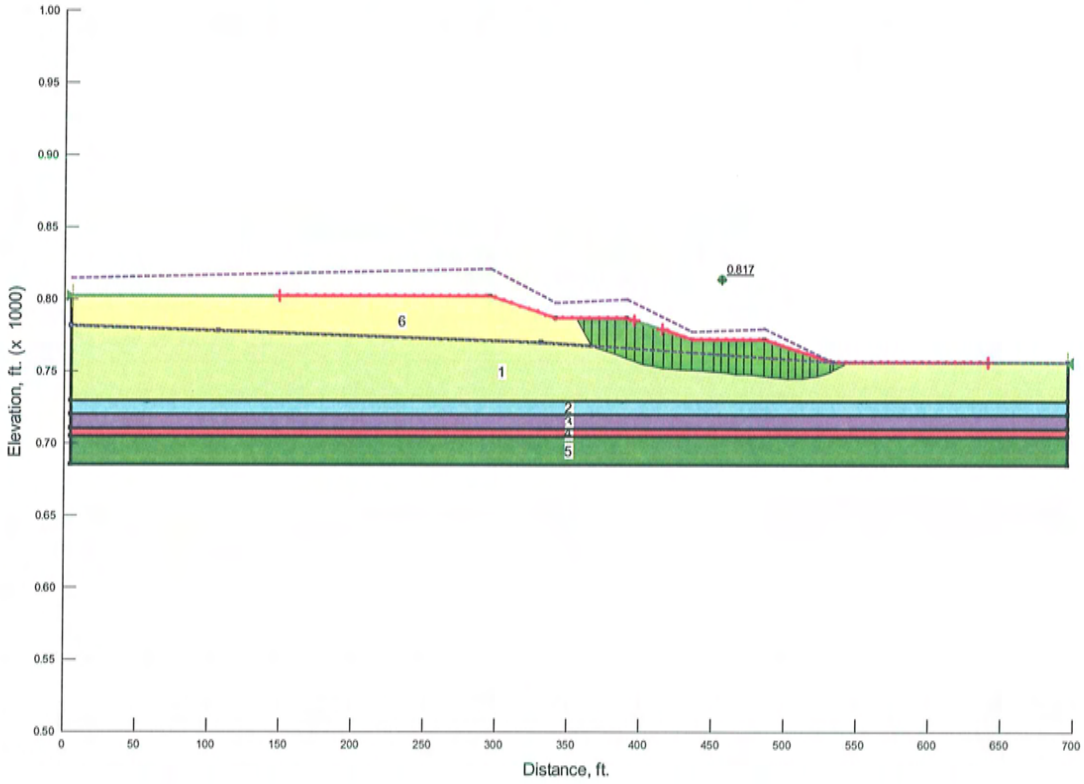


Figure 110 (B) – 100% Excess P.W.P in Both Clay and Existing Ash

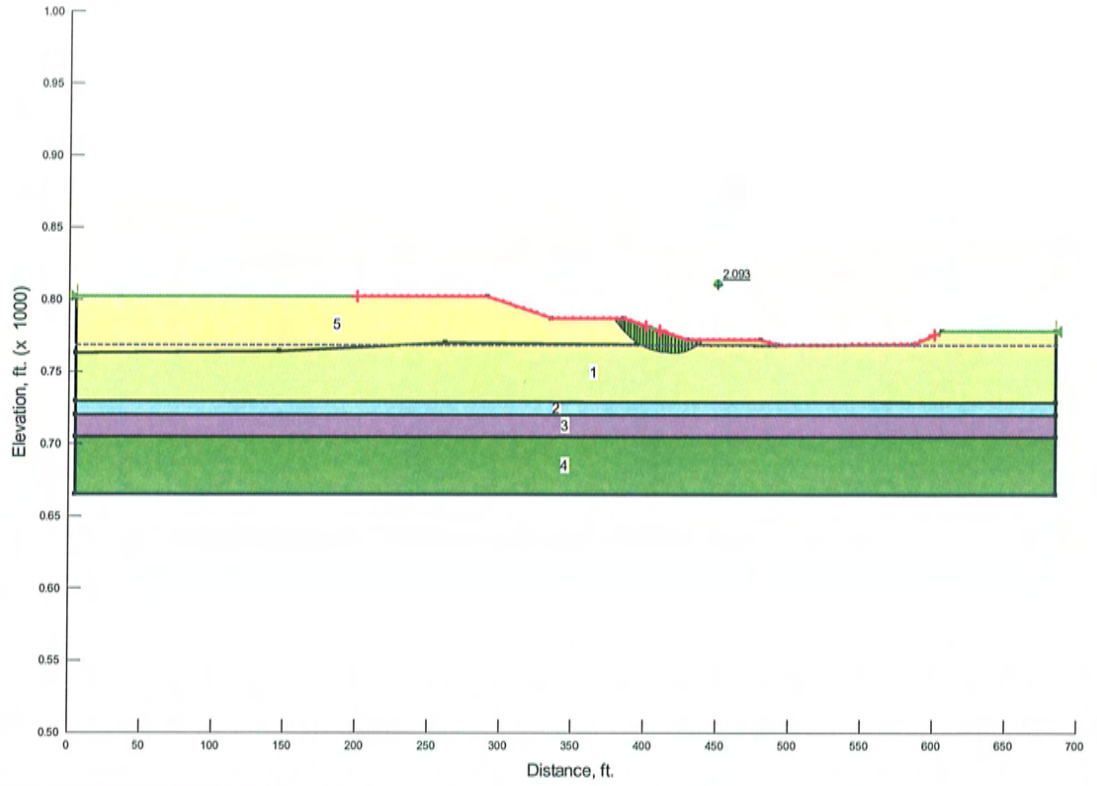


Figure 2A (A) – Peak Undrained Strength in Clay (c=1,380 psf)

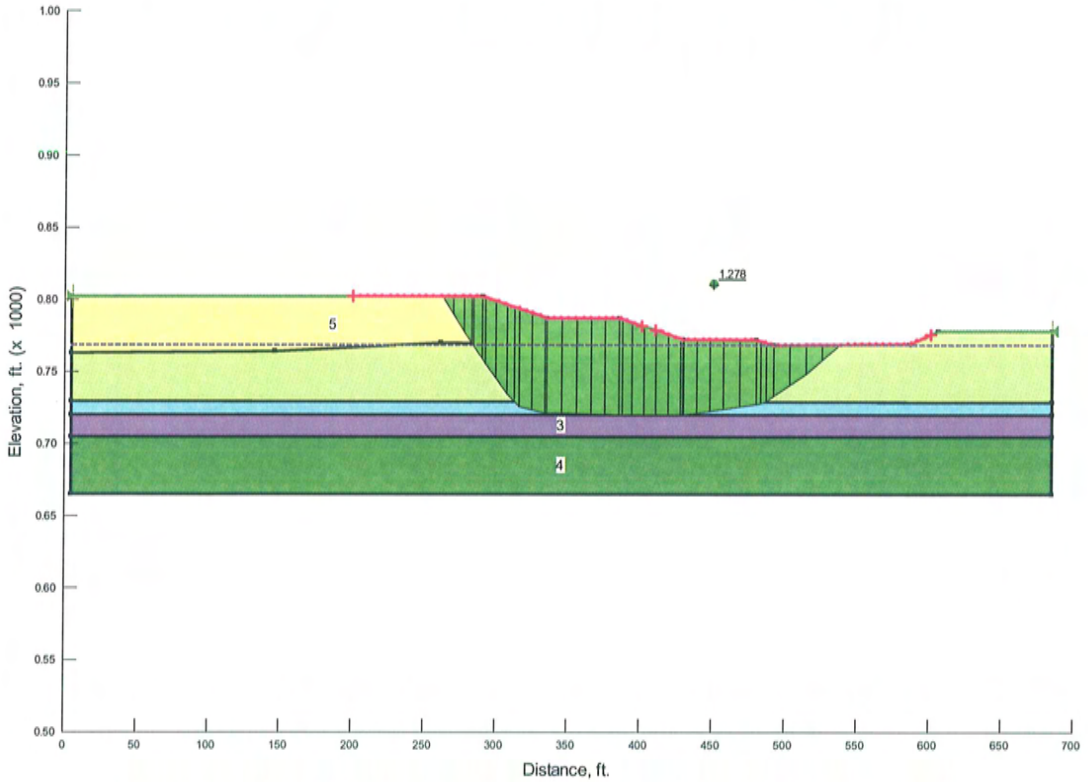


Figure 2A (B) – Residual Undrained Strength for Clay (c=280 psf)

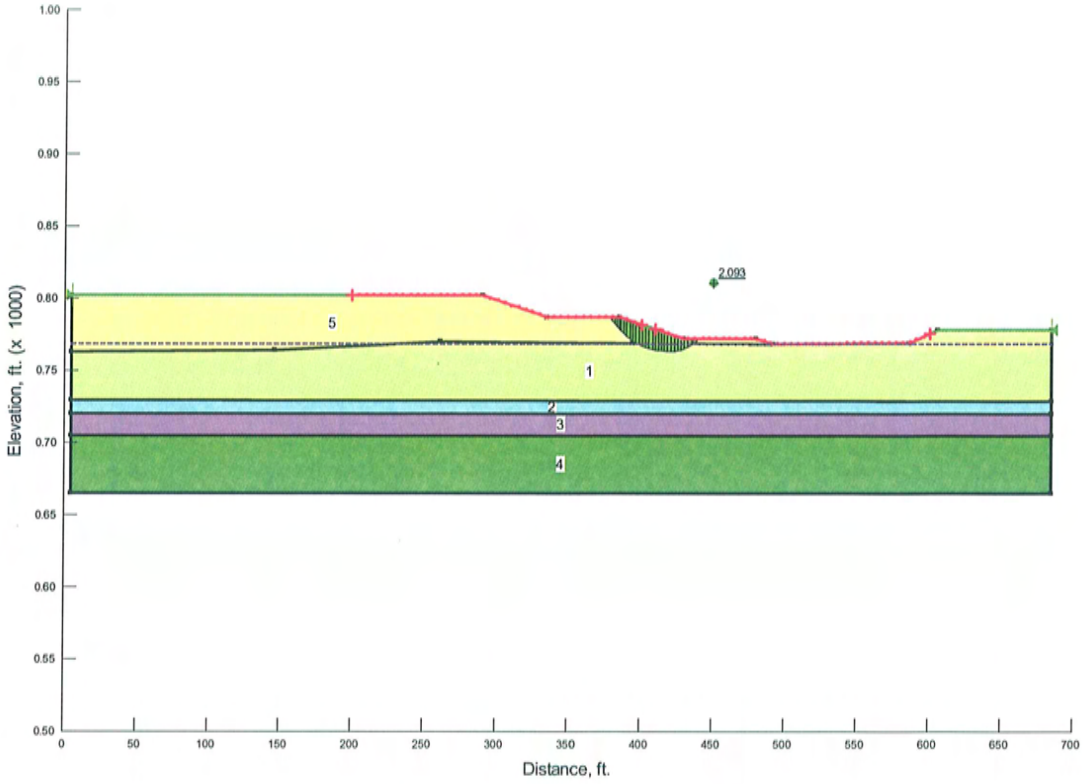


Figure 200 – No Excess P.W.P

Section 2A Plots

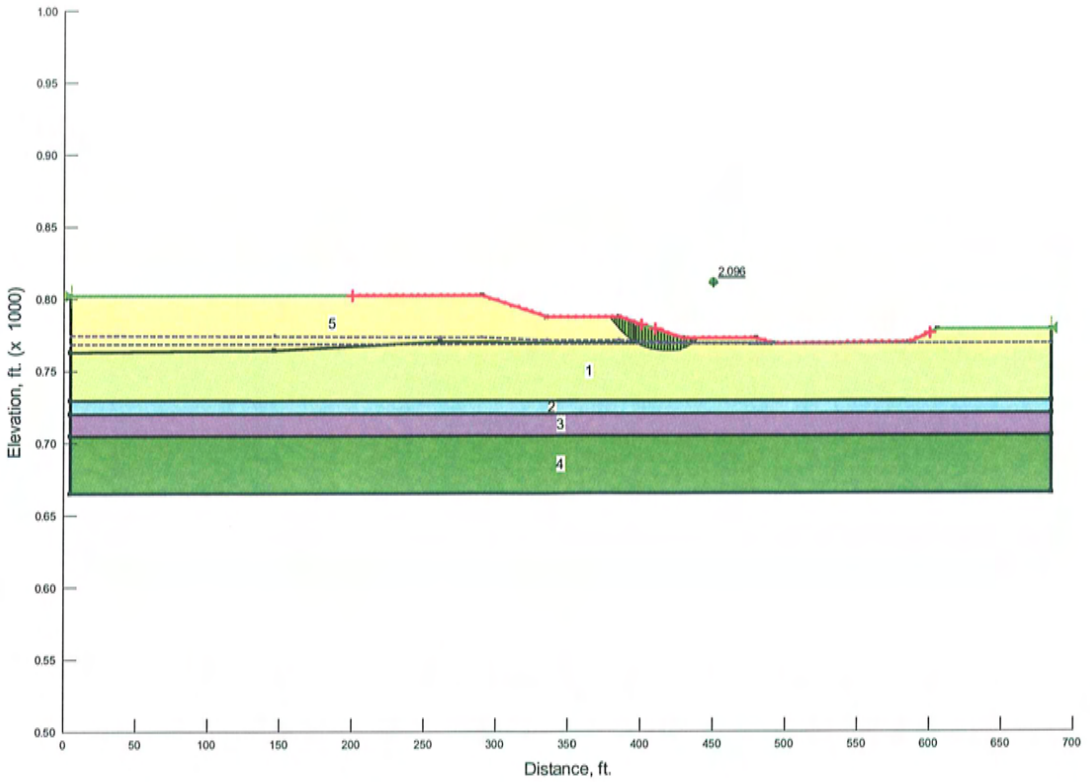


Figure 201 (A) – 10% Excess P.W.P in Clay Only

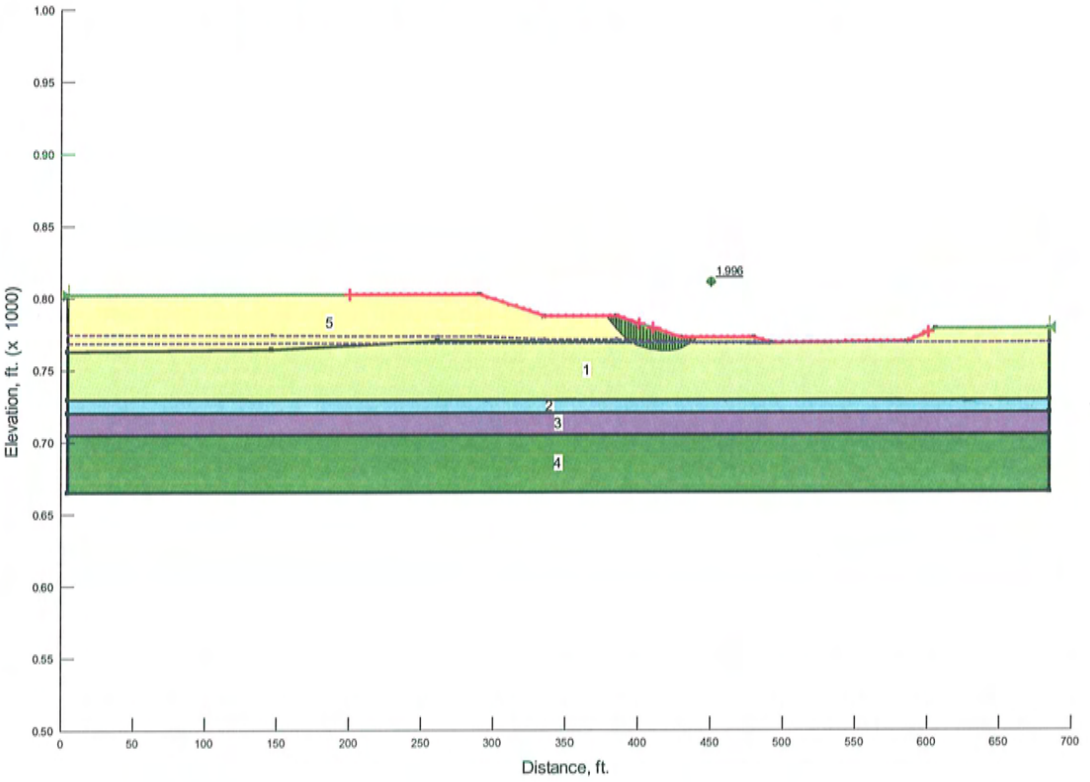


Figure 201 (B) – 10% Excess P.W.P in Both Clay and Existing Ash

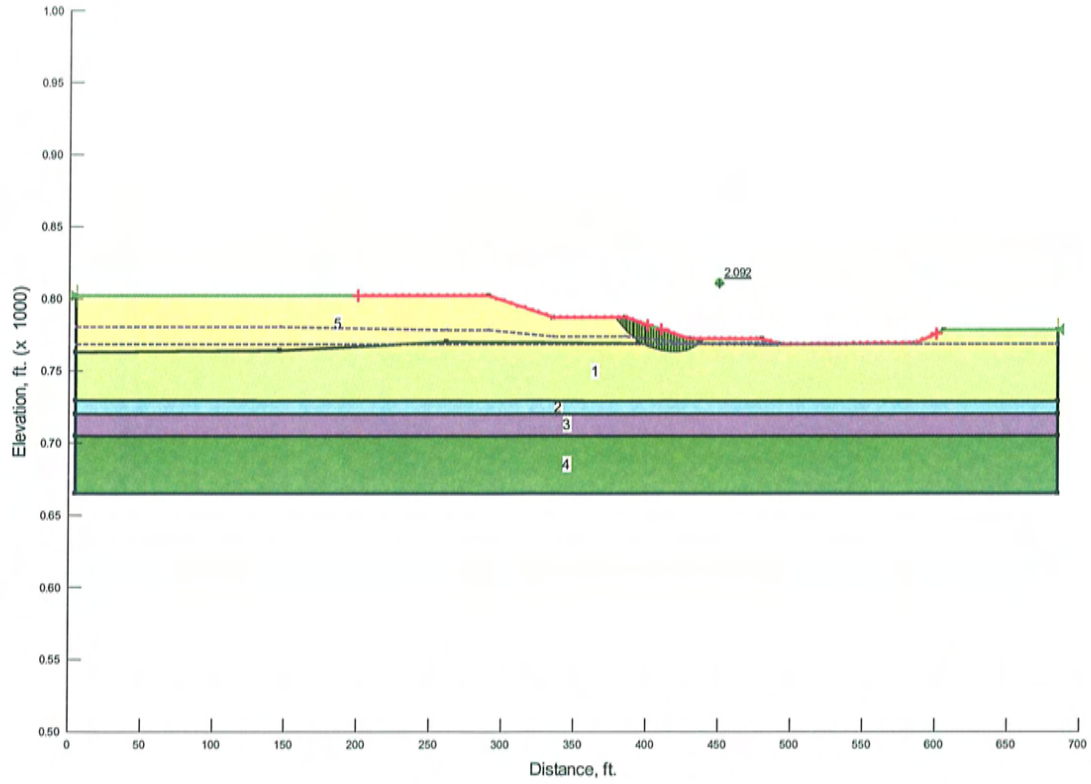


Figure 202 (A) – 20% Excess P.W.P in Clay Only

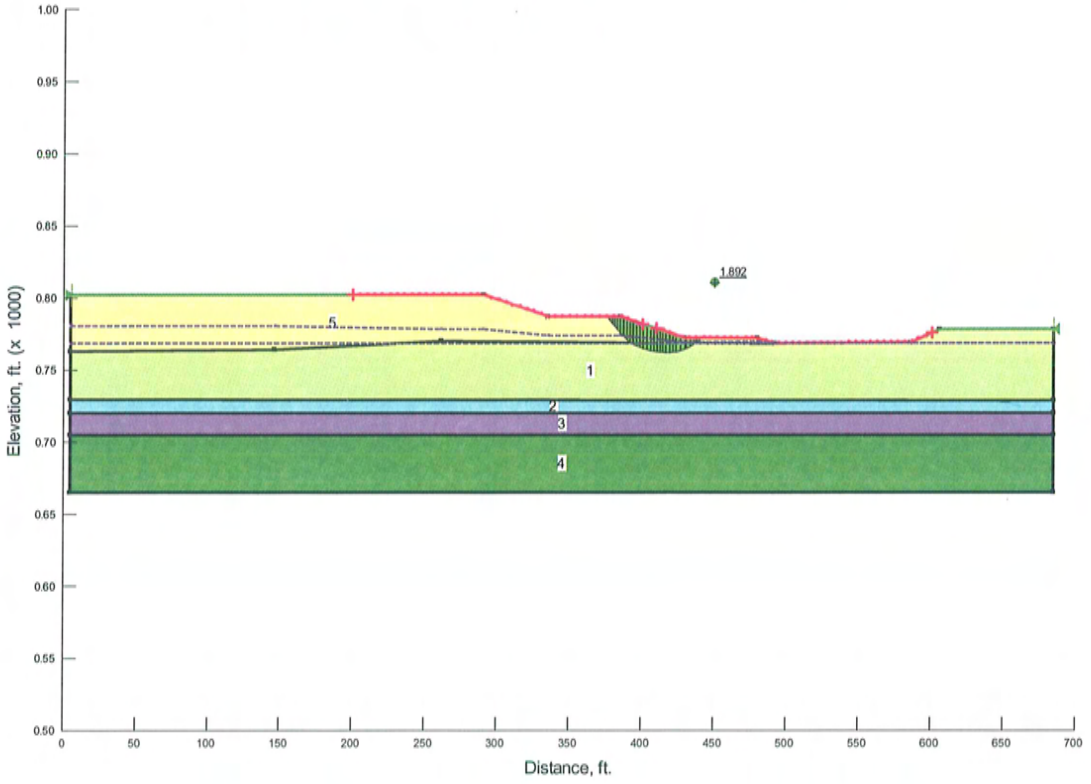


Figure 202 (B) – 20% Excess P.W.P in Both Clay and Existing Ash

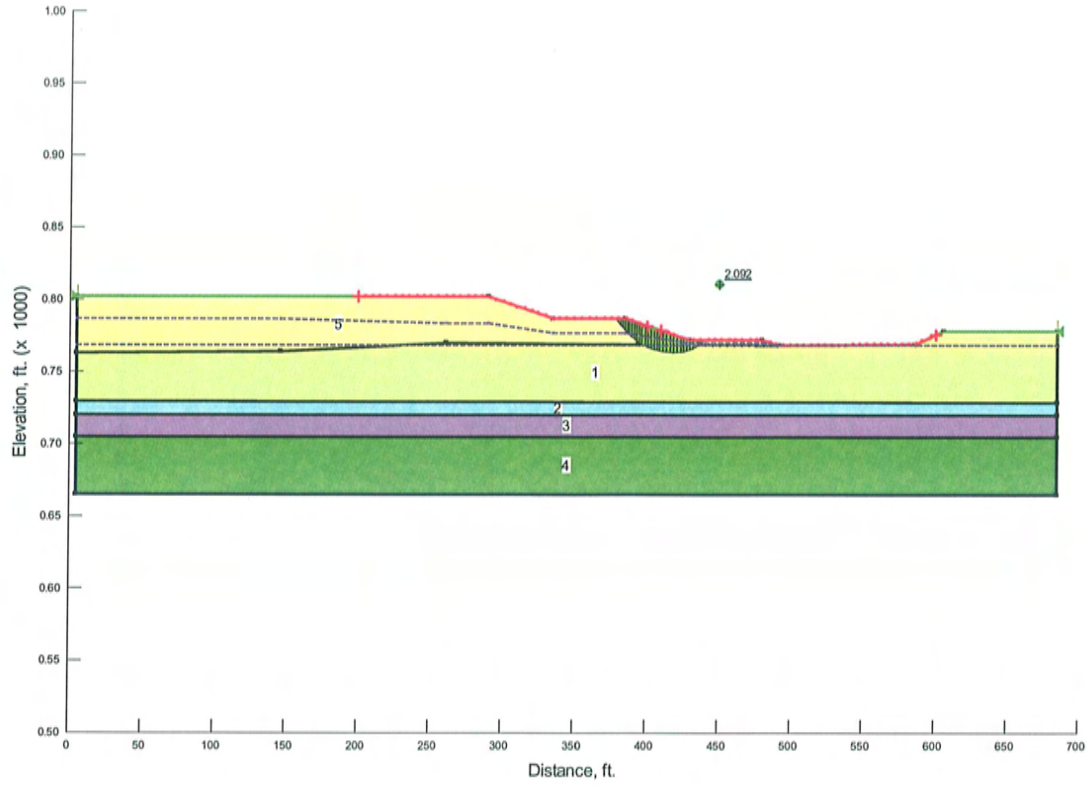


Figure 203 (A) – 30% Excess P.W.P in Clay Only

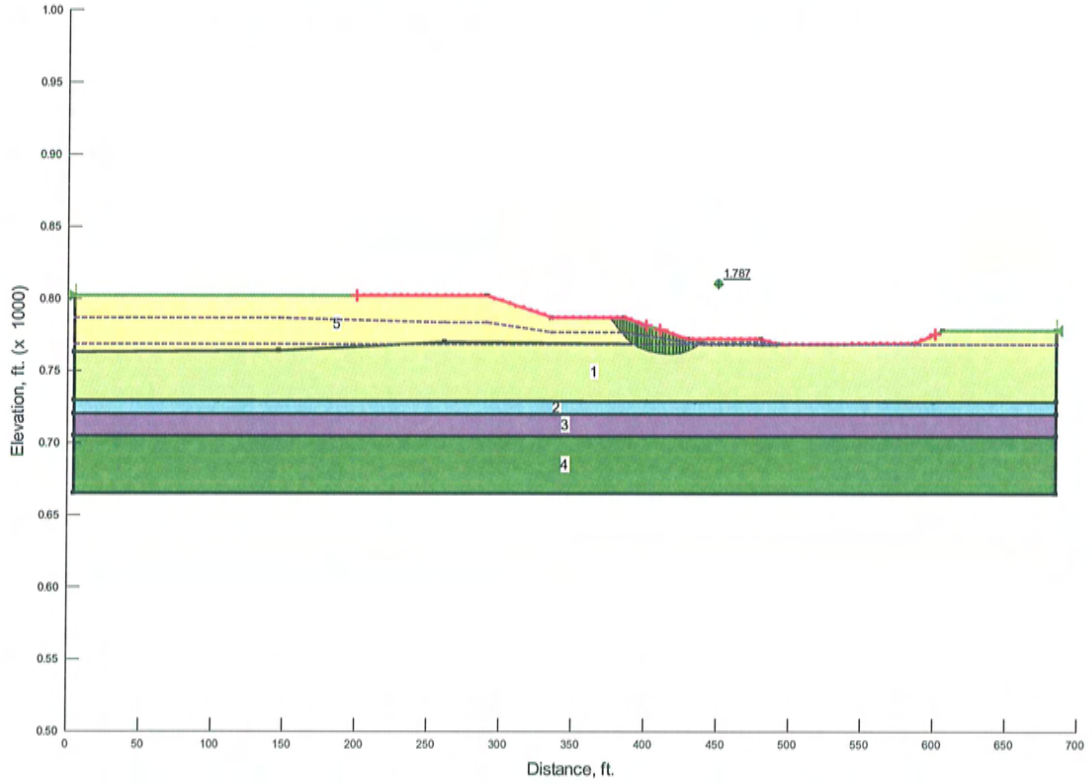


Figure 203 (B) – 30% Excess P.W.P in Both Clay and Existing Ash

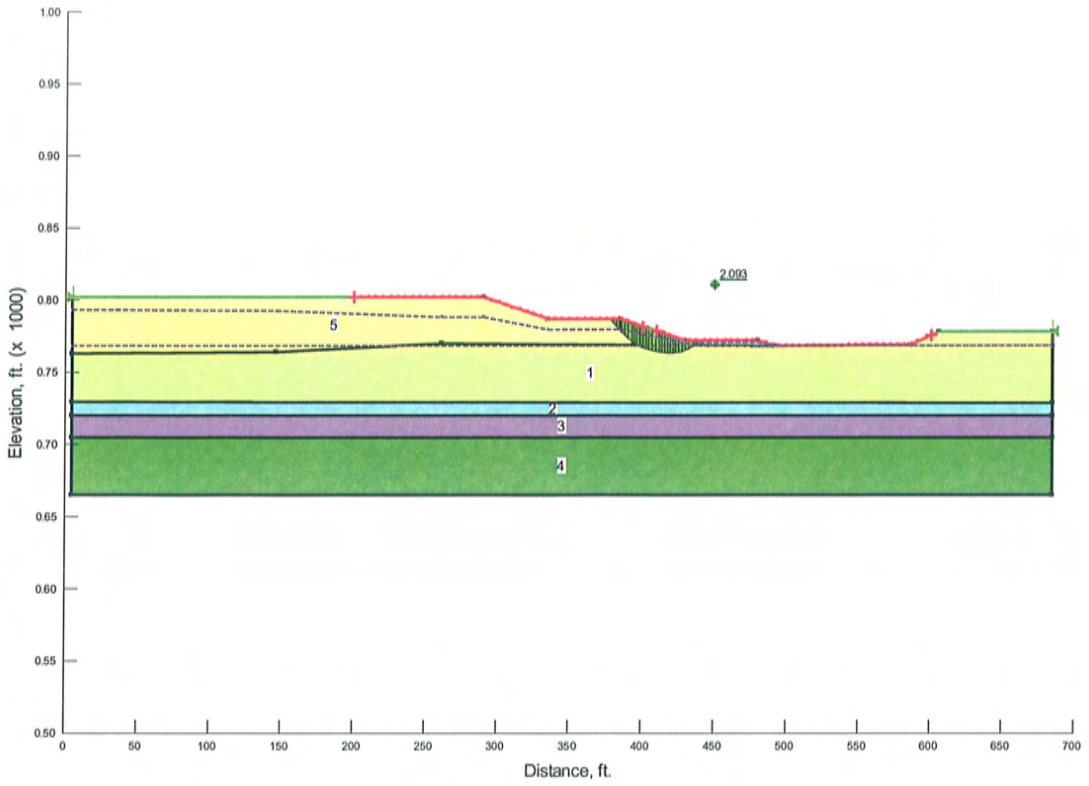


Figure 204 (A) – 40% Excess P.W.P in Clay Only

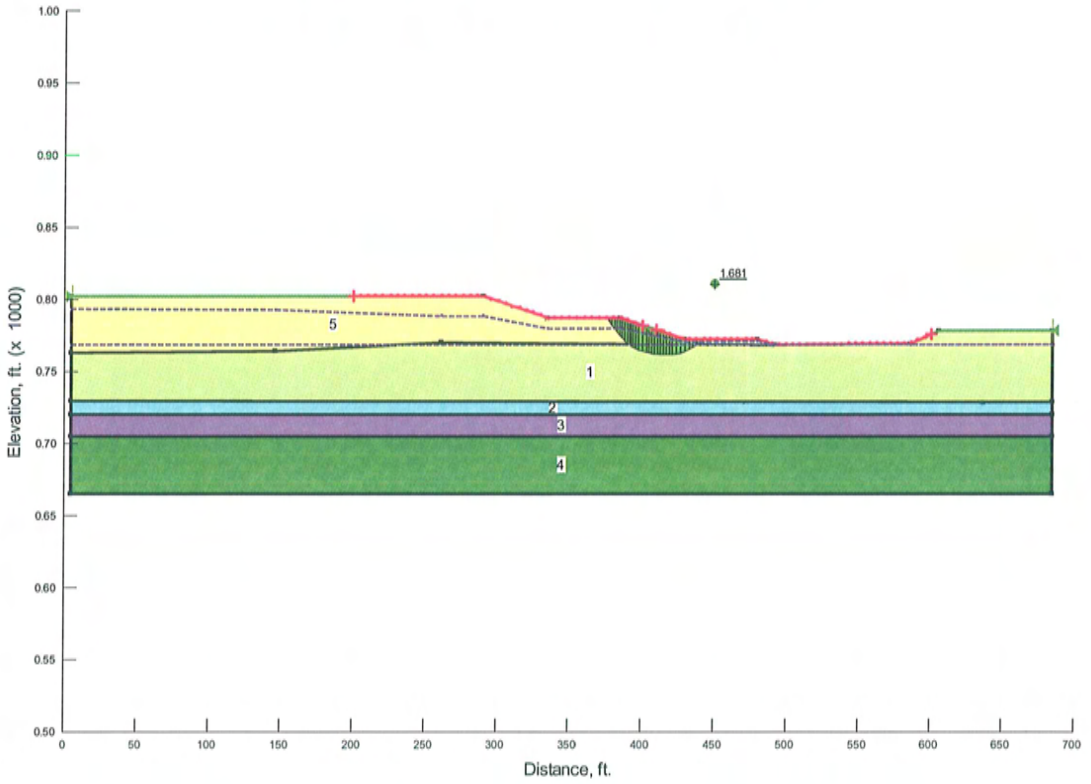


Figure 204 (B) – 40% Excess P.W.P in Both Clay and Existing Ash

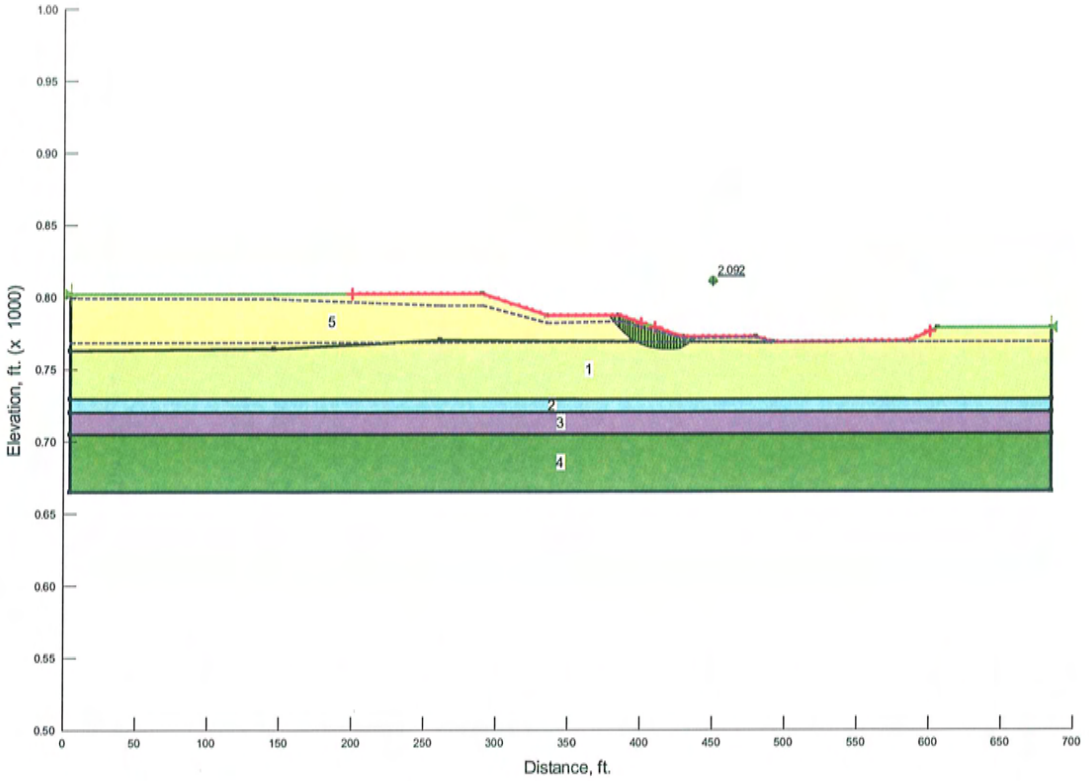


Figure 205 (A) – 50% Excess P.W.P in Clay Only

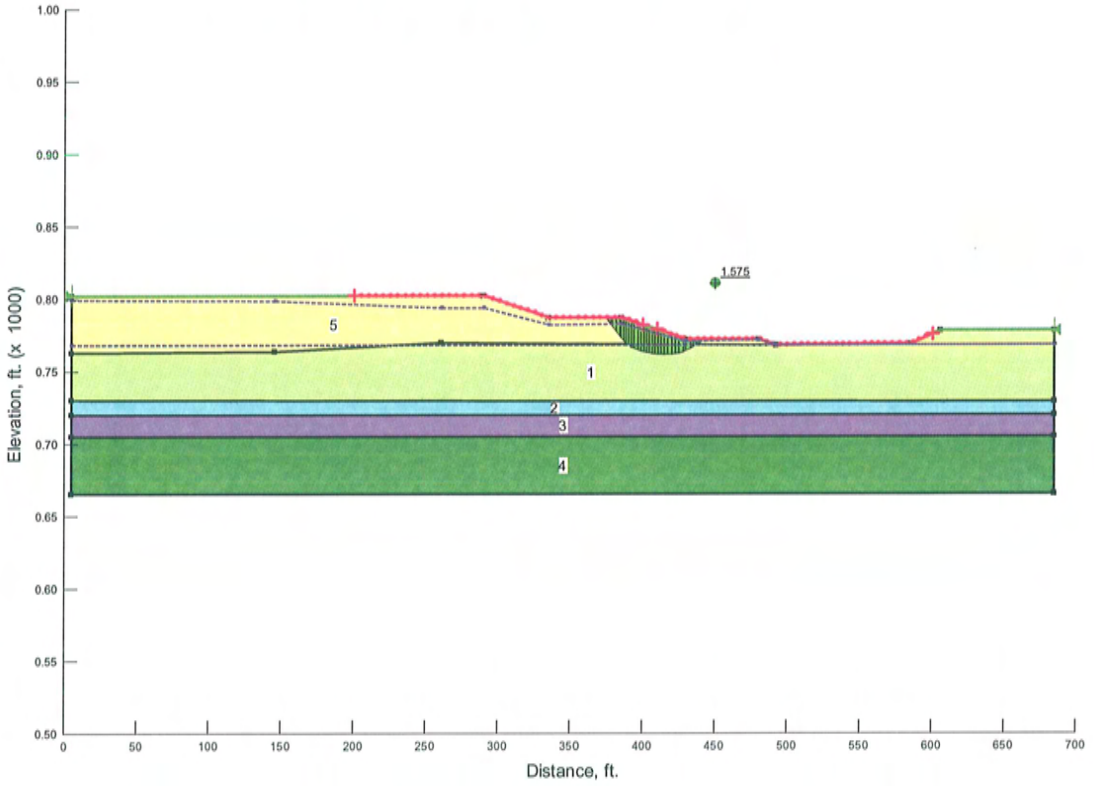


Figure 205 (B) – 50% Excess P.W.P in Both Clay and Existing Ash

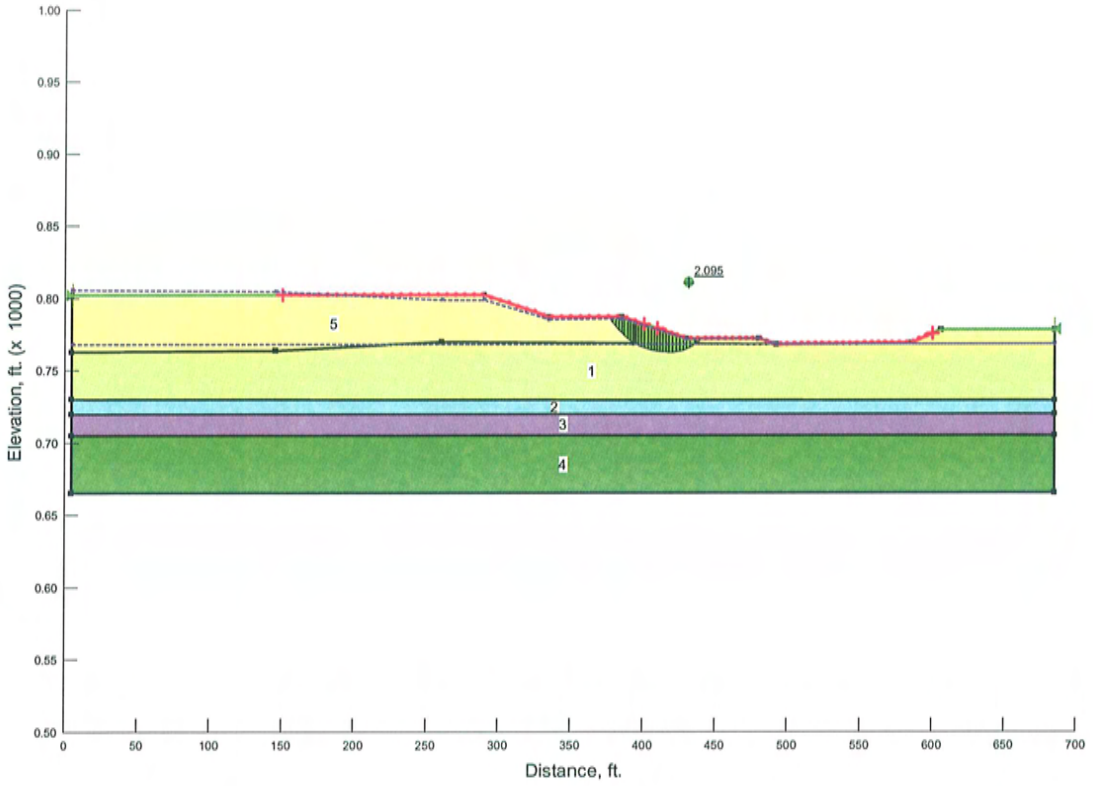


Figure 206 (A) – 60% Excess P.W.P in Clay Only

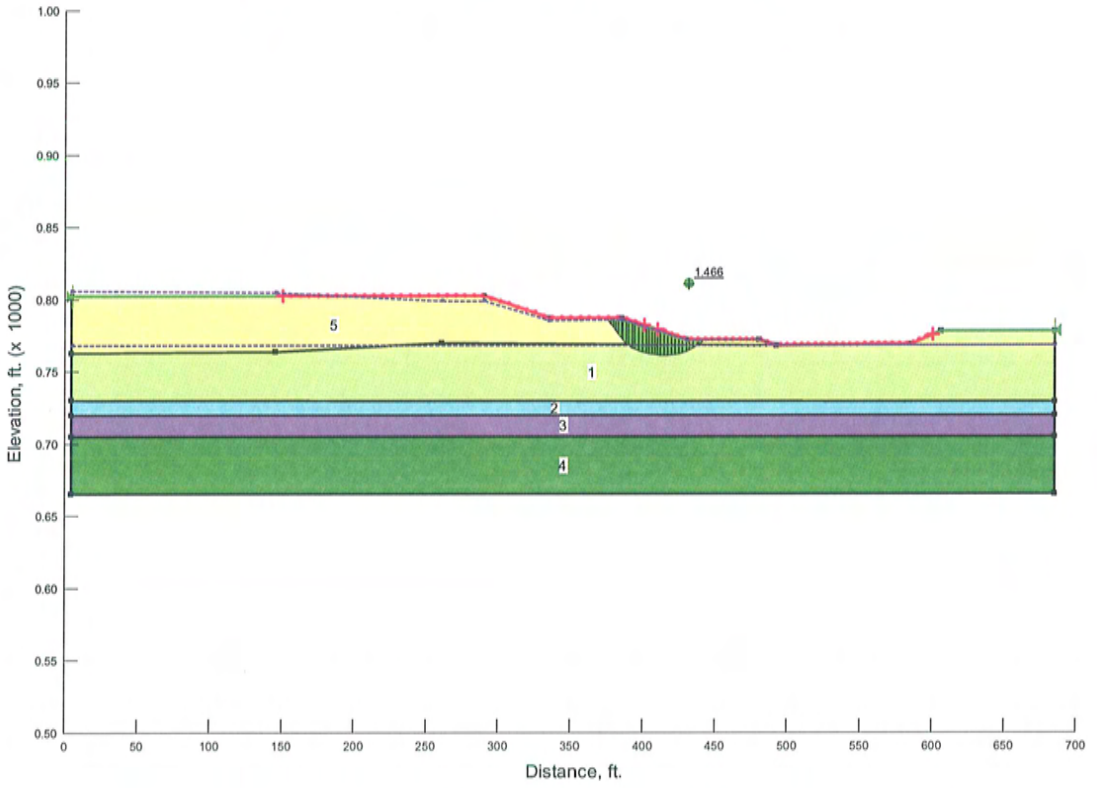


Figure 206 (B) – 60% Excess P.W.P in Both Clay and Existing Ash

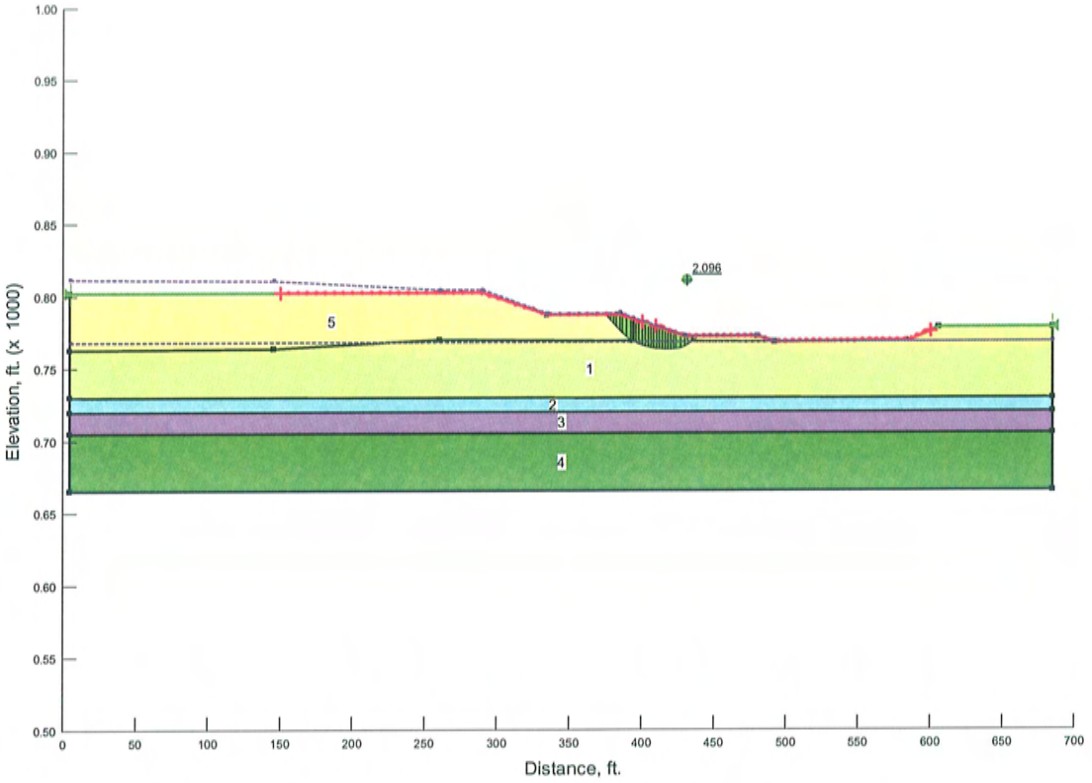


Figure 207 (A) – 70% Excess P.W.P in Clay Only

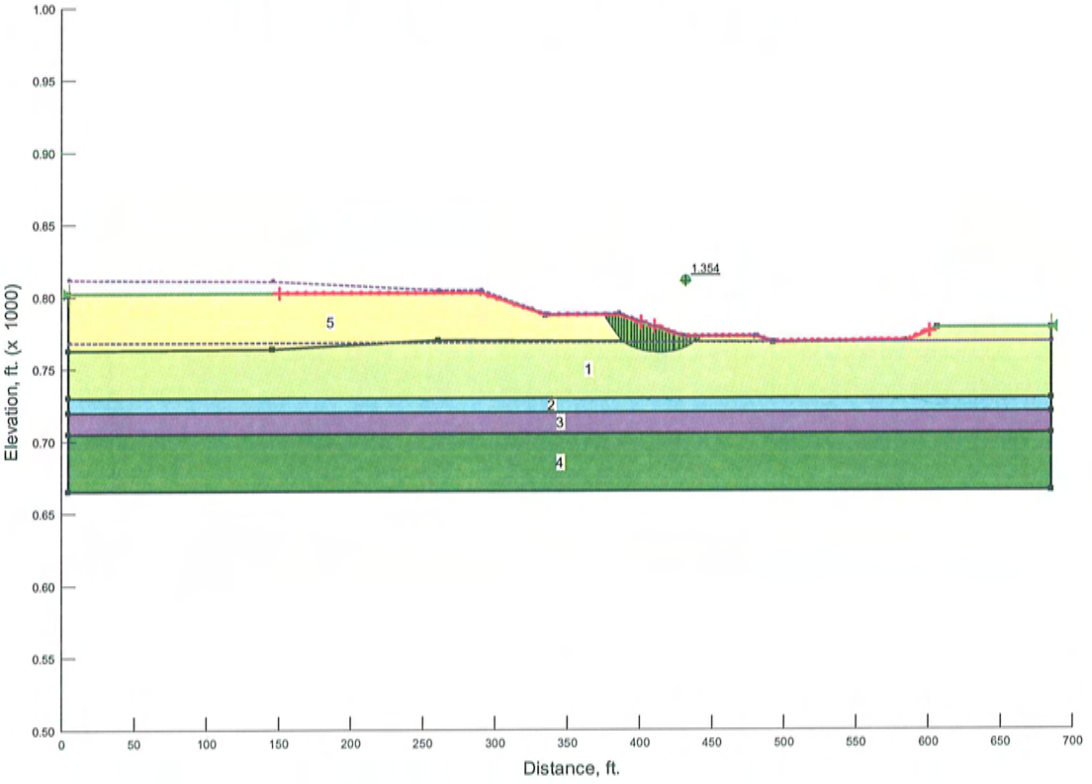


Figure 207 (B) – 70% Excess P.W.P in Both Clay and Existing Ash

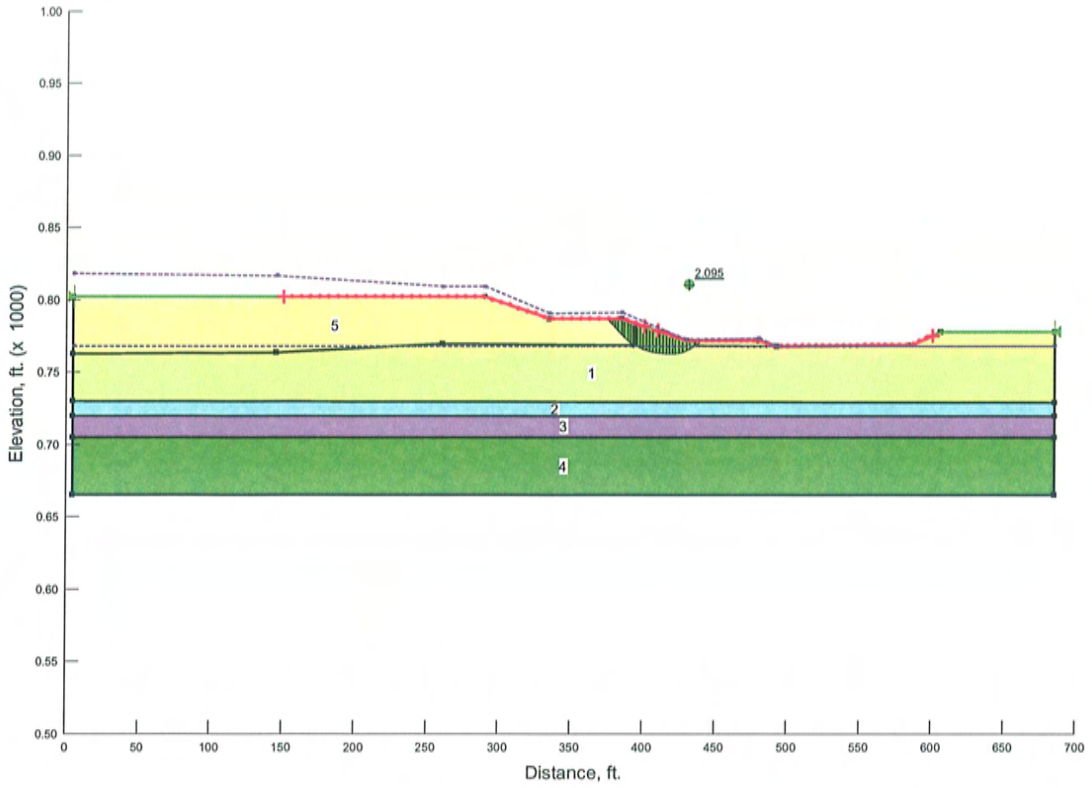


Figure 208 (A) – 80% Excess P.W.P in Clay Only

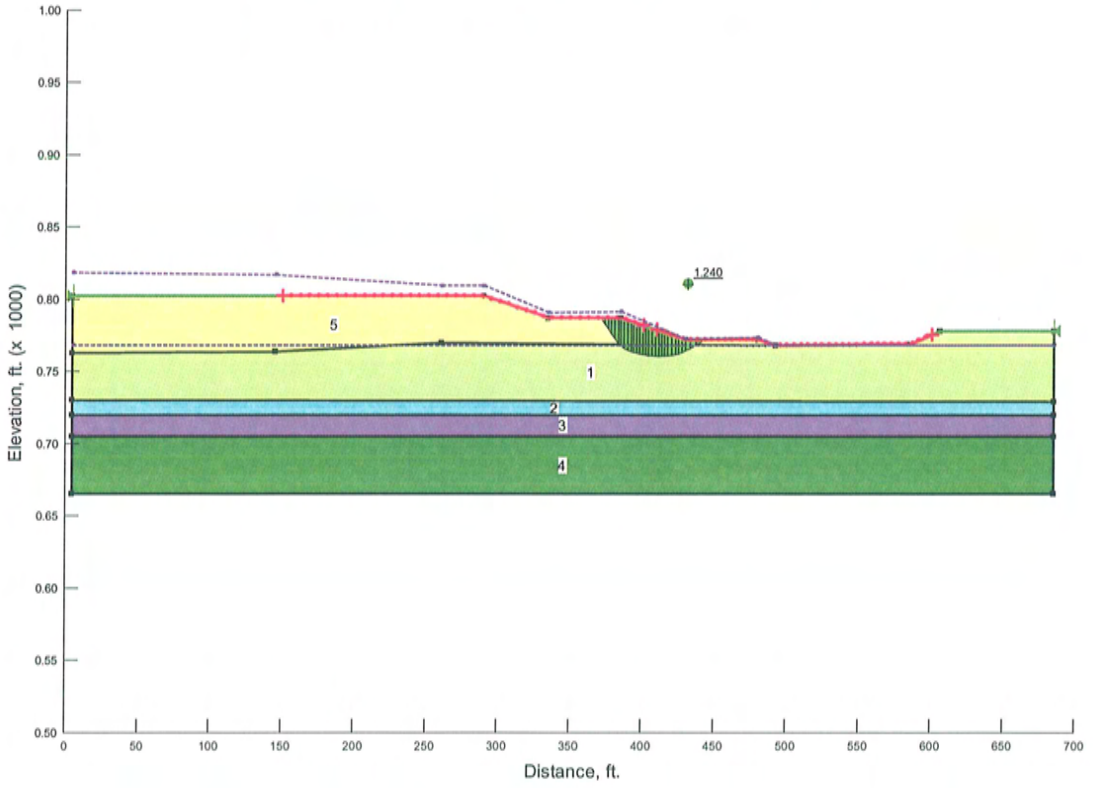


Figure 208 (B) – 80% Excess P.W.P in Both Clay and Existing Ash

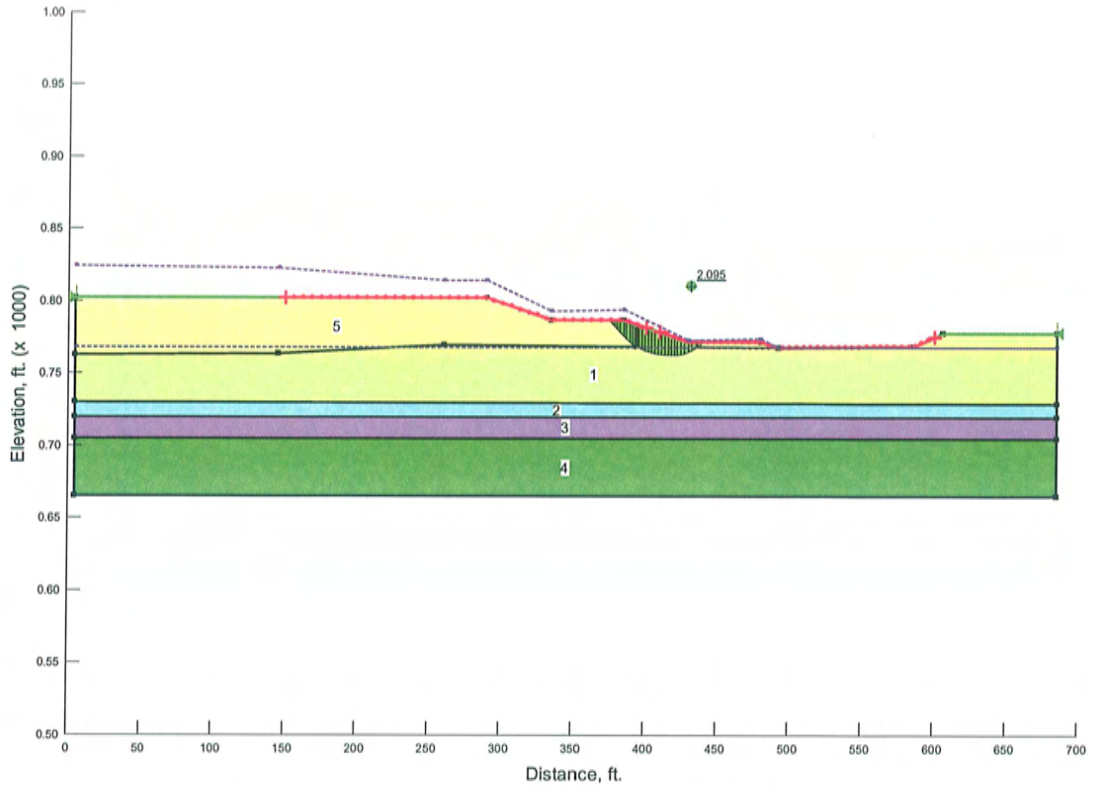


Figure 209 (A) – 90% Excess P.W.P in Clay Only

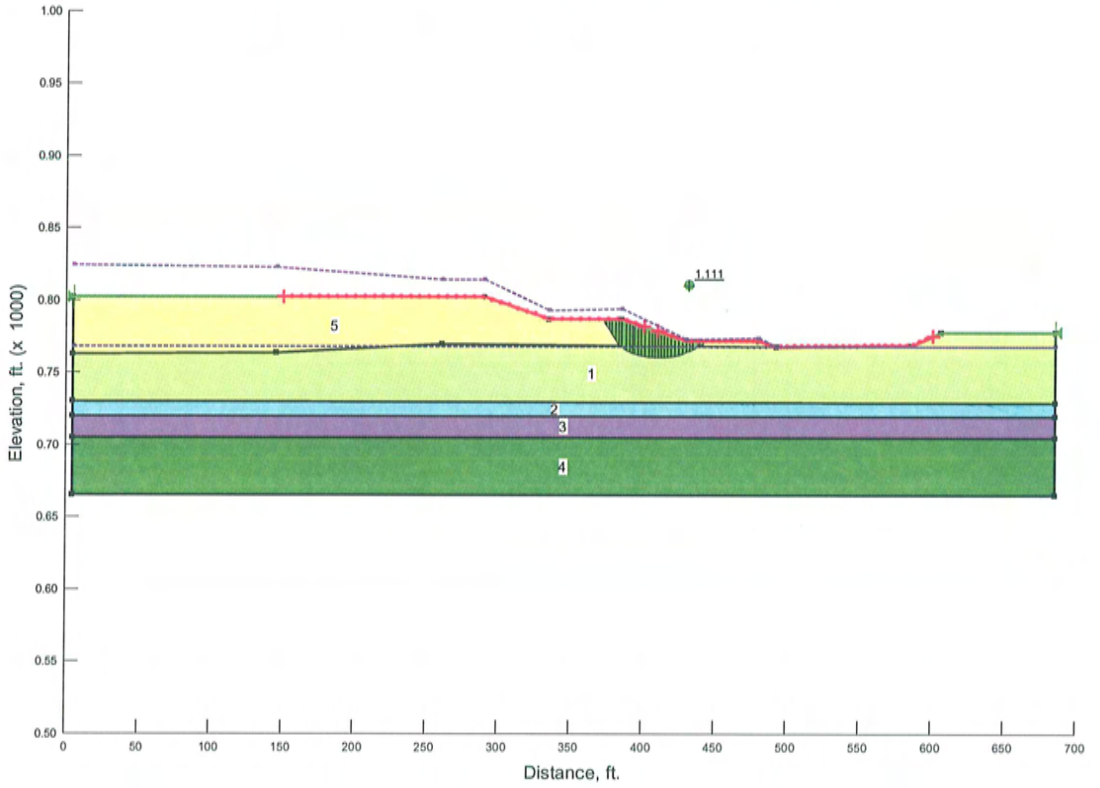


Figure 209 (B) – 90% Excess P.W.P in Both Clay and Existing Ash

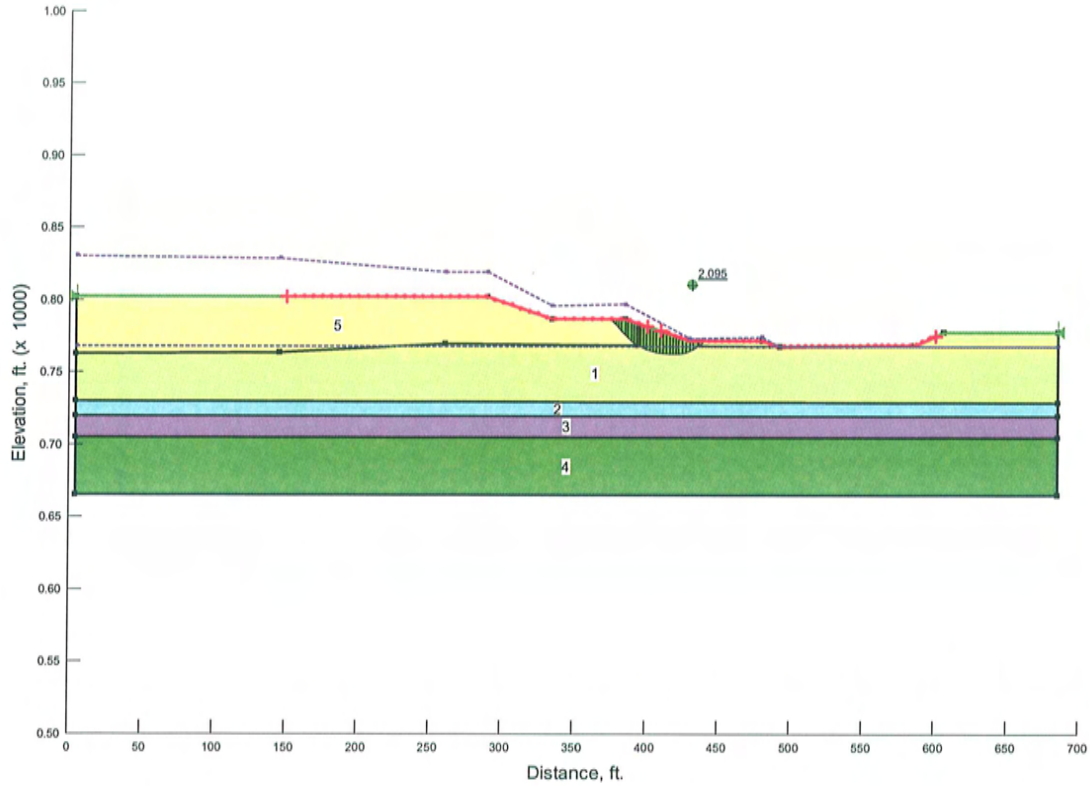


Figure 210 (A) – 100% Excess P.W.P in Clay Only

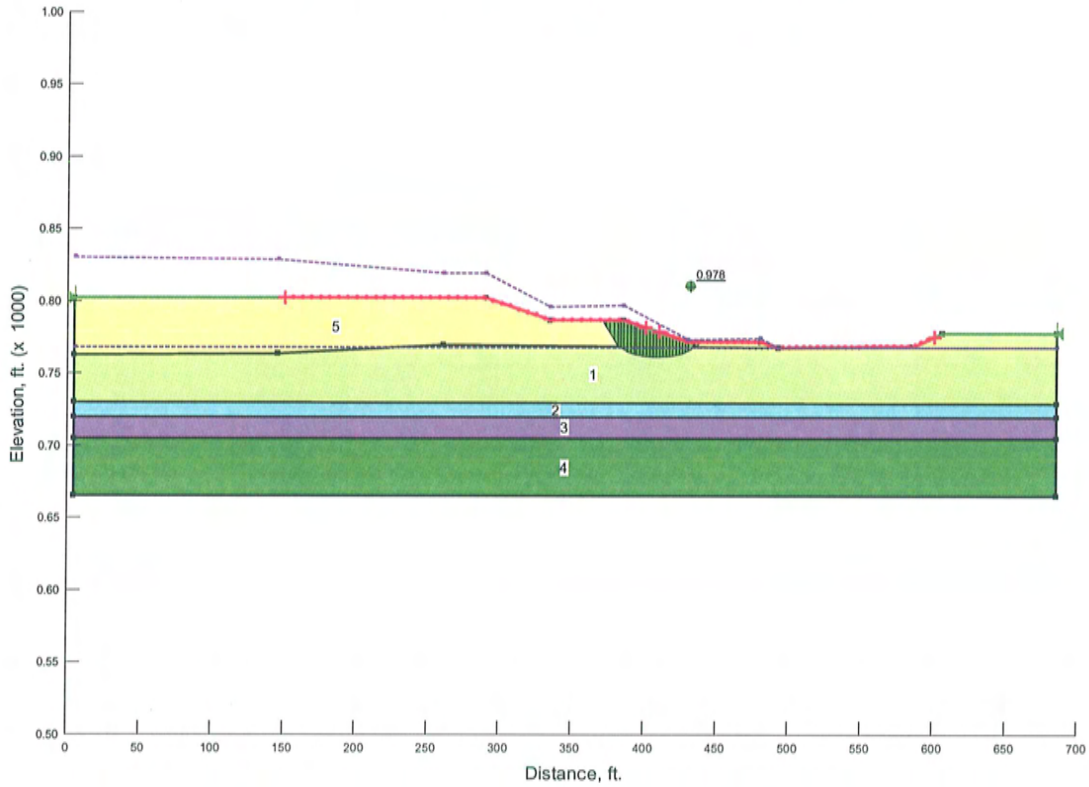


Figure 210 (B) – 100% Excess P.W.P in Both Clay and Existing Ash

Attachment 4

AECOM Peer Review Comments

AECOM
750 Corporate Woods Parkway, Vernon Hills, IL 60061
T 847.279.2500 F 847.279.2510 www.aecom.com

March 25, 2009

sent via e-mail : rerodgers@tva.gov

Mr. Ralph E. Rodgers
Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, Tennessee 37902-1401

Re: Review of Stantec Updated Test Embankment Program at Area A at Kingston Fossil Plant, Harriman, Roane County, Tennessee – AECOM Project No. 60095742

Dear Mr. Rodgers,

As requested by TVA's Barry Snider, we have reviewed the following work in progress documents provided by Stantec in emails to AECOM dated March 23, 2009.

1. Test Embankment Program, Kingston Fossil Plant, Harriman, Roane County TN." 4 pages, updated March 23, 2009.
2. Construction Quality Control Plan (CQCP), Test Embankment Program, Kingston Fossil Plant, Harriman, Roane County TN." 10 pages, updated March 23, 2009.
3. Sheet 1 of 6, Plan Limits, Kingston Test Embankment Program, updated March 2009.
4. Sheet 2 of 6, Instrumentation Plan, Kingston Test Embankment Program, March 2009.
5. Sheet 3 of 6, Cross Section, Kingston Test Embankment Program, updated March 2009.
6. Sheet 4 of 6, Typical Details, Kingston Test Embankment Program, updated March 2009.
7. Sheet 5 of 6, Typical Details (Settlement Plate), Kingston Test Embankment Program, updated March 2009.
8. Sheet 6 of 6, Typical Details (Inclinometer and Piezometer), Kingston Test Embankment Program, updated March 2009.

There was no cross-section for Test Embankment Area B. It would be very useful for TDEC to see the proposed cross-section for this test area.

Per TDEC directive, the remedial design documents for containment and closure of the Kingston Ash Pond and Dredge Cells will be reviewed by AECOM and TVA to promote short and long term structural stability and integrity of ash ponds. AECOM has been requested to review remedial designs as we are the Root Cause Analyst (RCA) of failure at this site. Both TVA and AECOM have been appointed to the TDEC structural integrity group of reviewers.

Performance Monitoring at Test Embankment at Area A

We assume Test Embankment A will be completed prior to constructing Test Embankment B. With this in mind, we offer the following comments and recommendations to measure the foundation response of failed wet flyash and lake bed silty clay for relocated ash placed at Test Area A.

1. We acknowledge that Stantec prepare a supplemental Sheet 2 of 6 showing their proposed instrumentation plan. We superimposed their data on our instrumentation plan and concur with their plan. Attached is our superimposed plan of Stantec's and AECOM instrumentation plan.
2. We understand Stantec will install either pneumatic piezometers or vibrating wire low pressure transducers rather than high volume Casagrande-type piezometers shown of Sheet 5 of 6. We agree with multi-level deep piezometers shown on Sheet 3 of 6 to be installed to monitor pressures along two lines under the Area A fill in failed flyash and foundation clay. We recommend that Sheet 6 of 6 be revised to show low volume electronic or pnuematic piezometers.

3. These instruments will be used to demonstrate rate of filling and the effectiveness and time for drainage. We also recommend at one or two locations under the deepest portion of the fill that vibrating wire piezometers be installed and connected to a data logger (i.e., RST Model No. DT2011) to better evaluate the rate of dissipation of excess porewater pressure after fill placement within the loose flyash and underlying clays. We suggest the details include tip elevations for the vibrating wire or pneumatic piezometers in the clay and in the ash just above the clay.
4. We recommend survey points be installed on the fill slope or bench surfaces to monitor top of relocated fill settlements.
5. We acknowledge the Stantec use of excess pore water pressure ratio as triggering thresholds for fill performance:
   - Less than 30% of below regular monitoring
   - Between 30% and 50% , fill with more instrumentation monitoring
   - Greater than 50% stop filling

   However, there were no stability computations attached to justify these threshold levels. We suggest these analyses be included subject to modification during filling.
6. We suggest several triggering limits be defined to slow or halt filling if:
   - Piezometer measure pore water pressures exceed certain predefined limits related to during construction slope stability effective stress analysis (ESA) factor of safety of 1.3 (trigger) and 1.1 (stop work or unload).
   - Inclinometer and settlement plate derived DR ratio of lateral inclinometer movement to vertical settlement plate movement (dh/dv) exceeds 0.2 (trigger) or 0.3 (stop work or unload), per the recommendations of Dr. Charles Ladd's 1991 Terzaghi Lecture.
7. AECOM has installed piezometer nests and rock socketed inclinometers at boring locations 09-408, 09-503, 09-500, and 09-502 located along our RCA east-west test boring and instrumentation line immediately north of Stantec's fill Area A. Furthermore, we have piezometer nests and a deep inclinometer though the unfailed hydraulic filled flyash and clayey foundation soils at 09-303 in Cell 1 located immediately south of the Area A Test Embankment.
8. We understand Stantec will take over monitoring AECOM installed instrumentation (pneumatic piezometers and inclinometers) starting tentatively the first week of April 2009.
9. Change references to the Emergency Dredge Cell to the TDEC permitted Phase 1 Dredge Cell.

Relocated Ash Placement Procedures at Areas A and B

We suggest the Construction Quality Control Plan (CQCP) address the following issues:

1. Identify alternatives to 50-ton heavy equipment proof-rolling of wet failed flyash.
2. Avoid using woven geotextile over failed ash. We suggest non-woven geotextile, geogrid, bottom ash, concrete sand or crushed stone over non-woven geocomposite drainage strips to promote blanket drainage under the test embankments and fill stability for relocated ash over failed wet flyash under fill Area A.
3. Provide fill lift thickness recommendations in the CQCP. We suggest lift thickness not exceed 24 inches.
4. Address the fact that the CQCP technical specifications are silent regarding the degree of compaction needed for the dewatered flyash that will be placed over the Ball Field area. We concur with Stantec's verbal recommendation of 90% of the maximum dry density per ASTM D698, Standard Proctor Test, be used to reduce the potential for liquid fill or slurry to be placed over the new fill area. There should be moisture limits defined in the CQCP after bench scale testing.
5. Recognize that in Section 6.3 of the QCCP we recommend that a large static smooth drum roller or loaded off-road haul truck be used to compact the reworked flyash above the working platform. Compaction of new ash fill may not be possible for the first couple of lifts as the compaction effort may fail the loose ash.
6. If nuclear density testing is used to measure the in-place density of compacted flyash, we recommend that a sand cone or water replacement density tests be performed every 10 tests to confirm the nuclear density meter results.
7. Provide a cross-section of Test Embankment B showing the intended height of fill and bench layout.

Recommended Stability Analyses for Test Embankments A and B

Prior to filling Areas A and b, Stantec should run shallow and deep global circular and wedge block, limit equilibrium stability analyses to show adequate factors of safety (FS) for staged fills up to 45 feet high. We would like to see hold periods between the 15, 30 and 45-foot high fill stages to ensure stability and falling pore-water pressures, settlement of the ash and inward movement of the inclinometers. This is important since it will allow time for thorough review of the instrumentation data before proceeding further.

Please note that the existing failed and unfailed ash do not show decreasing void ratio with depth. There is evidence that the ash may not consolidate as much as expected. This could impact the undrained shear strength of the ash if it does not consolidate under surcharge loading. We have attached sheets showing void ratio versus elevation in failed and unfailed ash.

We also suggest that bench scale laboratory studies identify the moisture-density relationship for the relocate flyash material to provide actual friction angles for relocated flyash. We recommend Stantec run effective stress and total stress analysis analyses (ESA and TSA) rapid undrained loading analyses to demonstrate computed FS will be greater than 1.3. However, the project will be using performance monitoring instrumentation to demonstrate relatively drained fill and soil behavior.

Summary

We are in favor of this engineered test embankment at Areas A and B with performance monitoring based on stability analyses. We will learn much about the foundation clay and failed flyash under relatively rapid loading for relocated flyash fills up to 45 feet high above failed Cell 1 and 3 located at the north end of failed stack section using benched fill slopes no steeper than 3H:1V. AECOM supports the premise that this engineered test fill solution based on analysis, design assumptions and testing be verified by daily monitoring and surveys. It would also be interesting to see if rapid filling can re-initiate minor movement along the December 22, 2008 failure plane. The failed section has little to no inertia in the failure mass to see movement at this time.

The TVA should avoid excavating deep continuous west to east drainage trenches along the series 09-200 holes and do not dig drainage trenches parallel to the toe of the Test Embankment A and B fills. The fact the failed ash has an angle of repose of less than 1% if evidence that the failed ash is loose (high void) and we want to avoid increasing shear stresses under the test embankments by creating higher driving forces due increase differential height of failed ash.

It would be very useful to run test borings or CPTu after the test fill to see if there has been an increase in fill strength or consolidation of the failed loose and submerged flyash. We suggest their plan include some post-fill testing and CPTu probes to see if there have been ground improvements due to surcharge loading.

We suggest TVA and AECOM be copied on this performance data on a timely basis to assist in site remediation design and review.

Please call us if you have any questions.

Very truly yours,

William H. Walton, P.E., S.E.
Vice President, Senior Principal Engineer

William Butler, P.E.
Senior Geotechnical Engineer

© AECOM 2009, ALL RIGHTS RESERVED

Attachments – Instrumentation Plan
Void Ratio Plots

cc: Barry Snider – bssnider@tva.gov
Gonzalo Castro – gv.castro@verizon.net

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Responses to Review Comments
March 31, 2009

Comments from William H. Walton and William Butler with AECOM dated March 25, 2009.

Performance Monitoring at Test Embankment at Area A

Comment No. 1: We acknowledge that Stantec prepare a supplemental Sheet 2 of 6 showing their proposed instrumentation plan. We superimposed their data on our instrumentation plan and concur with their plan. Attached is our superimposed plan of Stantec's and AECOM instrumentation plan.

Response No. 1: N/A

Comment No. 2: We understand Stantec will install either pneumatic piezometers or vibrating wire low pressure transducers rather than high volume Casagrande-type piezometers shown of Sheet 5 of 6. We agree with multi-level deep piezometers shown on Sheet 3 of 6 to be installed to monitor pressures along two lines under the Area A fill in failed flyash and foundation clay. We recommend that Sheet 6 of 6 be revised to show low volume electronic or pneumatic piezometers.

Response No. 2: Concur. The piezometer detail has been revised to illustrate a vibrating wire piezometer.

Comment No. 3: These instruments will be used to demonstrate rate of filling and the effectiveness and time for drainage. We also recommend at one or two locations under the deepest portion of the fill that vibrating wire piezometers be installed and connected to a data logger (i.e., RST Model No. DT2011) to better evaluate the rate of dissipation of excess porewater pressure after fill placement within the loose flyash and underlying clays. We suggest the details include tip elevations for the vibrating wire or pneumatic piezometers in the clay and in the ash just above the clay.

Response No. 3: Concur. Data acquisition has been incorporated into the program. Piezometer tip elevations will be determined in the field based on encountered subsurface conditions at each instrument location. It is noted that the referenced monitoring zones will be targeted.

Comment No. 4: We recommend survey points be installed on the fill slope or bench surfaces to monitor top of relocated fill settlements.

Response No. 4: Concur. Cross Sections A-A' and B-B' were revised to illustrate survey monuments on each bench.

Comment No. 5: We acknowledge the Stantec use of excess pore water pressure ratio as triggering thresholds for fill performance:

- *Less than 30% of below regular monitoring*
- *Between 30% and 50% , fill with more instrumentation monitoring*
- *Greater than 50% stop filling*

However, there were no stability computations attached to justify these threshold levels. We suggest these analyses be included subject to modification during filling.

Response No. 5: Concur. Stability calculations and associated narrative have been forwarded under separate cover.

Comment No. 6: We suggest several triggering limits be defined to slow or halt filling if:

- *Piezometer measure pore water pressures exceed certain predefined limits related to during construction slope stability effective stress analysis (ESA) factor of safety of 1.3 (trigger) and 1.1 (stop work or unload).*
- *Inclinometer and settlement plate derived DR ratio of lateral inclinometer movement to vertical settlement plate movement (dh/dv) exceeds 0.2 (trigger) or 0.3 (stop work or unload), per the recommendations of Dr. Charles Ladd's 1991 Terzaghi Lecture.*

Response No. 6: Excess pore water pressure ratios for target factors of safety of 1.5, 1.3 and 1.1 are included in the referenced calculations. Stantec has reviewed the document of Dr. Charles Ladd's 1991 Terzaghi Lecture and have noted trigger limits should be set on a case-by-case basis. Stantec concurs that trigger limits should be set. Accordingly, AECOM's recommended trigger limits of 0.2 (trigger) or 0.3 (stop work or unload) will be used for this program.

Comment No. 7: AECOM has installed piezometer nests and rock socketed inclinometers at boring locations 09-408, 09-503, 09-500, and 09-502 located along our RCA east-west test boring and instrumentation line immediately north of Stantec's fill Area A. Furthermore, we have piezometer nests and a deep inclinometer though the unfailed hydraulic filled flyash and clayey foundation soils at 09-303 in Cell 1 located immediately south of the Area A Test Embankment.

Response No. 7: NA

Comment No. 8: We understand Stantec will take over monitoring AECOM installed instrumentation (pneumatic piezometers and inclinometers) starting tentatively the first week of April 2009.

Response No. 8: Concur. Stantec will read AECOM's instrumentation as part of continued closure activities.

Comment No. 9: Change references to the Emergency Dredge Cell to the TDEC permitted Phase 1 Dredge Cell.

Response No. 9: Concur. All references to "Emergency Dredge Cell" have been modified to "Phase 1 Dredge Cell".

Relocated Ash Placement Procedures at Areas A and B

We suggest the Construction Quality Control Plan (CQCP) address the following issues:

Comment No. 1: Identify alternatives to 50-ton heavy equipment proof-rolling of wet failed flyash.

Response No. 1: Section 4 – Subgrade and Subbase, Subsection 4.4 – Quality Control Requirements states "The exposed surface was inspected to observe a proofroll using appropriate heavy equipment approved by the QC Manager".

Comment No. 2: Avoid using woven geotextile over failed ash. We suggest non-woven geotextile, geogrid, bottom ash, concrete sand or crushed stone over non-woven geocomposite drainage strips to promote blanket drainage under the test embankments and fill stability for relocated ash over failed wet flyash under fill Area A.

Response No. 2: Concur. Section 7 – Geotextile Filer Fabric (Optional) has been revised to specify non-woven fabric.

Comment No. 3: Provide fill lift thickness recommendations in the CQCP. We suggest lift thickness not exceed 24 inches.

Response No. 3: Concur. Section 4 – Subgrade and Subbase, Subsection 4.2 – Placement has been revised to state "The sequence of filling shall commence at the lowest section (in elevation) of the subject footprint and proceed upward in maximum eight-inch loose lifts in a manner to maintain positive drainage at all times." Section 5 – Working Platform (Optional), Subsection 5.2 – Placement has been revised to state "Each lift shall be constructed in maximum eight-inch loose lifts." Section 6 – Test Embankment, Subsection 6.2 – Placement has been revised to state "The sequence of filling shall commence at the lowest section (in elevation) of the subject footprint and proceed upward in maximum 24-inch loose lifts in a manner to maintain positive drainage at all times."

Comment No. 4: Address the fact that the CQCP technical specifications are silent regarding the degree of compaction needed for the dewatered flyash that will be placed over the Ball Field area. We concur with Stantec's verbal recommendation of 90% of the maximum dry density per ASTM D698, Standard Proctor Test, be used to reduce the potential for liquid fill or slurry to be placed over the new fill area. There should be moisture limits defined in the CQCP after bench scale testing.

Response No. 4: Concur. Section 6 – Test Embankment, Subsection 6.3 – Compaction has been revised to include "Materials shall be compacted to a minimum of 90 percent of standard Proctor maximum dry density at a moisture content within minus four percent and plus two percent of optimum or as established by the QC Manager based on field observations, testing and results of the test pads."

Comment No. 5: Recognize that in Section 6.3 of the QCCP we recommend that a large static smooth drum roller or loaded off-road haul truck be used to compact the reworked flyash above the working platform. Compaction of new ash fill may not be possible for the first couple of lifts as the compaction effort may fail the loose ash.

Response No. 5: Concur. Initial ash compaction efforts will likely be accomplished with loaded trucks. Smooth drum rollers will be used to seal working surfaces as required.

Comment No. 6: If nuclear density testing is used to measure the in-place density of compacted flyash, we recommend that a sand cone or water replacement density tests be performed every 10 tests to confirm the nuclear density meter results.

Response No. 6: Concur. Section 4 – Subgrade and Subbase, Subsection 4.3 – Compaction and Section 6 – Test Embankment, Subsection 6.4 – QC Requirements have been revised to include "Device calibration/confirmation testing shall consist of in-situ density tests (sand cone, water replacement, etc.) every 10 nuclear field density tests or as established by the QC Manager."

Comment No. 7: Provide a cross-section of Test Embankment B showing the intended height of fill and bench layout.

Response No. 7: Concur. A cross section for Test Embankment B has been included as Sheet 4 of 7.

AECOM
750 Corporate Woods Parkway, Vernon Hills, IL 60061
T 847.279.2500 F 847.279.2510 www.aecom.com

April 2, 2009

Mr. Ralph E. Rodgers
Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, Tennessee 37902-1401

Re: Review of Stantec Stability Submittal for the Test Embankment Program at Area A at Kingston Fossil Plant, Harriman, Roane County, TN – AECOM Project No. 60095742

Dear Mr. Rodgers,

As requested by TVA's Barry Snider, we have reviewed the following work in progress documents provided by Stantec in emails to AECOM dated March 31, 2009.

1. Stantec Responses to AECOM Review Comments, Test Embankment Program, Kingston Fossil Plant, Harriman, Roane County TN, 4 pages, dated March 31, 2009.
2. Stantec Summary of Stability Analysis, Test Embankment Program – Area A, Test Embankment Program, Kingston Fossil Plant, Harriman, Roane County TN, 5 pages, undated.
3. Stantec Plots of Stability Analysis, Test Embankment Program – Area A, Kingston Test Embankment Program, 27 pages, undated.

Per TDEC directive, the remedial design documents for containment and closure of the Kingston Ash Pond and Dredge Cells will be reviewed by AECOM and TVA in regards to promote short and long term structural stability and integrity of ash ponds. AECOM has been requested to review remedial designs as we are the Root Cause Analyst (RCA) of failure at this site. Both TVA and AECOM have been appointed to the TDEC structural integrity peer review for this structure.

Review Comments

A. Stantec Responses to AECOM Review Comments to Test Embankment Program

We appreciate Stantec's responses to AECOM's March 25, 2008 letter and expect the Stantec documents will be updated to include the information necessary to construct the Test Embankment at Areas A and B in stages at controlled rates to ensure drained behavior.

B. AECOM Review Comments to Test Embankment – Area A Stability Analyses

There are several issues that should be understood by all parties involved with the instrumented Test Embankments:

1. Stantec Stability Analyses – The computed factors of safety focus on effective stress strength (ESA) parameters and assumed excess positive pore water pressures due to rapid filling and limited drainage. The analysis did not evaluate the undrained behavior (TSA) or undrained strength of the loose, wet ash. As an alternative, we performance monitoring to evaluate positive pore water pressures, settlement, lateral movement to detect shear strains under the test fill and ash foundation toward the north or east. There is a risk that too rapid a loading could trigger undrained behavior especially when the undrained strength of ash could be as low as 100 to 500 psf. Upon further review of our ash testing in the laboratory, we recommend Stantec reduce the threshold "Action" and "Alarm" levels or the excess pore water pressure measured in the deep flyash be reduced to 10 percent and 15 percent, respectively due to the contractive behavior of the ash.

Based on recently completed laboratory testing, the 30 and 50 percent limits discussed a week ago pose too much risk for another flow slide from AECOM's perspective. We have attached our computations for fill stability if full undrained conditions were to occur. For each stage, the computed safety factor is less than unity for undrained ash strength. This shows the importance of loading the ash in a slow to ensure drained behavior.

2. High Void Ratio Ash – The failed, saturated flyash south of AECOM Boring 09-500 has high void ratios (average of 1.0 or more). Furthermore, the void ratios under non-failed portions of the Dredge Cell 1 increase with depth; this is contrary to what is expected for normally consolidated materials deposited hydraulically. Normally sluiced dredged fill material become denser with depth due to higher vertical stress, resulting increasing normal consolidation of a particulate media by increased overburden stresses.

3. Measure Excess Pore Pressures – In addition to using pneumatic piezometers we also recommend several, real-time, continuous readout, vibrating wire piezometers with alarms located in the bottom of the failed ash to detect fill induced excess pore water pressure that could develop due to rapid placement of fill over saturated high void flyash. For normal soft soils there should be excess pore water pressure generated when fill is placed over it until upward seepage occurs into a drainage blanket or sideways to lesser hydraulic head locations under or around the Test Embankments.

4. Ash Placement Rates – We expect the ash will be placed in uniform lifts across the entire footprint of the Test Area A and B. Once the first lift is complete a second lift can be placed. Time should be provided to ensure that all of the piezometers and inclinometers are read before the next lift is placed. Our goal should be to make sure filling rates are slow enough to allow drained behavior in the ash during the test embankment construction.

5. Settlement Plates - Settlement plates placed over the failed ash at the base of the test fill will to measure actual vertical compression of the failed ash to complement the concept that with increasing more surcharge pore water is forced out of the ash resulting in a denser material, therefore resulting in settlement or consolidation.

6. Clay Strengths – We have run vane shears under the Cell 1 and next to the Test Embankment at Area A. We concur with Stantec use of 1,380 psf for the shear strength of the foundation clay under Area A. The lowest AECOM measured peak vane shear strengths were 1,400 psf at 09-500 and 1,900 psf at 09-303.

7. Vertical Inclinometers – The inclinometers are used to monitor fill induced lateral shear strains created by the presence of the adjacent slope or driving forces created by the construction of the Test Embankment. The purpose of these instruments is to measure lateral movements and check to see if lateral movements are substantially less than measured vertical movements (determined from the settlement plate readings).

8. Rate of Filling – The contractor should be flexible in fill placement rates to ensure the footprint can allow full lift coverage before the next lift is placed. Should pore water pressures become too high, alternate filling should be done in Area 2 or at the Ball Field area. The goal should be to fill at a rate that allows ash drainage with low pore water pressure buildup.

9. Construction Oversight – It is very important that Stantec have skilled personnel on site that can will take daily readings and have the authority to stop filling if the ash shows undrained behavior.

The test embankment will confirm whether filling will cause excess pore water pressures in the ash and evaluate the dissipation of excess pore into the overlying drainage layer constructed under the base of the test fill.

If there is little excess pore water pressure generated and minimal settlement, the ash is carrying the load on particle edges, like an uniformly graded fine sand or silt deposit. The concern here is that the loose sand or silt particles can suddenly shift under load from an edge to edge orientation to attempt to nest into a more stable denser structure, thus causing a rapid rise in excess pore water pressure and loss of the ash shear strength. This could lead to a sudden flow slide or static liquefaction. Since there is level ground beyond the test fill, the consequences of a flow slide or shift is minor. Furthermore, the existing 3H:1V cut slope from the north crest of Cell No. 1 is from elevation 817 feet down to the failed ash plain at elevation 757 feet. This 60-foot high mass will be buttressed with a terraced 40-foot high benched fill with average slopes flatter than 4H:1V. If ash performs in a drained manner, the Area A fill will provide added stability berm against the Cell No.1 relic.

As further confidence to move forward with the Test Embankment construction at Area A, the initial test embankment over failed ash next to AECOM boring 09-404 constructed of excavated ash from the Cell No. 1 test trench did not result in excessive settlement or lateral displacement. For 6 feet of fill placed over failed ash over a two week period, the settlement plates on ash settled less than 1 to 2.5 inches and the inclinometer showed lateral outward movement down 20 feet but limited to a maximum of ¼ inch at grade. There was no increase in pressure in the Boring 09-404 multi-level piezometers as they were situated just outside the footprint of the test fill and experienced minimal shear strains at depth from the construction of the test fill. We have observed the stockpiling of failed ash in the sloughs over failed wet ash. Several of these stockpiles exceed 15 feet in height but were built slowly.

The importance of the test fill is to demonstrate whether loading creates excess pore water pressures within the failed ash and underlying clay soils. We suggest that the fill be placed in three stages (e.g., 15-foot, 15-foot and then 10 foot high lifts) with hold periods to allow for data analysis and time to perform CPTu testing done after each stage to measure if there has been ash strengthening or densification. During hold periods, the Test Embankment at Area B can be raised to a lesser height than fill levels at Area A.

Summary

We are in favor of this engineered test embankment at Areas A and B with performance monitoring based on drained conditions. We can learn much about the foundation clay and failed flyash under monitored loading for relocated flyash built in stages up to 40 feet high above failed Cell 1 and 3 located at the north end of failed stack section using benched fill slopes no steeper than 3H:1V, with 50 foot wide benches for every 15 foot rise in fill. AECOM supports the premise that this engineered test fill solution based on analysis, design assumptions and testing be verified by daily monitoring and surveys. It would also be interesting to see if test filling can re-initiate minor movement along the December 22, 2008 failure plane. The failed section has little to no inertia in the failure mass to see movement at this time.

The TVA should avoid excavating deep continuous west to east drainage trenches along the series 09-200 holes and do not dig drainage trenches parallel to the toe of the Test Embankment A and B fills. The fact the failed ash has an angle of repose of less than 1% if evidence that the failed ash is loose (high void). We want to avoid flow slides than can occur due to increasing shear stresses caused by undrained loading under the test embankments by creating higher driving forces due to an increasing differential height of failed ash.

It would be very useful to run SPT test borings and/or CPTu after the test fill stage to see if there has been an increase in fill strength or consolidation of the failed loose and submerged flyash. We suggest their plan include some post-fill testing and CPTu probes to see if there have been ground improvements due to surcharge loading.

We suggest TVA and AECOM be copied on this daily instrumentation performance data to assist in site remediation design and review.

Please call us if you have any questions.

Very truly yours,

William H. Walton, P.E., S.E.
Vice President, Senior Principal Engineer

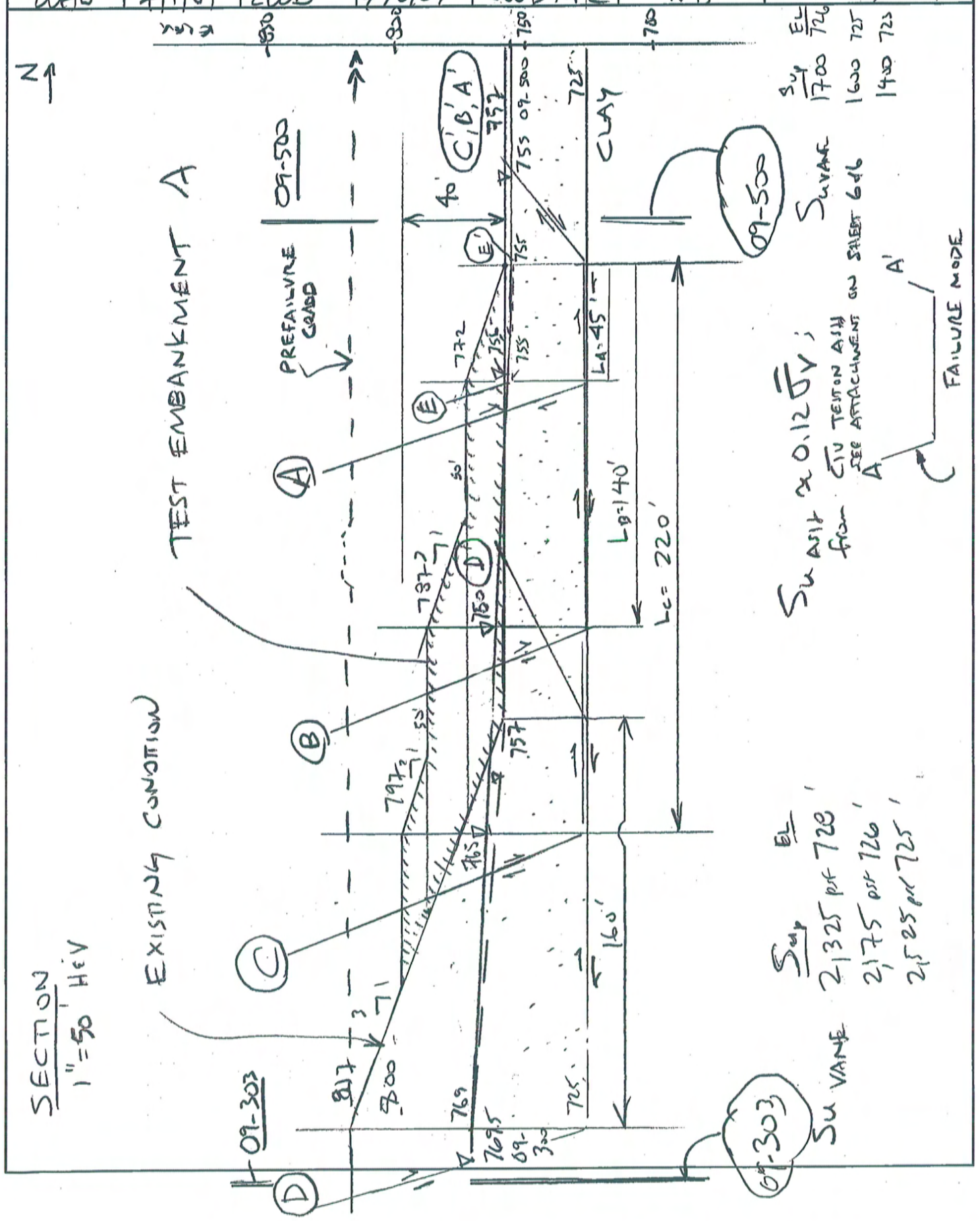
William Butler, P.E.
Senior Geotechnical Engineer

Attachments – Staged Stability Check of Test Embankment A

cc: Barry Snider – TVA – bssnider@tva.gov
Gonzalo Castro – Consultant – gv.castro@verizon.net

Calculation Sheet

Project	KINGSTON	Subject	TEST EMBANKMENT ANALYSIS
Originated By: ATH	Date: 4/1/09	Checked By: LWB	Date: 4/2/09
STS Job No.: 60095742	Scale: NTS	Sheet No.: 1 of 6	



Calculation Sheet

Project				Subject			
KINGSTON				TEST EMBANKMENT ANALYSIS			
Originated By	Date	Checked By	Date	STS Job No.	Scale	Sheet No.	
ASH	4/1/09	CWB	4/2/09	60045742		2 of 6	

ESTIMATE $S_u = SR\ \bar{\sigma}_{VO} = 0.12\ \bar{\sigma}_{VO}$ (ASH)

$SR = 23.18/2/96 = 0.12$ ↑ PRELIMINARY

CASE E: $\frac{772' + 757'}{2} - 755' = 764.5 - 755 = 9.5'$

@ EL 764.5 w/ ▽ EL 755.5'

$\bar{\sigma}_V = (0.5(0.0476) + 9(0.11))$ $S_u = 1.01(0.12)$

$\bar{\sigma}_V = (0.02 + 0.99) = 1.01$ ksf $\therefore S_u = 0.12$ ksf

CASE A: @ EL = 766.5 ± w/ ▽ EL 755.5'

$\bar{\sigma}_V = (9.0(0.11) + 30.5(0.0476))$ $S_u = 2.44(0.12)$

$\bar{\sigma}_V = (0.99 + 1.45) = 2.44$ ksf (0.99) $\therefore S_u = 0.29$ ksf

CASE B: @ EL. 772 ± w/ ▽ EL 759'

$\bar{\sigma}_V = (15(0.11) + 32(0.0476))$ $S_u = 3.17(0.12)$

$\bar{\sigma}_V = (1.65 + 1.52) = 3.17$ ksf $\therefore S_u = 0.38$ ksf

CASE C: @ EL 787 ± w/ ▽ EL 759'

$\bar{\sigma}_V = (27(0.11) + 35(0.0476))$ $S_u = 4.64(0.12)$

$\bar{\sigma}_V = (2.97 + 1.67) = 4.64$ ksf $\therefore S_u = 0.57$ ksf

CASE D @ EL. 787 ± w/ ▽ EL 765'

$\bar{\sigma}_V = (22(0.11) + 40(0.0476)) = (2.42 + 1.90) = 4.32$ ksf $S_u = 0.12(4.32)$

$\therefore S_u = 4.8$ ksf

Calculation Sheet

Project	KINGSTON			Subject	TEST EMBANKMENT ANALYSIS		
Originated By	Date	Checked By	Date	STS Job No.	Scale		Sheet No.
MAN	4/1/09			60095742	NTS		3 of 5

CHECK WEDGE A

$SF = 1.0 = \dfrac{S_u(L)}{E_A - E_p}$ SOLVE FOR S_u

$\Phi_{ASH} = 23°$ $K_o = 1 - \sin\phi = 0.53$

$P_a = 0.53(772 - 756)(0.11) = 0.93$ (16, 0.78)

$P_b = 0.93 + 0.53(0.0476)31 + 31(0.0624)$ (1.93)

$P_b = 3.64$

$P_c = 2(0.11)(0.53) = 0.12$

$P_d = 0.12 + 0.0476(30)(0.53)$ (0.757)

$+30(0.0624)$ (1.872)

$P_d = 2.75$

$E_A = \dfrac{0.93(16)}{2} + \dfrac{0.93 + 3.64}{2}(31)$

$E_A = 7.44 + 70.84 = 78.28$ k/ft

$E_p = \dfrac{2(0.12)}{2} + \dfrac{2.75 + 0.12}{2}(30)$

$E_p = 0.12 + 43.1$

$E_p = 43.2$

$S_{u\ req'd} = \dfrac{78.28 - 43.2}{45'}$ k/ft $= 0.78$ ksf > 0.29

S_u CLAY AT 09-500 1400 to 1700 psf

$S_{u\ ASH} = 290$ psf

CHECK WEDGE E

$P_a = 0.93$

$P_b = 0.93 + 1(0.0624) + 1(0.0476)0.53$ (0.062, 0.025)

$P_b = 1.02$

$P_b = 2(0.11)(0.53)$

$P_b = 0.12$

$E_A = \dfrac{0.93(16)}{2} + \dfrac{0.93 + 1.02}{2}(1)$

$E_A = 7.44 + 0.98 = 8.42$

$E_b = \dfrac{0.12(2)}{2} = 0.12$

$S_u = \dfrac{8.42 - 0.12}{45} = 0.184$ ksf

$S_{u\ ASH} = 120$ psf

Calculation Sheet

Project	KINGSTON			Subject	TEST EMBANKMENT ANALYSIS		
Originated By	Date	Checked By	Date	STS Job No.	Scale		Sheet No.
MTW	4/1/09	CWB	4/2/09	60095742	NTS		4 of 6

CHECK WEDGE B

$\phi_{ASH} = 28°$, $K_o = 0.53$

$P_a = 27(0.11)0.53 = 1.57$ ksf/ft $E_p = 43.2$ k/ft

$P_b = 1.57 + 35(0.0624) + 0.53(0.0476)(35)$

$P_b = 1.57 + 2.184 + 0.88 = 4.64$ ksf/ft

$E_A = \frac{1.57}{2}(27) + \frac{1.57 + 4.64}{2}(35) = 21.2 + 108.7 = 129.9$

$S_{u\,req'd} = \frac{129.9 - 43.2}{140'} = 0.61$ ksf > 0.38 ksf ASH

CHECK WEDGE C

$\phi_{ASH} = 28°$ $K_o = 0.53$

$P_a = 32(0.11)0.53 = 1.87$ ksf/ft $E_p = 43.2$ k/ft

$P_b = 1.87 + 40(0.0624) + 0.53(40)(0.0476)$ (2.496, 1.01)

$P_b = 5.38$ ksf/ft

$E_A = \frac{1.87(32)}{2} + \frac{1.87 + 5.38}{2}(40) = 29.9 + 145.0$

$E_A = 174.9$ k/ft

$S_{u\,req'd} = \frac{174.9 - 43.2}{L = 220'} = 0.60$ ksf > 0.57 ksf

Calculation Sheet

Project	KINGSTON			Subject	TEST EMBANKMENT ANALYSIS		
Originated By	Date 4/1/09	Checked By	Date 4/2/09	STS Job No. 60095742	Scale NTS	Sheet No. 5 Of 6	

CHECK WEDGE D (Current Stability AT SITE)

$\phi_{ASH} = 30°$ $K_o = 0.53$

$P_a = 48(0.11)0.53 = 2.79$

$P_b = 2.79 + \underset{2.75}{44(0.0624)} + \underset{1.10}{0.047(44)(0.53)}$

$P_b = 6.64$ ksf/ft

$E_A = \frac{2.79(40)}{2} + \frac{2.79 + 6.64}{2}(44)$

$E_A = 66.96 + 207.46 = 274.4$ k/ft

$P_c = 40(0.0476)(0.53) + 40(0.0624)$

$P_c = 1.01 + 2.496$

$P_c = 3.51$ ksf/ft

$E_p = \frac{3.51(40)}{2}$

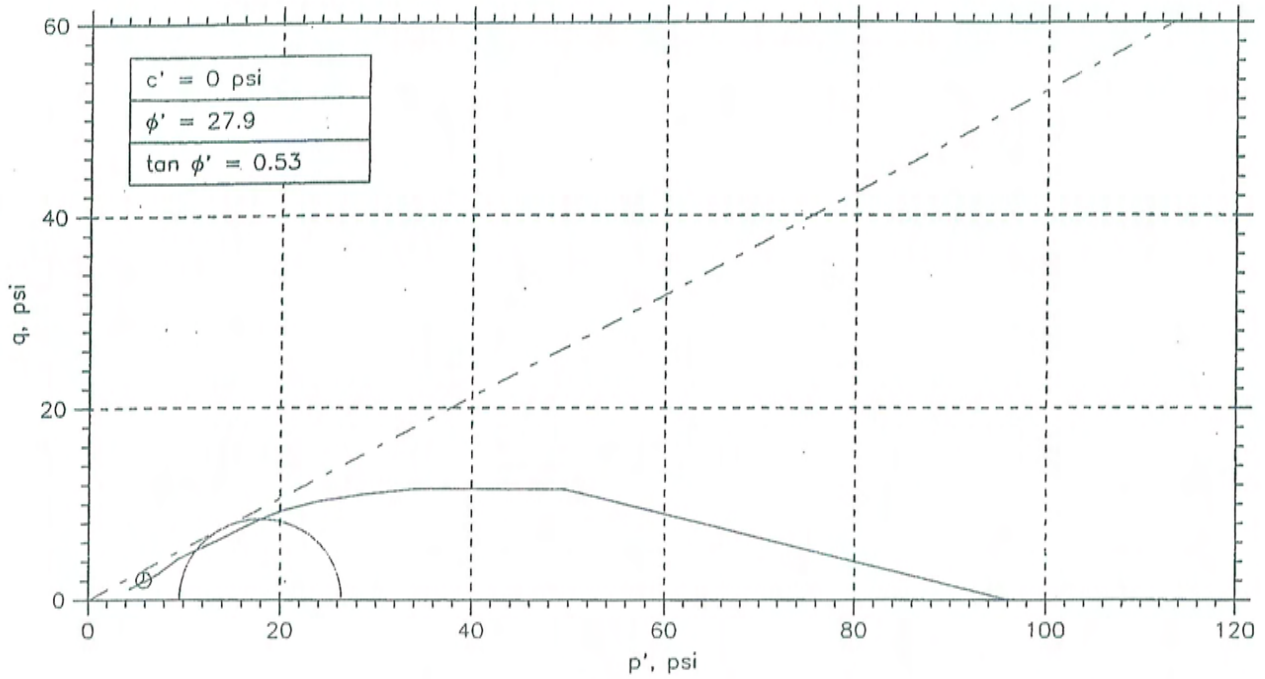
$E_p = 70.2$ k/ft

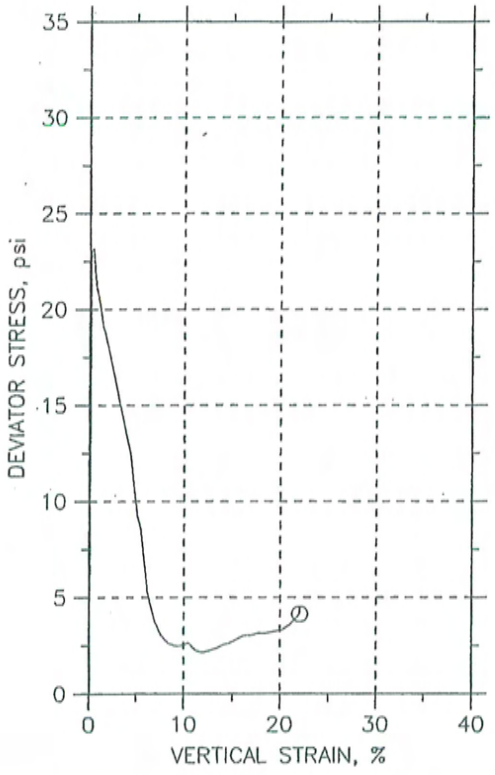
$S_{req'd} = \frac{(274.4 - 70.2)\text{ k/ft}}{160'} = 1.28$ ksf > 0.48 ksf

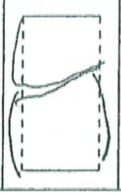
- Cell No. 1 North Slope was flattened and buttressed is currently stable due to drained behavior.

CONCLUSIONS: WE NEED TO ENSURE DRAINED BEHAVIOR DURING TEST EMBANKMENT FILLING. ONLY NOMINAL PWP CAN BE TOLERATED UNDRAINED FS ≤ UNITY. NEED INSTRUMENTATION

TRIAXIAL COMPRESSION TEST REPORT





Symbol		⊙			
Test No.		5742200B T2			
Initial	Diameter, mm	71.37			
	Height, mm.	165.36			
	Water Content, %	70.21			
	Dry Density, pcf	63.73			
	Saturation, %	128.87			
	Void Ratio	1.2531			
Before Shear	Water Content, %	43.24			
	Dry Density, pcf	71.99			
	Saturation, %	100.00			
	Void Ratio	0.99452			
	Back Press., psi	70			
Minor Prin. Stress, psi		96			
Max. Dev. Stress, psi		23.177			
Time to Failure, min		4.0005			
Strain Rate, %/min		0.15			
B-Value		---			
Estimated Specific Gravity		2.30			
Liquid Limit		NP			
Plastic Limit		NP			
Plasticity Index		NP			
Failure Sketch					

Project: KINGSTON COAL TVA
Location: TN
Project No.: 60095742
Boring No.: 09-200 SET
Sample Type: RECONST

Description: COAL ASH - DARK GRAY SPECIMEN RECONSTITUTED BY DRAINED SLURRY TECHNIQUE (B=0.99)

Remarks: FAILURE CRITERIA = MAXIMUM EFFECTIVE STRESS RATIO TEST PERFORMED AS PER ASTM D 4767

Tue, 31-MAR-2009 12:50:16

WORK-IN-PROGRESS

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Responses to Review Comments
April 7, 2009

Comments from William H. Walton and William Butler with AECOM dated April 2, 2009.

Comment No. 1: Stantec Stability Analyses – The computed factors of safety focus on effective stress strength (ESA) parameters and assumed excess positive pore water pressures due to rapid filling and limited drainage. The analysis did not evaluate the undrained behavior (TSA) or undrained strength of the loose, wet ash. As an alternative, we performance monitoring to evaluate positive pore water pressures, settlement, lateral movement to detect shear strains under the test fill and ash foundation toward the north or east. There is a risk that too rapid a loading could trigger undrained behavior especially when the undrained strength of ash could be as low as 100 to 500 psf. Upon further review of our ash testing in the laboratory, we recommended Stantec reduce the threshold "Action" and Alarm" levels or the excess pore water pressure measured in the deep flyash be reduced to 10 percent and 15 percent, respectively due to the contractive behavior of the ash.

Based on recently completed laboratory testing, the 30 and 50 percent limits discussed a week ago pose too much risk for another flow slide from AECOM's perspective. We have attached our computations for fill stability if full undrained conditions were to occur. For each stage, the computed safety factor is less than unity for undrained ash strength. This shows the importance of loading the ash in a slow to ensure drained behavior.

Response No. 1: Concur. It is recognized that on-going laboratory testing of recovered ash materials may impact conclusions/recommendations developed during earlier stages of the project. Accordingly, AECOM's previous recommended limits of 0.3 (trigger) and 0.5 (stop work or unload) have been reduced to 0.1 and 0.15, respectively.

Comment No. 2: High Void Ratio Ash – The failed, saturated flyash south of AECOM Boring 09-500 has high void ratios (average of 1.0 or more). Furthermore, the void ratios under non-failed portions of the Dredge Cell 1 increase with depth; this is contrary to what is expected for normally consolidated materials deposited hydraulically. Normally sluiced dredged fill material become denser with depth due to higher vertical stress, resulting increasing normal consolidation of a particulate media by increased overburden stresses.

Response No. 2: N/A.

Comment No. 3: Measure Excess Pore Pressures – In addition to using pneumatic piezometers we also recommend several, real-time, continuous readout, vibrating wire piezometers with alarms located in the bottom of the failed ash to detect fill induced excess pore water pressure that could develop due to rapid placement of fill over saturated high void flyash. For normal soft soils there should be excess pore water pressure generated when fill is placed over it until upward seepage occurs into a drainage blanket or sideways to lesser hydraulic head locations under or around the Test Embankments.

Response No. 3: Concur. Stantec proposes to instrument one select instrument cluster of four vibrating wire piezometers per test embankment. At these locations it is anticipated that vibrating wire piezometers will be connected to a data logger that will upload data via air card technology to a password access website. This website may be accessed by select individuals in order to review real-time pore pressure data. These data acquisition systems will be configured so that they may be moved to different piezometer clusters, if necessary.

Comment No. 4: Ash Placement Rates – We expect the ash will be placed in uniform lifts across the entire footprint of the Test Area A and B. Once the first lift is complete a second lift can be placed. Time should be provided to ensure that all of the piezometers and inclinometers are read before the next lift is placed. Our goal should be to make sure filling rates are slow enough to allow drained behavior in the ash during the test embankment construction.

Response No. 4: Concur.

Comment No. 5: Settlement Plates – Settlement plates placed over the failed ash at the base of the test fill will to measure actual vertical compression of the failed ash to complement the concept that with increasing more surcharge pore water is forced out of the ash resulting in a denser material, therefore resulting in settlement or consolidation.

Response No. 5: N/A

Comment No. 6: Clay Strengths – We have run vane shears under the Cell 1 and next to the Test Embankment at Area A. We concur with Stantec use of 1,380 psf for the shear strength of the foundation clay under Area A. The lowest AECOM measured peak vane shear strengths were 1,400 psf at 09-500 and 1,900 psf at 09-303.

Response No. 6: N/A

Comment No. 7: Vertical Inclinometers – The inclinometers are used to monitor fill induced lateral shear strains created by the presence of the adjacent slope or driving forces created by the construction of the Test Embankment. The purpose of these instruments is to measure lateral movements and check to see if lateral movements are substantially less than measured vertical movements (determined from the settlement plate readings).

Response No. 7: N/A

Comment No. 8: Rate of Filling – The contractor should be flexible in fill placement rates to ensure the footprint can allow full lift coverage before the next lift is placed. Should pore water pressures become too high, alternate filling should be done in Area 2 or at the Ball Field area. The goal should be to fill at a rate that allows ash drainage with low pore water pressure buildup.

Response No. 8: Concur.

Comment No. 9: Construction Oversight – It is very important that Stantec have skilled personnel on site that can will take daily readings and have the authority to stop filling if the ash shows undrained behavior.

Response No. 9: Concur.

Stantec intends to perform additional site characterization within the test embankment limits during various stages of the project. The primary purpose of this work is to assess the effect of embankment loading across various foundation materials.

AECOM
750 Corporate Woods Parkway, Vernon Hills, IL 60061
T 847.279.2500 F 847.279.2510 www.aecom.com

April 9, 2009

sent via e-mail rerodgers@tva.gov

Mr. Ralph E. Rodgers
Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, Tennessee 37902-1401

Re: Review of Stantec Stability Submittal for the Test Embankment Program at Area A at Kingston Fossil Plant, Harriman, Roane County, TN – AECOM Project No. 60095742

Dear Mr. Rodgers,

As requested by TVA's Barry Snider, we have reviewed the following work in progress document provided by Stantec in an email to AECOM dated April 7, 2009.

1. Stantec Responses to AECOM Review Comments for the Summary of Stability Analysis, Test Embankment Program – Area A, Test Embankment Program, Kingston Fossil Plant, Harriman, Roane County TN, 3 pages, dated April 7, 2009.

Per TDEC directive, the remedial design documents for containment and closure of the Kingston Ash Pond and Dredge Cells will be reviewed by AECOM and TVA to promote short and long term structural stability and integrity of ash ponds. AECOM has been requested to review remedial designs as we are the Root Cause Analyst (RCA) of failure at this site. Both TVA and AECOM have been appointed to the TDEC structural integrity peer review for this structure.

Review Comments

We appreciate and concur with Stantec's responses to AECOM's review letter dated April 2, 2008 and expect the Stantec documents will be updated to include the information necessary to construct the Test Embankment at Areas A and B in stages at controlled rates to ensure drained behavior.

Summary

We are in favor of conducting engineered test embankments at Areas A and B with performance monitoring to maintain drained loading conditions. We can learn much about the foundation clay and failed flyash under monitored loading during construction of the test embankments. The relocated flyash built using benched fill slopes no steeper than 3H:1V, with 50 foot wide benches for every 15-foot rise in fill in stages up to a maximum 40-foot height. We are pleased Stantec will be performing explorations after each the completion of each bench. AECOM supports the premise that this engineered test fill solution, based on analysis, design assumptions and testing will be verified by daily by Stantec using instrumentation monitoring and surveys to demonstrate drained behavior. It would also be interesting to see if test filling can re-initiate minor movement along the December 22, 2008 failure plane. The failed section has little to no inertia in the failure mass to obsevered movement along the failure plane at this time.

We suggest TVA and AECOM be copied on this daily instrumentation performance data to assist in site remediation design and review.

Please call us if you have any questions.

Very truly yours,

William H. Walton, P.E., S.E.
Vice President, Senior Principal Engineer

William Butler, P.E.
Senior Geotechnical Engineer

cc: Barry Snider – TVA – bssnider@tva.gov
Gonzalo Castro – Consultant – gv.castro@verizon.net

January 6, 2010
Modification

Stantec Consulting Services Inc.
1409 North Forbes Road
Lexington KY 40511-2050
Tel: (859) 422-3000
Fax: (859) 422-3100

January 6, 2009 let_007_kif_175669015

Mr. Michael T. Scott, PE
General Manager
TVA Kingston Fossil Ash Recovery Operations
1134 Swan Pond Road, KFP 1T-KST
Harriman, Tennessee 37748

Re: Revised Instrumentation Monitoring Criteria
Test Embankment Program
TVA Kingston Fossil Plant
Harriman, Roane County, Tennessee

Dear Mr. Scott:

Based on recommendations received from AECOM (letter dated November 30, 2009 and subsequent team discussions conducted on December 16 and 17, 2009) Section 11.4 of the Construction Quality Control (QC) Plan of the approved Test Embankment Program document (dated June 3, 2009) is revised as follows:

11.4 Thresholds

Embankment loading models have been analyzed which take into account the existing subsurface conditions and the proposed embankment heights. The following threshold limits shall be used for the test embankments.

a. *Piezometers – Embankment filling may continue, with regular monitoring frequency, as long as the ratio of excess pore pressure to the applied embankment load is 10 percent or below. When the excess pore pressure ratio within* ***native foundation soil layers*** *ranges from 10 to 15 percent, embankment filling may continue, but with an increase in instrumentation monitoring specified by the QC Manager. All fill placements shall stop immediately when the excess pore pressure ratio is above the 15 percent level within* ***native foundation soil layers****. Embankment filling shall stop immediately when the excess pore pressure ratio is above the 10 percent level within* ***wet (foundation) ash layers****. All excess pore pressure measurements shall be evaluated from baseline data values.*

b. *Slope Inclinometers and Settlement Plates – Embankment filling may continue with regular monitoring frequency, as long as the displacement ratio of lateral inclinometer movement to vertical settlement plate movement is 20 percent or below. When the displacement ratio ranges from 20 to 30 percent, embankment filling may continue, but with an increase in instrumentation monitoring specified by the QC Manager. All fill placements shall stop immediately when the displacement ratio is above the 30 percent level.*

Following a stoppage, embankment filling in affected areas may resume based on the discretion of the QC Manager and engineering considerations on embankment stability. It should be noted that embankment loading may be restricted and/or modified at the discretion of the QC Manager based on other potentially unstable conditions not outlined herein.

I have instructed our Test Embankment QC Team to follow these criteria, effective immediately. If you have any questions or need additional information, please call.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Michael J. Steele, PE
Associate

/rdr

cc: Stephen H. McCracken, PE
John C. Kammeyer, PE
Barry S. Snider, PE
Vernon J. Dotson Jr., PE
Jack Howard, PE
Don W. Fuller II, PE
James W. Andrew, PE

Appendix B

Geotechnical
Instrumentation
Borings/Installation Details

Geotechnical
Instrumentation Borings

Stantec

SUBSURFACE LOG

Project No.	171468117	Location	N 556601.76, E 2440140.39 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-1** Total Depth 44.5 ft
Location	Kingston, Tennessee	Surface Elevation	757.3 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	4/30/09 Completed 4/30/09
Supervisor	Ben Halada Driller Kent Clements	Depth to Water	N/A Date/Time N/A
Logged By	Ben Halada	Automatic Hammer ☒	Safety Hammer ☐ Other ☐

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
757.3'	0.0'	Top of Hole							
		OVERBURDEN, Ash (Augered without sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers
				SPT-1	29.5 - 31.0	0.0	2-2-4	--	
				SPT-2	31.0 - 32.5	0.1	5-4-6	--	
724.3'	33.0'			SPT-3	32.5 - 34.0	1.0	5-2-2	--	
		SILT, dark gray, moist, soft, some clay		SPT-4	34.0 - 35.5	1.4	3-3-5	--	
722.3'	35.0'			SPT-5	35.5 - 37.0	1.4	WOR-WOR-WOR	--	
		CLAY, light gray and brown, saturated, soft, some silt, some fine to medium gravel		SPT-6	37.0 - 38.5	1.3	3-4-4	--	
				SPT-7	38.5 - 40.0	0.8	WOH-1-4	--	
716.3'	41.0'			SPT-8	40.0 - 41.5	1.1	6-4-7	--	
				SPT-9	41.5 - 43.0	1.1	3-6-9	--	
				SPT-10	43.0 - 44.5	1.1	3-7-6	--	

FMSM_LEGACY 175680015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556601.76, E 2440140.39 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-1**
		Total Depth	44.5 ft

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
712.8'	44.5'	GRAVEL, white to light gray, saturated, medium, fine to coarse grained, angular, some fine to coarse sand *(Continued)*							
		No Refusal / Bottom of Hole							

WOH = Weight of Hammer
WOR = Weight of Rods

Four Vibrating Wire PZ's installed; tip elevations are at 742.3', 731.3', 719.3', and 714.3"

FMSM_LEGACY 175568015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556494.71, E 2440294.45 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-2** Total Depth 48.2 ft
Location	Kingston, Tennessee	Surface Elevation	760.2 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	5/13/09 Completed 5/13/09
Supervisor	Ben Halada Driller Kent Clements	Depth to Water	N/A Date/Time N/A
Logged By	Ben Halada	Automatic Hammer ☒	Safety Hammer ☐ Other ☐

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
760.2'	0.0'	Top of Hole							
		OVERBURDEN, Ash							Boring advanced using 4 1/4 " Hollow Stem Augers
				SPT-1	28.0 - 29.5	1.3	WOR-WOR-WOR	--	
				SPT-2	29.5 - 31.0	1.2	WOH-1-1	--	
				SPT-3	31.0 - 32.5	1.0	WOR-WOH-WOH	--	
727.2'	33.0'								
		SILT, dark gray, moist, loose, some clay		SPT-4	32.5 - 34.0	1.1	1-WOH-1	--	
725.2'	35.0'			SPT-5	34.0 - 35.5	1.1	2-1-2	--	
		LEAN CLAY, gray with light brown, saturated, soft, some silt, some fine sand		SPT-6	35.5 - 37.0	0.9	2-4-5	--	
				SPT-7	37.0 - 38.5	1.1	3-5-6	--	
				SPT-8	38.5 - 40.0	1.3	WOH-2-3	--	
				SPT-9	40.0 - 41.5	1.3	4-4-7	--	
717.2'	43.0'			SPT-10	41.5 - 43.0	1.1	3-4-5	--	
				SPT-11	43.0 - 44.5	1.1	3-4-3	--	

FMSM_LEGACY 175669015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556494.71, E 2440294.45 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-2**
		Total Depth	48.2 ft

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
714.2'	46.0'	LEAN CLAY with Sand, gray, saturated, soft *(Continued)*		SPT-12	44.5 - 46.0	1.1	2-2-2	--	
712.0'	48.2'	SAND, gray, saturated, very loose, fine to medium grained, trace silt		SPT-13	46.0 - 47.5	1.2	WOR-WOH-1	--	

No Refusal /
Bottom of Hole

WOH = Weight of Hammer
WOR = Weight of Rods

Four Vibrating Wire PZ's installed; tip elevations are at 742.5', 731.5', 720.5', and 713.5'

FMSM_LEGACY 175669015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

Stantec

SUBSURFACE LOG

Project No.	171468117	Location	N 556390.54, E 2440383.16 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-3** Total Depth 44.5 ft
Location	Kingston, Tennessee	Surface Elevation	760.3 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	5/15/09 Completed 5/15/09
Supervisor	Ben Halada Driller Kent Clements	Depth to Water	N/A Date/Time N/A
Logged By	Ben Halada	Automatic Hammer ☒	Safety Hammer ☐ Other ☐

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
760.3'	0.0'	Top of Hole							
		OVERBURDEN, Ash							
729.8'	30.5'			SPT-1	29.5 - 31.0	1.1	WOR-WOR-WOR	--	
		SILT, dark gray to black, moist, loose		SPT-2	31.0 - 32.5	0.3	WOR-WOR-WOR	--	
726.8'	33.5'			SPT-3	32.5 - 34.0	1.3	WOH-WOH-2	--	
		LEAN CLAY, light brown and gray, moist, medium stiff, trace fine sand		SPT-4	34.0 - 35.5	1.0	1-3-5	--	
				SPT-5	35.5 - 37.0	1.0	5-3-7	--	
				SPT-6	37.0 - 38.5	1.3	3-5-8	--	
				SPT-7	38.5 - 40.0	1.4	1-4-6	--	
719.3'	41.0'			SPT-8	40.0 - 41.5	1.3	1-4-5	--	
		SAND, light brown, moist, medium, fine to medium grained		SPT-9	41.5 - 43.0	1.1	5-7-8	--	
				SPT-10	43.0 - 44.5	1.0	1-3-5	--	

FMSM_LEGACY 175669015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556390.54, E 2440383.16 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-3**
		Total Depth	44.5 ft

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
715.8'	44.5'	No Refusal / Bottom of Hole							

WOH = Weight of Hammer
WOR = Weight of Rods

Four Vibrating Wire PZ's installed; tip elevations are at 745.3', 734.3', 723.3', and 717.3'

FMSM_LEGACY 1:\569015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

Stantec

SUBSURFACE LOG

Project No.	171468117	Location	N 556436.40, E 2440237.87 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-4** Total Depth 48.0 ft
Location	Kingston, Tennessee	Surface Elevation	760.5 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	5/18/09 Completed 5/18/09
Supervisor	Ben Halada Driller Kent Clements	Depth to Water	N/A Date/Time N/A
Logged By	Ben Halada	Automatic Hammer ☒	Safety Hammer ☐ Other ☐

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
760.5'	0.0'	Top of Hole							
		OVERBURDEN, Ash							Boring advanced using 4 1/4 " Hollow Stem Augers
726.5'	34.0'			SPT-1	33.0 - 34.5	1.1	WOR-WOR-WOR	--	
725.0'	35.5'	SILT, dark gray to black, moist, very soft		SPT-2	34.5 - 36.0	1.3	WOH-1-2	--	
		CLAY, gray and light brown, moist, soft to medium stiff, trace fine sand		SPT-3	36.0 - 37.5	0.0	4-4-4	--	
				SPT-4	37.5 - 39.0	1.2	WOH-2-4	--	
				SPT-5	39.0 - 40.5	1.1	1-3-6	--	
				SPT-6	40.5 - 42.0	1.0	6-6-8	--	
				SPT-7	42.0 - 43.5	1.1	6-7-9	--	

FMSM_LEGACY 175609015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556436.40, E 2440237.87 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-4**
		Total Depth	48.0 ft

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
715.5'	45.0'			SPT-8	43.5 - 45.0	1.4	3-6-6	--	
		SAND, gray, moist, medium, fine to medium grained, some clay		SPT-9	45.0 - 46.5	1.2	3-3-3	--	
712.5'	48.0'			SPT-10	46.5 - 48.0	1.1	3-5-3	--	

No Refusal /
Bottom of Hole

WOH = Weight of Hammer
WOR = Weight of Rods

Four Vibrating Wire PZ's installed; tip elevations are at 742.5', 731.5', 720.5', and 713.5'

FMSM_LEGACY_175669015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556312.74, E 2440334.89 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-5** Total Depth 50.0 ft
Location	Kingston, Tennessee	Surface Elevation	769.0 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	4/28/09 Completed 4/28/09
Supervisor	Ben Halada Driller Kent Clements	Depth to Water	N/A Date/Time N/A
Logged By	Ben Halada	Automatic Hammer ☒	Safety Hammer ☐ Other ☐

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
769.0'	0.0'	Top of Hole							
		OVERBURDEN, Ash (Augered without sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers
				SPT-1	35.0 - 36.5	1.1	WOH-WOH-WOH	--	
				SPT-2	36.5 - 38.0	1.1	WOR-WOH-WOH	--	
729.5'	39.5'			SPT-3	38.0 - 39.5	1.2	WOR-WOR-WOR	--	
		CLAY, light brown to brown, moist, soft, silty clay		SPT-4	39.5 - 41.0	0.0	4-5-4	--	
				SPT-5	41.0 - 42.5	0.9	2-1-2	--	
				SPT-6	42.5 - 44.0	1.1	5-3-5	--	

FMSM_LEGACY 17968015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556312.74, E 2440334.89 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-5** Total Depth 50.0 ft

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
		CLAY, light brown to brown, moist, soft, silty clay *(Continued)*		SPT-7	44.0 - 45.5	1.1	3-4-5	--	
722.0'	47.0'			SPT-8	45.5 - 47.0	1.0	1-2-3	--	
		SAND, brown with gray, saturated, medium, medium to coarse grained, some silty clay		SPT-9	47.0 - 48.5	1.1	2-3-3	--	
719.0'	50.0'			SPT-10	48.5 - 50.0	1.0	3-3-5	--	

No Refusal /
Bottom of Hole

WOH = Weight of Hammer
WOR = Weight of Rods

Four Vibrating Wire PZ's installed; tip elevations are at 749.0', 739.0', 726.0', and 721.0'

FMSM_LEGACY 175668015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556149.67, E 2440547.30 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-6** Total Depth 65.0 ft
Location	Kingston, Tennessee	Surface Elevation	777.3 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	4/27/09 Completed 4/27/09
Supervisor	Ben Halada Driller Kent Clements	Depth to Water	N/A Date/Time N/A
Logged By	Ben Halada	Automatic Hammer ☒	Safety Hammer ☐ Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
777.3'	0.0'	Top of Hole							
		Overburden, Ash (Augered without sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers
				SPT-1	42.0 - 43.5	1.0	1-WOH-WOH	--	

FMSM_LEGACY 175668015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556149.67, E 2440547.30 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-6**
		Total Depth	65.0 ft

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
		Overburden, Ash (Augered without sampling) *(Continued)*		SPT-2	43.5 - 45.0	1.1	1-WOH-WOH	--	
				SPT-3	45.0 - 46.5	1.1	WOR-WOR-WOR	--	
				SPT-4	46.5 - 48.0	1.1	WOR-WOR-WOR	--	
728.3'	49.0'			SPT-5	48.0 - 49.5	1.2	WOR-WOH-2	--	
		CLAY, light brown to brown, moist, soft, silty clay		SPT-6	49.5 - 51.0	1.3	WOR-1-3	--	
				SPT-7	51.0 - 52.5	1.4	6-5-4	--	
				SPT-8	52.5 - 54.0	1.3	5-5-7	--	
722.3'	55.0'			SPT-9	54.0 - 55.5	1.3	3-6-12	--	
		SAND, brown, saturated, medium, medium to coarse grained, some silty clay		SPT-10	55.5 - 57.0	1.2	14-6-8	--	
712.3'	65.0'								

No Refusal /
Bottom of Hole

WOH = Weight of Hammer
WOR = Weight of Rods

Four Vibrating Wire PZ's installed; tip elevations are at 753.1', 736.4', 725.3', and 717.4'

FMSM_LEGACY 175668015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556361.20, E 2440168.33 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-7** Total Depth 55.0 ft
Location	Kingston, Tennessee	Surface Elevation	771.3 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	5/5/09 Completed 5/5/09
Supervisor	Ben Halada Driller Kent Clements	Depth to Water	N/A Date/Time N/A
Logged By	Ben Halada	Automatic Hammer ☒	Safety Hammer ☐ Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
771.3'	0.0'	Top of Hole							
		OVERBURDEN, Ash (Augered without sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers
				SPT-1	34.5 - 36.0	1.1	WOR-WOH-1	--	
				SPT-2	36.0 - 37.5	1.0	WOR-WOH-WOH	--	
				SPT-3	37.5 - 39.0	1.2	3-1-1	--	
				SPT-4	39.0 - 40.5	1.0	1-1-WOH	--	
				SPT-5	40.5 - 42.0	1.3	WOR-WOR-WOR	--	
				SPT-6	42.0 - 43.5	1.2	1-3-2	--	
727.3'	44.0'								

FMSM_LEGACY 175669015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556361.20, E 2440168.33 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-7**
		Total Depth	55.0 ft

Lithology		Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
Elevation	Depth								
		SILTY CLAY, green to brown, saturated, soft *(Continued)*		SPT-7	43.5 - 45.0	1.0	WOH-WOH-2	--	
				SPT-8	45.0 - 46.5	1.1	WOH-WOH-3	--	
				SPT-9	46.5 - 48.0	1.3	3-3-6	--	
				SPT-10	48.0 - 49.5	1.2	4-6-6	--	
				SPT-11	49.5 - 51.0	1.0	2-5-7	--	
719.8'	51.5'								
		SAND, brown with gray, saturated, medium, medium to coarse grained, some silty clay		SPT-12	51.0 - 52.5	1.0	10-8-9	--	
716.3'	55.0'								

No Refusal /
Bottom of Hole

WOH = Weight of Hammer
WOR = Weight of Rods

Four Vibrating Wire PZ's installed; tip elevations are at 746.0', 735.9', 723.8', and 718.3'

FMSM_LEGACY 175680015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556240.85, E 2440301.82 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-8** Total Depth 54.5 ft
Location	Kingston, Tennessee	Surface Elevation	773.1 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	4/29/09 Completed 4/29/09
Supervisor	Ben Halada Driller Kent Clements	Depth to Water	N/A Date/Time N/A
Logged By	Ben Halada	Automatic Hammer ☒	Safety Hammer ☐ Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
773.1'	0.0'	Top of Hole							
		OVERBURDEN, Ash (Augered without sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers
				SPT-1	39.5 - 41.0	1.0	WOR-WOR-WOR	--	
				SPT-2	41.0 - 42.5	1.3	WOR-WOR-WOR	--	
				SPT-3	42.5 - 44.0	1.1	WOR-	--	

FMSM_LEGACY 175668015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556240.85, E 2440301.82 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-8**
		Total Depth	54.5 ft

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
728.1'	45.0'			SPT-4	44.0 - 45.5	1.1	WOR-WOR WOH-	--	
		CLAY, light brown to brown, moist, soft, silty clay		SPT-5	45.5 - 47.0	1.0	WOH-2 WOH-2-2	--	
				SPT-6	47.0 - 48.5	1.1	3-4-4	--	
				SPT-7	48.5 - 50.0	1.3	3-6-7	--	
721.6'	51.5'			SPT-8	50.0 - 51.5	1.2	3-5-7	--	
		SAND, brown, saturated, medium, medium to coarse grained, some silty clay		SPT-9	51.5 - 53.0	1.1	4-6-7	--	
718.6'	54.5'								

No Refusal /
Bottom of Hole

WOH = Weight of Hammer
WOR = Weight of Rods

Four Vibrating Wire PZ's installed; tip elevations are at 750.1', 739.1', 725.1', and 720.1'

FMSM_LEGACY 175668015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556352.72, E 2441038.11 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-9** Total Depth 51.0 ft
Location	Kingston, Tennessee	Surface Elevation	757.7 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	8/16/09 Completed 8/16/09
Supervisor	Jim Andrew Driller Greg Thompson	Depth to Water	N/A Date/Time N/A
Logged By	Greg Thompson	Automatic Hammer ☒	Safety Hammer ☐ Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
757.7'	0.0'	Top of Hole							
		Augered without sampling							Boring advanced using 4 1/4 " Hollow Stem Augers Saturated at 3.2 ft
733.7'	24.0'								
		Fly ash, gray, saturated, very soft		SPT-1	24.0 - 25.5	1.5	WOR-1-2	--	
730.7'	27.0'			SPT-2	25.5 - 27.0	1.2	1-1-1	--	
		SILTY CLAY, red brown with gray modeling, moist, soft		SPT-3	27.0 - 28.5	1.3	WOH-WOH-WOH	--	
				SPT-4	28.5 - 30.0	1.0	WOH-1-1	--	
				SPT-5	30.0 - 31.5	1.5	WOH-2-2	--	
				SPT-6	31.5 - 33.0	1.1	2-3-3	--	
				SPT-7	33.0 - 34.5	0.7	2-3-4	--	
				SPT-8	34.5 - 36.0	1.2	3-4-5	--	
				SPT-9	36.0 - 37.5	1.3	3-4-6	--	
719.7'	38.0'								
		SILTY SAND, brown, moist, loose		SPT-10	37.5 - 39.0	1.5	3-3-4	--	
				SPT-11	39.0 - 40.5	1.5	WOH-2-3	--	
				SPT-12	40.5 - 42.0	1.3	1-2-3	--	
715.2'	42.5'								
				SPT-13	42.0 - 43.5	1.0	2-3-2	--	

FMSM_LEGACY 175688015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

Stantec

SUBSURFACE LOG

Project No.	171468117	Location	N 556352.72, E 2441038.11 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-9**
		Total Depth	51.0 ft

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
		SAND, gray, moist, medium, medium grained *(Continued)*		SPT-14	43.5 - 45.0	1.5	2-5-4	--	
				SPT-15	45.0 - 46.5	1.1	1-2-2	--	
				SPT-16	46.5 - 48.0	1.0	1-3-6	--	
				SPT-17	48.0 - 49.5	1.5	8-9-17	--	
706.7'	51.0'			SPT-18	49.5 - 51.0	0.3	2-50	--	

No Refusal /
Bottom of Hole

WOH = Weight of Hammer
WOR = Weight of Rods

Four Vibrating Wire PZ's installed; tip depths are at 746.5', 735.5', 726.5', and 718.5'

FMSM_LEGACY 175660015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556277.32, E 2441146.29 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-11** Total Depth 51.0 ft
Location	Kingston, Tennessee	Surface Elevation	764.8 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	8/15/09 Completed 8/15/09
Supervisor	Jim Andrew Driller Greg Thompson	Depth to Water	N/A Date/Time N/A
Logged By	Greg Thompson	Automatic Hammer ☒	Safety Hammer ☐ Other ☐

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
764.8'	0.0'	Top of Hole							
		Augered without sampling							Boring advanced using 4 1/4 " Hollow Stem Augers
									Saturated at 7.5 ft
731.8'	33.0'								
		Fly ash, gray, saturated, very soft		SPT-1	33.0 - 34.5	1.5	2-1-WOH	--	
				SPT-2	34.5 - 36.0	1.5	WOH-WOH-WOH	--	
727.8'	37.0'			SPT-3	36.0 - 37.5	1.0	1-3-4	--	
		SANDY clay, brown with gray modeling, moist, medium		SPT-4	37.5 - 39.0	1.5	1-3-4	--	
				SPT-5	39.0 - 40.5	1.5	3-5-6	--	
				SPT-6	40.5 - 42.0	1.2	5-10-11	--	
721.3'	43.5'			SPT-7	42.0 - 43.5	1.3	4-4-5	--	

FMSM_LEGACY 175669015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556277.32, E 2441146.29 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-11** Total Depth 51.0 ft

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
719.8'	45.0'	SILTY SAND, brown, moist, medium, fine grained *(Continued)*		SPT-8	43.5 - 45.0	1.5	3-4-4	--	
				SPT-9	45.0 - 46.5	1.5	WOH-4-5	--	
717.8'	47.0'	SAND, red to brown, moist, medium		SPT-10	46.5 - 48.0	1.5	1-1-3	--	
713.8'	51.0'	SAND, gray, moist, loose, fine grained							
		No Refusal / Bottom of Hole							

WOH = Weight of Hammer

Four Vibrating Wire PZ's installed; tip elevations are at 744.8', 734.8', 725.8', and 719.8'.

FMSM_LEGACY 175668015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 555904.47, E 2440978.82 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-12** Total Depth 58.0 ft
Location	Kingston, Tennessee	Surface Elevation	772.2 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	8/17/09 Completed 8/17/09
Supervisor	Jim Andrew Driller Greg Thompson	Depth to Water	N/A Date/Time N/A
Logged By	Greg Thompson	Automatic Hammer ☒	Safety Hammer ☐ Other ☐

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
772.2'	0.0'	Top of Hole							
		Augered without sampling							Boring advanced using 4 1/4 " Hollow Stem Augers
									Saturated at 12.7 ft
737.7'	34.5'								
		Fly ash, gray, saturated, soft		SPT-1	34.5 - 36.0	1.5	WOH-WOH-WOH	--	
				SPT-2	36.0 - 37.5	1.5	1-1-1	--	
				SPT-3	37.5 - 39.0	1.3	2-3-3	--	
				SPT-4	39.0 - 40.5	1.4	2-5-5	--	
				SPT-5	40.5 - 42.0	1.0	1-2-4	--	
				SPT-6	42.0 - 43.5	1.0	2-3-3	--	

FMSM_LEGACY 175660015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

Stantec

SUBSURFACE LOG

Project No.	171468117	Location	N 555904.47, E 2440978.82 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-12**
		Total Depth	58.0 ft

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
727.0'	45.2'			SPT-7	43.5 - 45.0	1.0	3-2-2	--	
		SANDY clay, red brown with gray, moist, medium		SPT-8	45.0 - 46.5	1.5	2-3-4	--	
				SPT-9	46.5 - 48.0	1.5	7-8-10	--	
				SPT-10	48.0 - 49.5	1.5	4-6-8	--	
				SPT-11	49.5 - 51.0	1.5	5-8-8	--	
720.4'	51.8'			SPT-12	51.0 - 52.5	1.5	3-5-6	--	
718.6'	53.6'	SILTY SAND, red brown to brown, moist, medium		SPT-13	52.5 - 54.0	1.5	2-3-3	--	
		SAND, gray, moist, medium, fine to medium grained, brown sand layers and gravel layers		SPT-14	54.0 - 55.5	1.5	7-5-7	--	
				SPT-15	55.5 - 57.0	1.0	7-8-8	--	
714.2'	58.0'			SPT-16	57.0 - 58.5	1.5	3-4-5	--	
		No Refusal / Bottom of Hole							

WOH = Weight of Hammer

Four Vibrating Wire PZ's installed; tip elevations are at 740.2', 730.7', 724.7', and 719.2'

FMSM_LEGACY 175669015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 555966.42, E 2440940.05 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-13** Total Depth 51.0 ft
Location	Kingston, Tennessee	Surface Elevation	761.6 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	8/15/09 Completed 8/15/09
Supervisor	Jim Andrew Driller Greg Thompson	Depth to Water	N/A Date/Time N/A
Logged By	Greg Thompson	Automatic Hammer ☒	Safety Hammer ☐ Other ☐

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
761.6'	0.0'	Top of Hole							
		Augered without sampling							Boring advanced using 4 1/4 " Hollow Stem Augers Saturated at 6.2 ft
731.6'	30.0'								
		Fly ash, gray, saturated, very soft		SPT-1	30.0 - 31.5	1.0	WOH-1-1	--	
				SPT-2	31.5 - 33.0	1.3	WOR-2-1	--	
				SPT-3	33.0 - 34.5	1.5	WOR-3-2	--	
726.8'	34.8'								
		SILTY CLAY, brown with gray modeling, moist, soft		SPT-4	34.5 - 36.0	1.1	1-3-3	--	
				SPT-5	36.0 - 37.5	0.6	2-4-5	--	
				SPT-6	37.5 - 39.0	1.0	1-3-3	--	
				SPT-7	39.0 - 40.5	0.8	1-2-3	--	
719.8'	41.8'			SPT-8	40.5 - 42.0	0.9	2-3-4	--	
		SAND, light brown, moist, medium, medium grained		SPT-9	42.0 - 43.5	1.1	3-5-5	--	

FMSM_LEGACY 175680015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 555966.42, E 2440940.05 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**PZ-13** Total Depth 51.0 ft

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
		SAND, light brown, moist, medium, medium grained *(Continued)*		SPT-10	43.5 - 45.0	1.0	1-2-3	--	
				SPT-11	45.0 - 46.5	1.4	3-3-3	--	
713.5'	48.1'			SPT-12	46.5 - 48.0	1.5	3-2-2	--	
		SAND, gray, moist, medium, fine grained		SPT-13	48.0 - 49.5	1.5	1-1-2	--	
710.6'	51.0'			SPT-14	49.5 - 51.0	1.5	1-1-1	--	
		No Refusal / Bottom of Hole							

WOH = Weight of Hammer
WOR = Weight of Rods

Four Vibrating Wire PZ's installed; tip elevations are at 743.6', 733.6', 723.6' and 715.6'.

FMSM_LEGACY 175668015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556399.05, E 2439955.40 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	SI-1
Location	Kingston, Tennessee	Surface Elevation	777.2 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	4/21/09
Supervisor	Ben Halada	Driller	Kent Clements
Logged By	Ben Halada	Depth to Water	N/A

Total Depth: 74.0 ft | Completed: 4/21/09 | Date/Time: N/A

Automatic Hammer ☐ Safety Hammer ☐ Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
777.2'	0.0'	Top of Hole							
		OVERBURDEN, (Augered, no sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers

FMSM_LEGACY 175669015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556399.05, E 2439955.40 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	SI-1
		Total Depth	74.0 ft

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
		OVERBURDEN, (Augered, no sampling) *(Continued)*							
705.2'	72.0'								Boring backfilled with bentonite cement grout from 0.0 ft to 74.0 ft
703.2'	74.0'	No Core, Rock like resistance (Augered)							
		Auger Refusal / Bottom of Hole							

Slope Indicator (74.0 ft of pipe) installed with a concrete pad and flushmount cover

FMSM_LEGACY 175689015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556717.42, E 2440143.33 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	SI-2
Location	Kingston, Tennessee	Surface Elevation	757.7 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	4/29/09
Supervisor	Ben Halada	Driller	Kent Clements
Logged By	Ben Halada	Automatic Hammer ☐	Safety Hammer ☐

Total Depth: 59.0 ft | Completed: 4/29/09 | Depth to Water: N/A | Date/Time: N/A | Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
757.7'	0.0'	Top of Hole							
		OVERBURDEN, Ash (Augered without sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers

FMSM_LEGACY 175660015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556717.42, E 2440143.33 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**SI-2**
Total Depth	59.0 ft		

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
707.7'	50.0'	OVERBURDEN, Ash (Augered without sampling) *(Continued)*							
698.7'	59.0'	No Core, Rock like resistance (Augered)							Boring backfilled with bentonite cement grout from 0.0 ft to 59.0 ft
		Auger Refusal / Bottom of Hole							

Slope Indicator (59 ft of pipe) installed with a concrete pad and flushmount cover

FMSM_LEGACY 175699015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556958.51, E 2440332.04 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	SI-3
Location	Kingston, Tennessee	Surface Elevation	758.9 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	5/12/09
Supervisor	Ben Halada	Driller	Kent Clements
Logged By	Ben Halada	Depth to Water	N/A

Total Depth: 65.6 ft
Completed: 5/12/09
Date/Time: N/A
Automatic Hammer ☐ Safety Hammer ☐ Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
758.9'	0.0'	Top of Hole							
		OVERBURDEN, (Augered, no sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers

FMSM_LEGACY 175698015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

Stantec

SUBSURFACE LOG

Project No.	171468117	Location	N 556958.51, E 2440332.04 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	SI-3
		Total Depth	65.6 ft

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
		OVERBURDEN, (Augered, no sampling) *(Continued)*							
703.9'	55.0'								
		No Core, Rock like resistance (Augered)							Boring backfilled with bentonite cement grout from 0.0 ft to 65.5 ft
693.4'	65.5'								
		No Refusal / Bottom of Hole							

Slope Indicator (65.5 ft of pipe) installed with a concrete pad and flushmount cover

FMSM_LEGACY 175568015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556450.32, E 2440480.28 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	SI-4
Location	Kingston, Tennessee	Total Depth	70.5 ft
Project Type	Geotechnical Exploration	Surface Elevation	765.8 ft. (NGVD29)
Supervisor	Ben Halada	Date Started	5/12/09
Driller	Kent Clements	Completed	5/12/09
Logged By	Ben Halada	Depth to Water	N/A
		Date/Time	N/A
		Automatic Hammer ☐	Safety Hammer ☐ Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
765.8'	0.0'	Top of Hole							
		OVERBURDEN, (Augered, no sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers

FMSM_LEGACY 175680015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556450.32, E 2440480.28 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	SI-4
		Total Depth	70.5 ft

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
		OVERBURDEN, (Augered, no sampling) *(Continued)*							
705.3'	60.5'								
		No Core, Rock like resistance (Augered)							
695.3'	70.5'								Boring backfilled with bentonite cement grout from 0.0 ft to 70.5 ft
		No Refusal / Bottom of Hole							

Slope Indicator (70.5 ft of pipe) installed with a concrete pad and flushmount cover

FMSM_LEGACY 175688015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556228.97, E 2440609.05 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	SI-5
Location	Kingston, Tennessee	Total Depth	74.6 ft
Project Type	Geotechnical Exploration	Surface Elevation	774.0 ft. (NGVD29)
Supervisor	Ben Halada	Date Started	4/23/09
Driller	Steve Bradford	Completed	4/23/09
Logged By	Adam Smith	Depth to Water	N/A
		Date/Time	N/A
		Automatic Hammer ☐	Safety Hammer ☐ Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
774.0'	0.0'	Top of Hole							
		OVERBURDEN, (Augered, no sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers

FMSM_LEGACY 171468015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556228.97, E 2440609.05 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**SI-5**
		Total Depth	74.6 ft

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
		OVERBURDEN, (Augered, no sampling) *(Continued)*							
703.4'	70.6'								
699.4'	74.6'	No Core, Rock like resistance (Augered)							Boring backfilled with bentonite cement grout from 0.0 ft to 74.6 ft
		Auger Refusal / Bottom of Hole							

Slope Indicator (74.6 ft of pipe) installed with a concrete pad and flushmount cover

FMSM_LEGACY 175669015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

Stantec

SUBSURFACE LOG

Project No.	171468117	Location	N 556470.91, E 2440255.41 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**SI-6** Total Depth 82.6 ft
Location	Kingston, Tennessee	Surface Elevation	778.1 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	1/14/10 Completed 1/18/10
Supervisor	Ben Halada Driller Mark Martin	Depth to Water	N/A Date/Time N/A
Logged By	Ben Halada	Automatic Hammer ☐	Safety Hammer ☐ Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
778.1'	0.0'	Top of Hole							
		OVERBURDEN, (Augered, no sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers

Stantec

SUBSURFACE LOG

Project No.	171468117	Location	N 556470.91, E 2440255.41 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**SI-6**
		Total Depth	82.6 ft

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
		OVERBURDEN, (Augered, no sampling) *(Continued)*							
703.1'	75.0'								
		Cored, Core not saved, Shale and limestone							Boring backfilled with bentonite cement grout from 0.0 ft to 82.6 ft
695.5'	82.6'								
		Auger Refusal / Bottom of Hole Top of Rock = 75.0' Elevation (703.1')							
		Slope Indicator (85.0 ft of pipe) installed							

FMSM_LEGACY 175669015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 4/8/10

Stantec

SUBSURFACE LOG

Project No.	171468117	Location	N 556377.96, E 2440393.10 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**SI-7** Total Depth 82.2 ft
Location	Kingston, Tennessee	Surface Elevation	775.3 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	1/12/10 Completed 1/13/10
Supervisor	Ben Halada Driller Mark Martin	Depth to Water	N/A Date/Time N/A
Logged By	Ben Halada	Automatic Hammer ☐	Safety Hammer ☐ Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
775.3'	0.0'	Top of Hole							
		OVERBURDEN, (Augered, no sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers

SUBSURFACE LOG

Project No.	171468117	Location	N 556377.96, E 2440393.10 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	SI-7
		Total Depth	82.2 ft

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
		OVERBURDEN, (Augered, no sampling) *(Continued)*							
703.0'	72.3'								
		Cored, Core not saved, Shale and limestone							
693.1'	82.2'								Boring backfilled with bentonite cement grout from 0.0 ft to 82.2 ft
		Auger Refusal / Bottom of Hole Top of Rock = 72.3' Elevation (703.0') Slope Indicator (85.0 ft of pipe) installed							

FMSM_LEGACY - 175660015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 4/8/10

SUBSURFACE LOG

Project No.	171468117	Location	N 556088.48, E 2440789.54 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	SI-9
Location	Kingston, Tennessee	Total Depth	83.3 ft
Project Type	Geotechnical Exploration	Surface Elevation	777.9 ft. (NGVD29)
Supervisor	Ben Halada	Driller Kent Clements	Date Started 5/11/09 Completed 5/11/09
Logged By	Ben Halada	Depth to Water	N/A Date/Time N/A
		Automatic Hammer ☐	Safety Hammer ☐ Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
777.9'	0.0'	Top of Hole							
		OVERBURDEN, (Augered, no sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers

FMSM_LEGACY 175669015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

Project No.	171468117	Location	N 556088.48, E 2440789.54 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**SI-9**
		Total Depth	83.3 ft

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
		OVERBURDEN, (Augered, no sampling) *(Continued)*							
705.0'	72.9'								
		No Core, Rock like resistance (Augered)							Boring backfilled with bentonite cement grout from 0.0 ft to 83.3 ft
694.6'	83.3'								
		No Refusal / Bottom of Hole							

FMSM_LEGACY 175660015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

Stantec

SUBSURFACE LOG

Project No.	171468117	Location	N 556088.48, E 2440789.54 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**SI-9**
		Total Depth	83.3 ft

Lithology		Description	Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	Remarks
Elevation	Depth		Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	
		Slope Indicator (83.3 ft of pipe) installed with a concrete pad and flushmount cover							

FMSM_LEGACY 175668015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 556396.48, E 2440972.31 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**SI-10** Total Depth 55.0 ft
Location	Kingston, Tennessee	Surface Elevation	753.2 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	8/17/09 Completed 8/17/09
Supervisor	Jim Andrew Driller Greg Thompson	Depth to Water	N/A Date/Time N/A
Logged By	Russ Mehnert	Automatic Hammer ☐	Safety Hammer ☐ Other ☐

Lithology Elevation	Lithology Depth	Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
753.2'	0.0'	Top of Hole							
		Augered without sampling							Boring advanced using 4 1/4 " Hollow Stem Augers

FMSM_LEGACY 175660015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

Stantec

SUBSURFACE LOG

Project No.	171468117	Location	N 556396.48, E 2440972.31 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**SI-10**
		Total Depth	55.0 ft

Lithology		Description	Overburden / Rock Core	Sample # / RQD	Depth / Run	Rec. Ft. / Rec. Ft.	Blows / Rec. %	Mois.Cont. % / Run Depth	Remarks
Elevation	Depth								
706.5'	46.7'	Augered without sampling *(Continued)*							
698.2'	55.0'	Rock, Augered							Boring backfilled with bentonite cement grout from 0.0 ft to 55.0 ft
		Auger Refusal / Bottom of Hole							

Slope Indicator (55.0 ft of pipe) installed with a concrete pad and flushmount cover

FMSM_LEGACY 1/569015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 557066.19, E 2441439.93 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	SI-11
Location	Kingston, Tennessee	Surface Elevation	758.0 ft. (NGVD29)
Project Type	Geotechnical Exploration	Date Started	4/20/09
Supervisor	Ben Halada	Driller	Kent Clements
Logged By	Ben Halada	Automatic Hammer ☐	Safety Hammer ☐ Other ☐

Total Depth: 59.0 ft
Completed: 4/20/09
Depth to Water: N/A
Date/Time: N/A

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
758.0'	0.0'	Top of Hole							
		OVERBURDEN, (Augered, no sampling)							Boring advanced using 3 1/4 " Hollow Stem Augers

FMSM_LEGACY 175960015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 557066.19, E 2441439.93 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**SI-11**
		Total Depth	59.0 ft

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
		OVERBURDEN, (Augered, no sampling) *(Continued)*							Boring backfilled with bentonite cement grout from 0.0 ft to 74.0 ft
703.0'	55.0'								
		No Core, Rock like resistance (Augered)							
699.0'	59.0'								
		Auger Refusal / Bottom of Hole							

Slope Indicator (59.0 ft of pipe) installed with a concrete pad and flushmount cover

FMSM_LEGACY 175669015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

SUBSURFACE LOG

Project No.	171468117	Location	N 555868.69, E 2441062.49 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	SI-12
Location	Kingston, Tennessee	Total Depth	89.5 ft
Project Type	Geotechnical Exploration	Surface Elevation	783.8 ft. (NGVD29)
Supervisor	Ben Halada	Date Started	4/30/09
Driller	Kent Clements	Completed	5/1/09
Logged By	Ben Halada	Depth to Water	N/A
		Date/Time	N/A
		Automatic Hammer ☐	Safety Hammer ☐ Other ☐

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
783.8'	0.0'	Top of Hole							
		OVERBURDEN, Ash (Augered without sampling)							Boring advanced using 4 1/4 " Hollow Stem Augers

FMSM_LEGACY 175869015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

Stantec

SUBSURFACE LOG

Project No.	171468117	Location	N 555868.69, E 2441062.49 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**SI-12**
		Total Depth	89.5 ft

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks
		OVERBURDEN, Ash (Augered without sampling) *(Continued)*							
705.3'	78.5'								
		No Core, Rock like resistance (Augered)							Boring backfilled with bentonite cement grout from 0.0 ft to 89.5 ft
694.3'	89.5'								
		Auger Refusal / Bottom of Hole							

FMSM_LEGACY 175699015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

Stantec

SUBSURFACE LOG

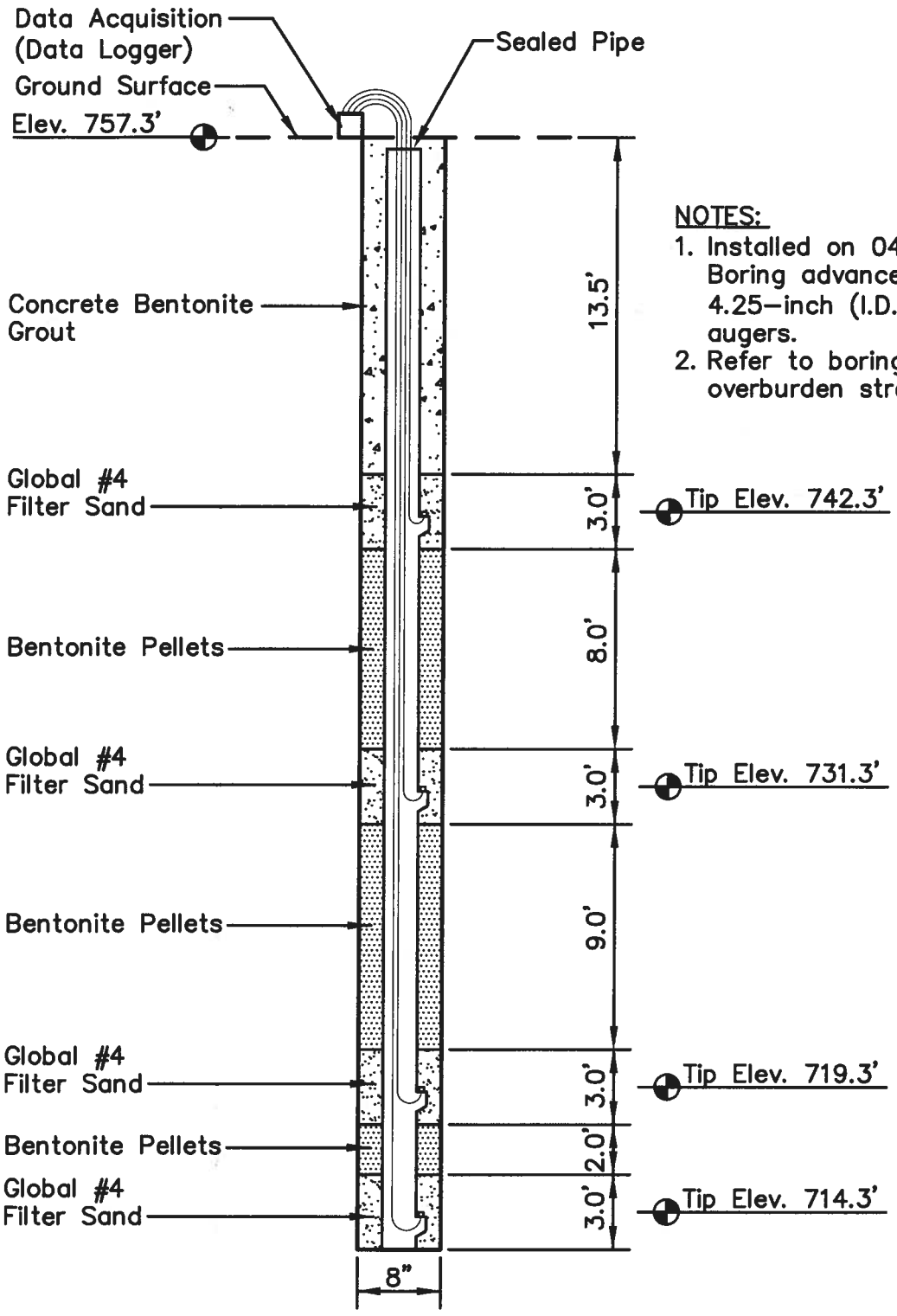
Project No.	171468117	Location	N 555868.69, E 2441062.49 (NAD27)
Project Name	Kingston Ash Pond	Boring No.	**SI-12**
		Total Depth	89.5 ft

Lithology			Overburden	Sample #	Depth	Rec. Ft.	Blows	Mois.Cont. %	
Elevation	Depth	Description	Rock Core	RQD	Run	Rec. Ft.	Rec. %	Run Depth	Remarks

Slope Indicator (89.5 ft of pipe) installed with a concrete pad and flushmount cover

FMSM_LEGACY 175680015 KINGSTON INSTRUMENTATION.GPJ FMSM.GDT 9/17/09

Geotechnical Instrumentation Installation Details



NOTES:

1. Installed on 04/30/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden stratigraphy.

LOCATION
Northing: 556,601.76
Easting: 2,440,140.39
Ground Elevation: 757.3 feet

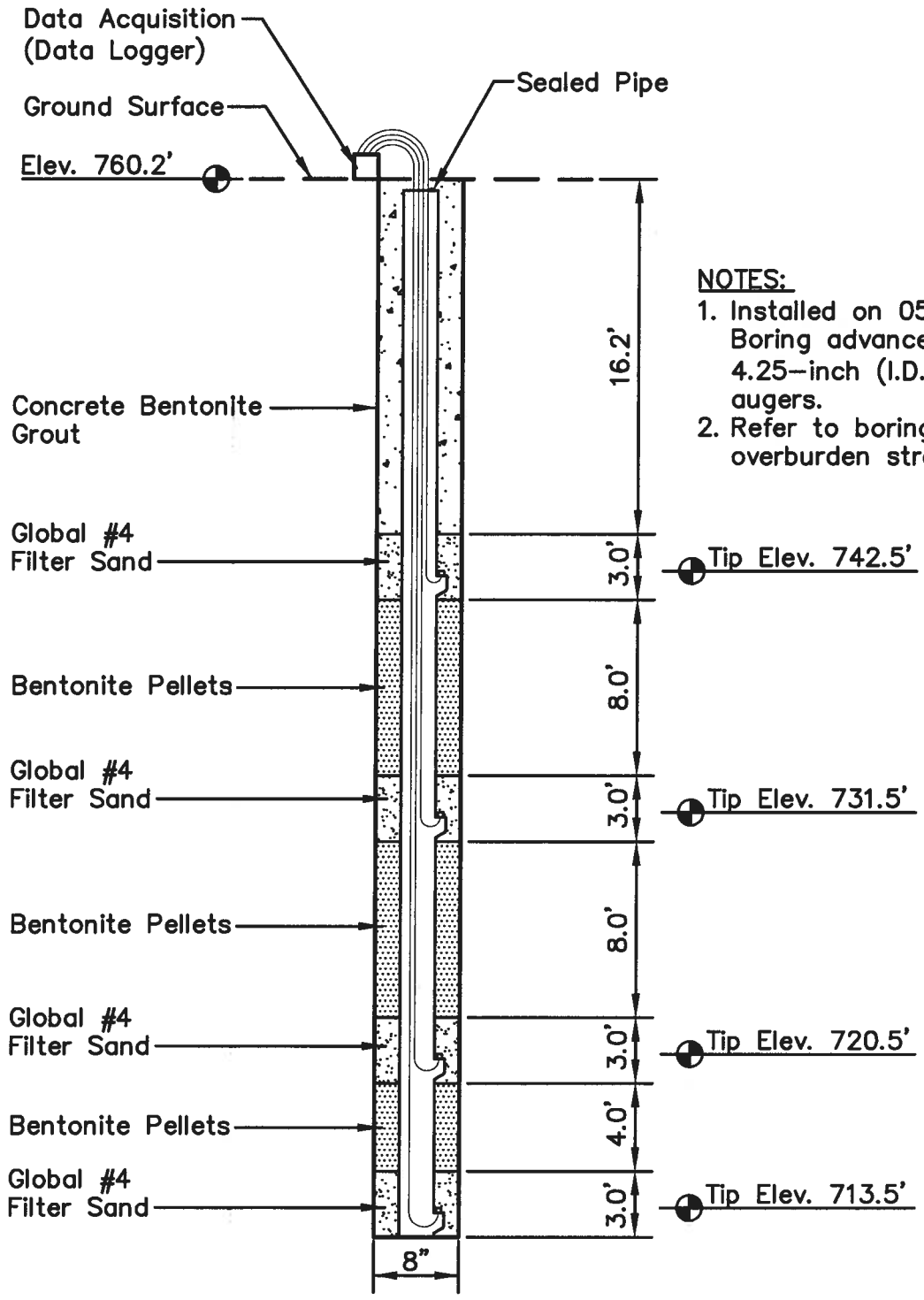
Locations to be provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27
Vertical Datum: NGVD29

PLOT DATE: 06/08/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-VP1.DWG

VIBRATING WIRE PIEZOMETER PZ-1
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	BFS	DATE	MAY, 2009	REVISED	SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1. 3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2. 4.	



NOTES:

1. Installed on 05/13/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden stratigraphy.

LOCATION
Northing: 556,494.71
Easting: 2,440,294.45
Ground Elevation: 760.2 feet

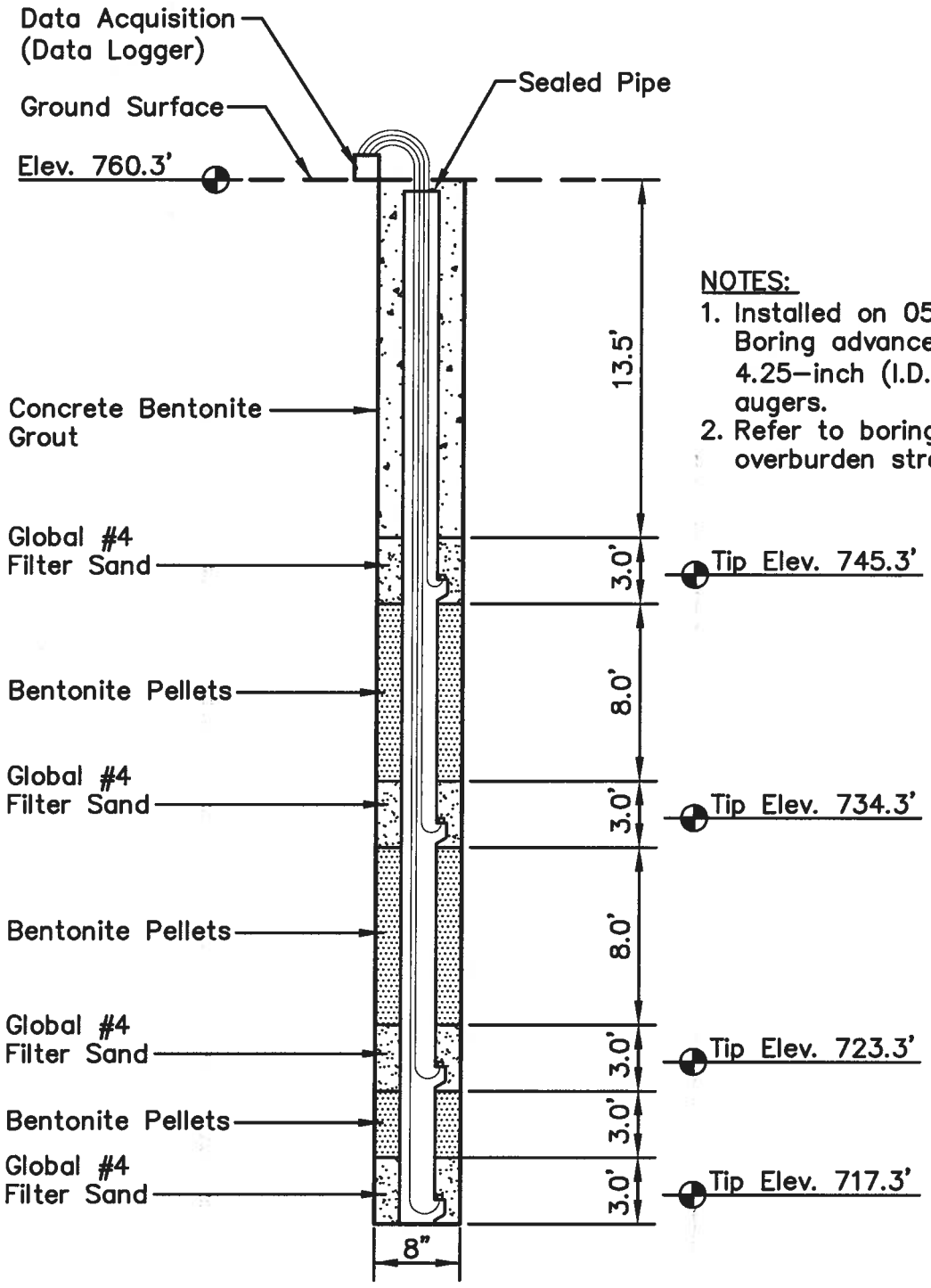
Locations to be provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27
Vertical Datum: NGVD29

VIBRATING WIRE PIEZOMETER PZ-2
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	PJB	DATE	MAY, 2009	REVISED	SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1. 3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2. 4.	

PLOT DATE: 06/08/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-VP2.DWG



NOTES:

1. Installed on 05/15/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden stratigraphy.

LOCATION
Northing: 556,390.54
Easting: 2,440,383.16
Ground Elevation: 760.3 feet

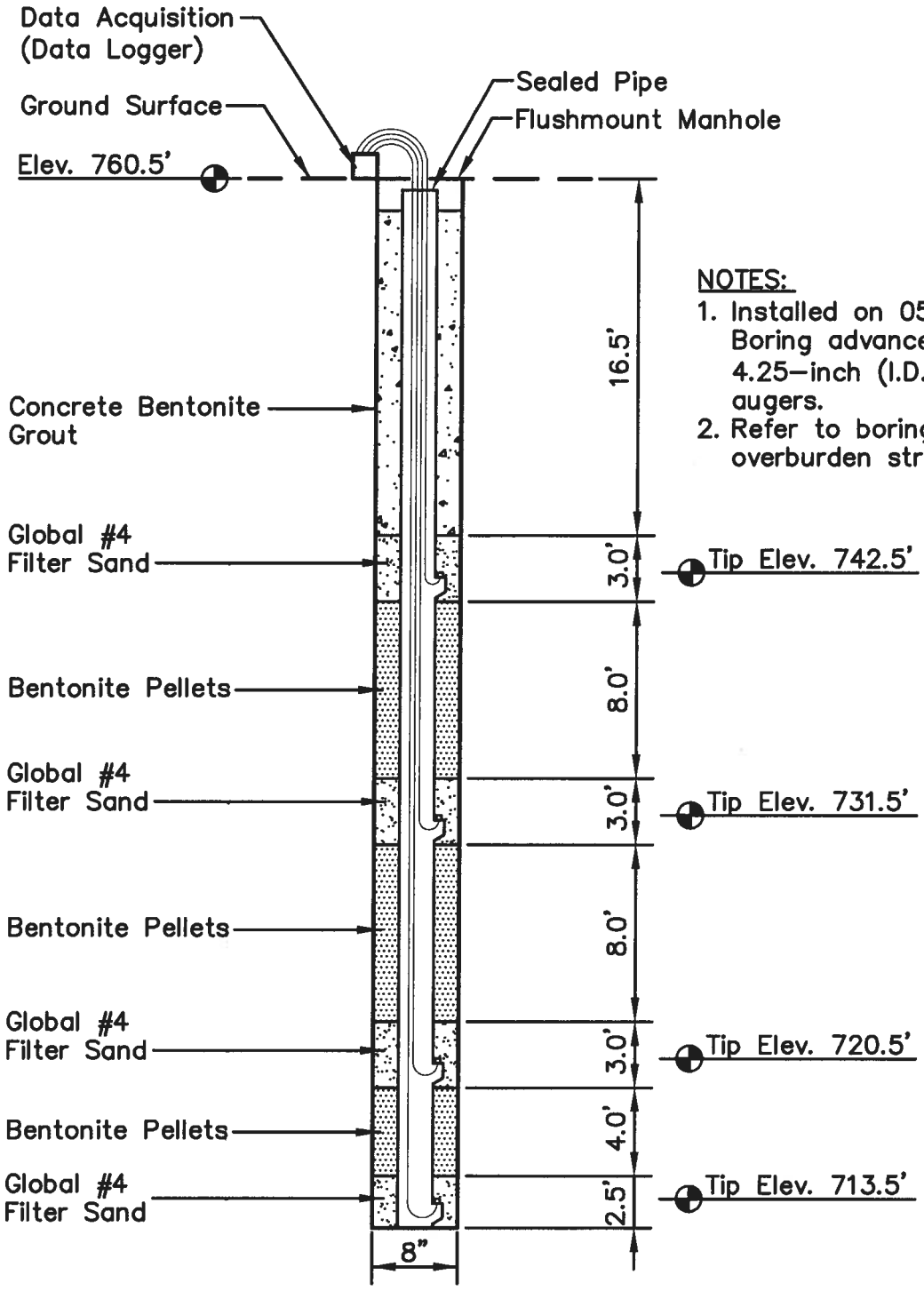
Locations to be provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27
Vertical Datum: NGVD29

PLOT DATE: 06/08/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-VP3.DWG

VIBRATING WIRE PIEZOMETER PZ-3
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	PJB	DATE	MAY, 2009	REVISED		SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	



NOTES:

1. Installed on 05/18/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden stratigraphy.

PLOT DATE: 06/08/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-VP4.DWG

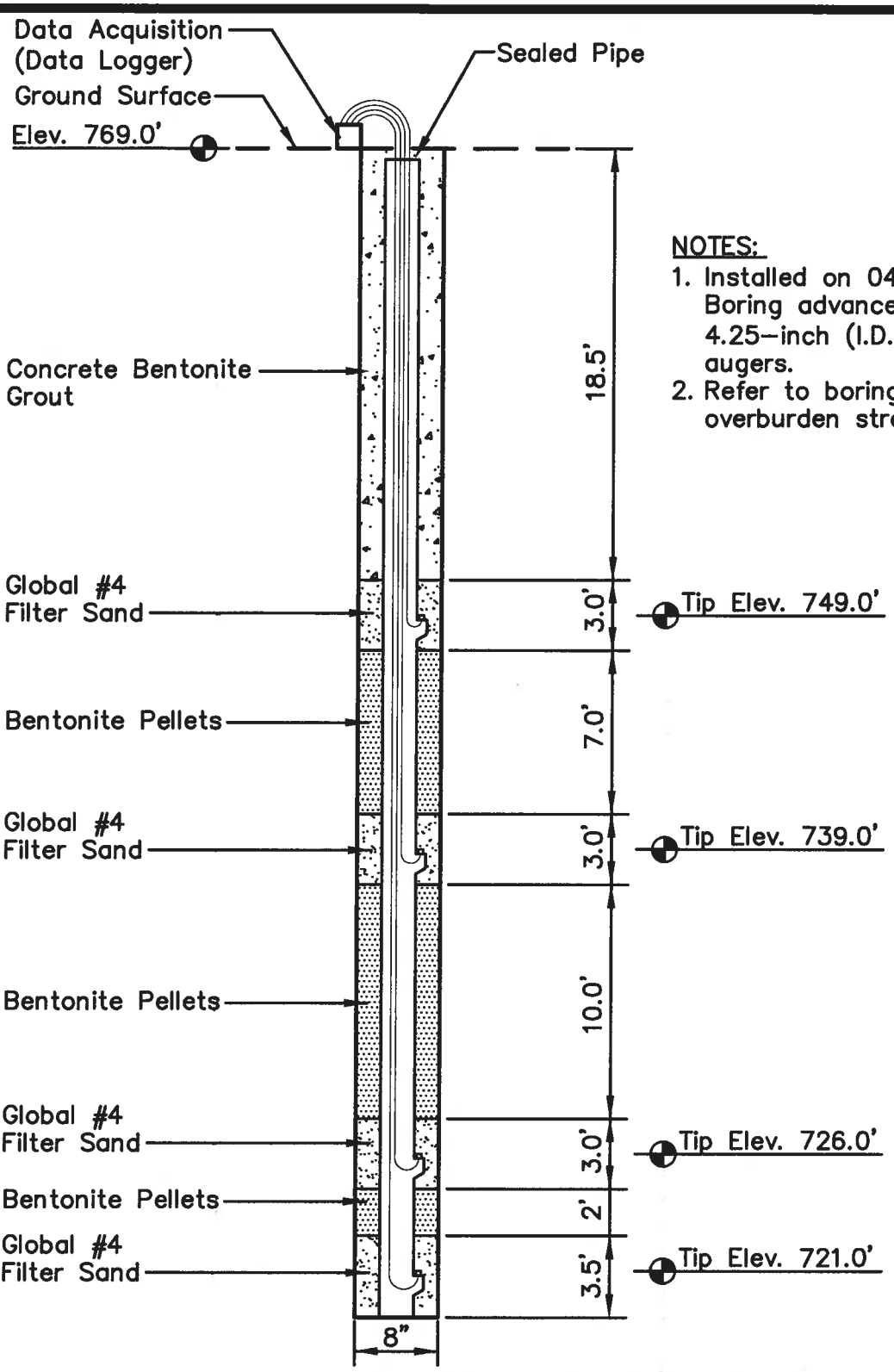
LOCATION
Northing: 556,436.40
Easting: 2,440,237.87
Ground Elevation: 760.5 feet

Locations to be provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27
Vertical Datum: NGVD29

VIBRATING WIRE PIEZOMETER PZ-4
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	PJB	DATE	MAY, 2009	REVISED		SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	



NOTES:

1. Installed on 04/28/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden stratigraphy.

LOCATION
Northing: 556,312.74
Easting: 2,440,334.89
Ground Elevation: 769.0 feet

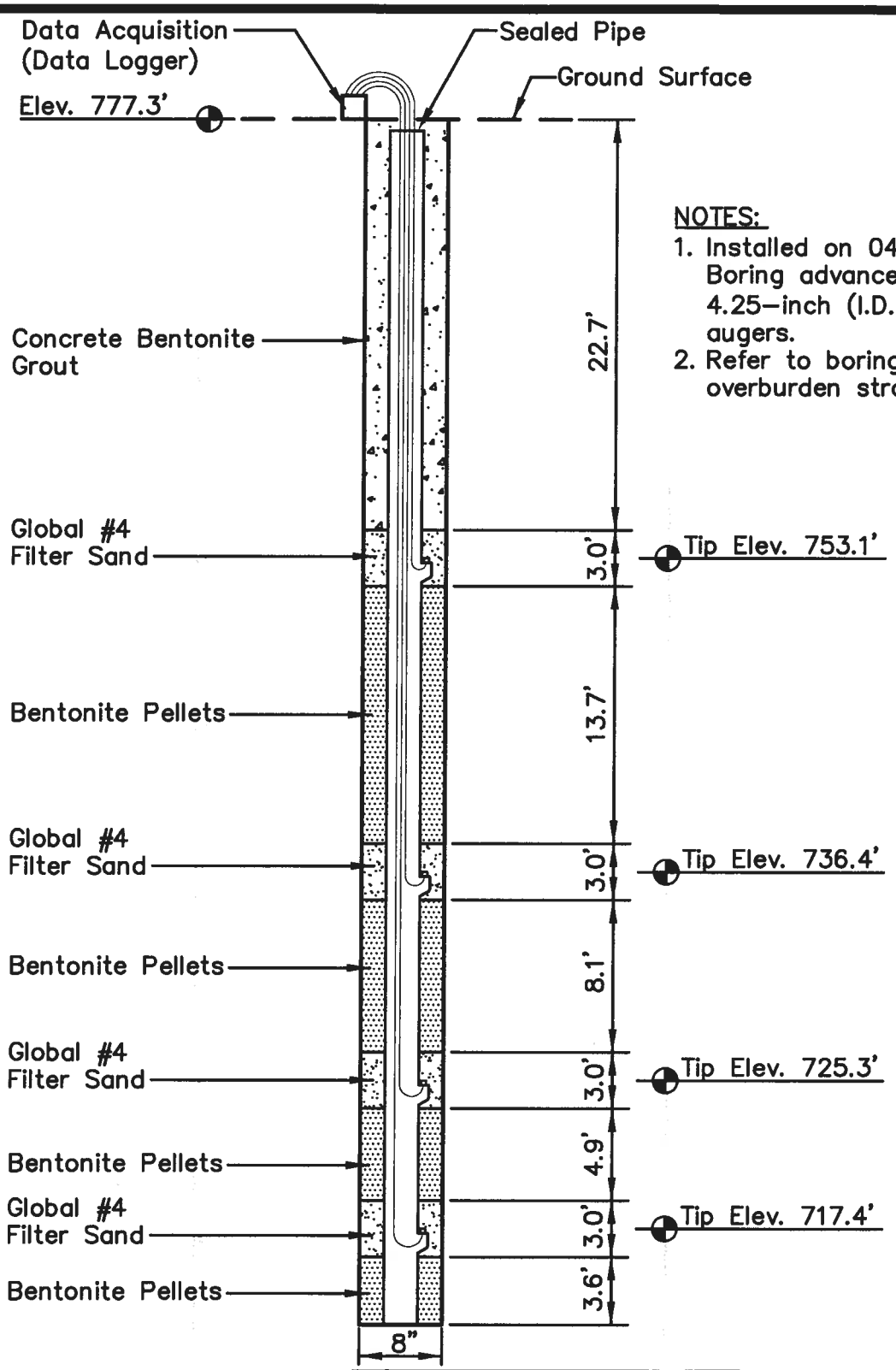
Locations to be provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27
Vertical Datum: NGVD29

VIBRATING WIRE PIEZOMETER PZ-5
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	BFS	DATE	MAY, 2009	REVISED		SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	

PLOT DATE: 06/08/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-VP5.DWG



NOTES:

1. Installed on 04/27/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden stratigraphy.

PLOT DATE: 06/08/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-VP6.DWG

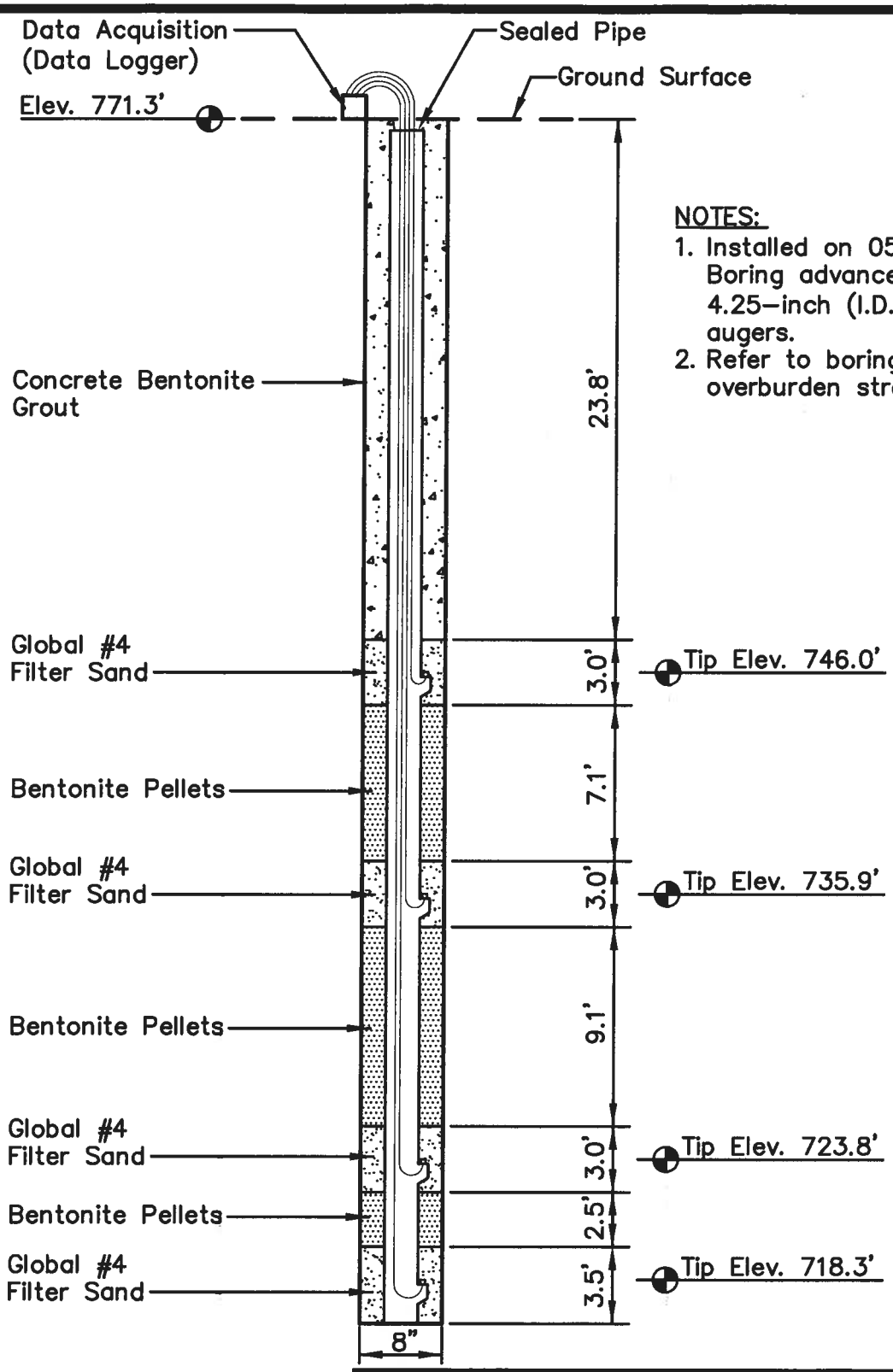
VIBRATING WIRE PIEZOMETER PZ-6
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

LOCATION
Northing: 556,149.67
Easting: 2,440,547.30
Ground Elevation: 777.3 feet

Locations to be provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27
Vertical Datum: NGVD29

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	BFS	DATE	MAY, 2009	REVISED		SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	



NOTES:

1. Installed on 05/05/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden stratigraphy.

PLOT DATE: 06/09/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-VP7.DWG

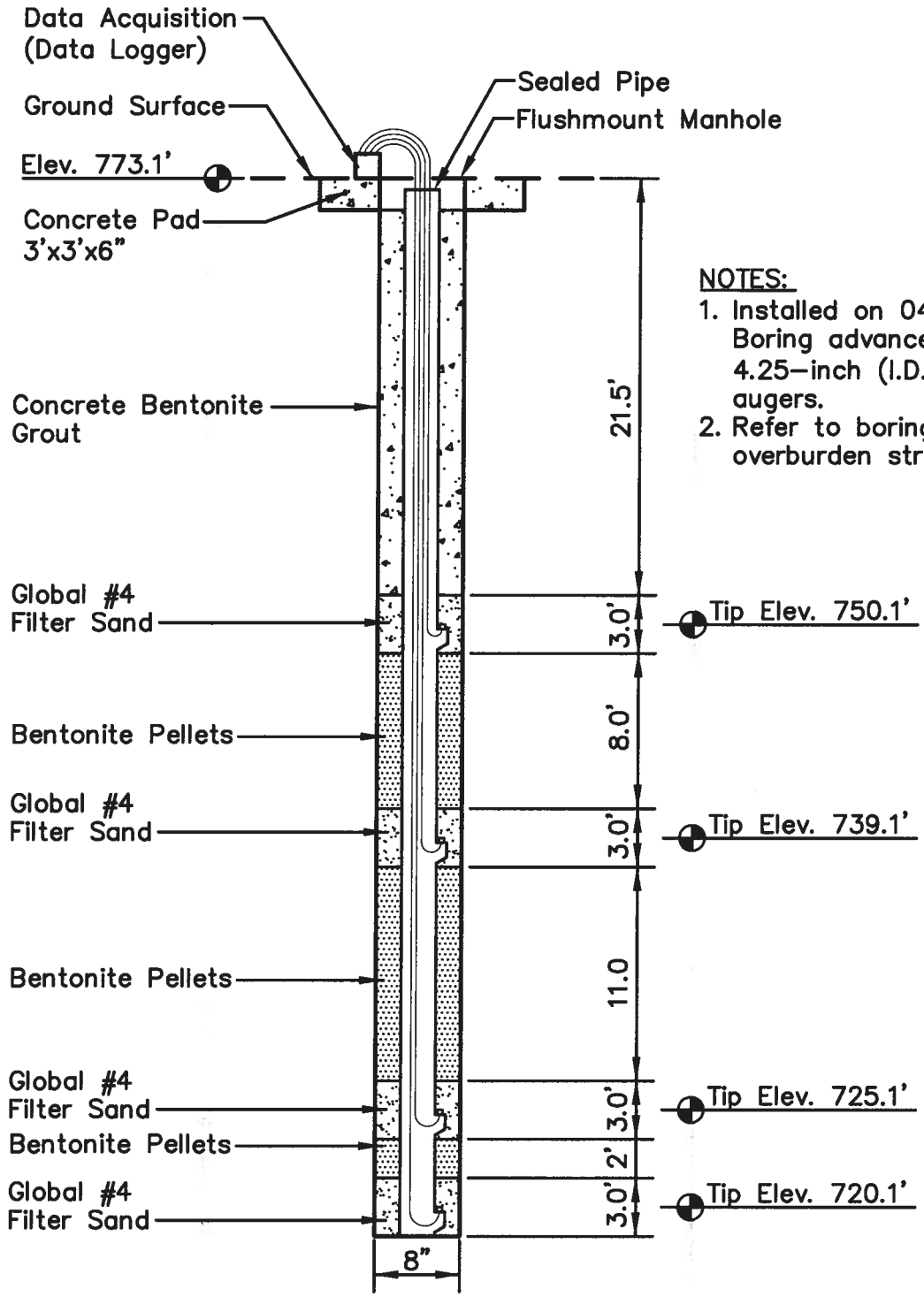
VIBRATING WIRE PIEZOMETER PZ-7
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

LOCATION
Northing: 556,361.20
Easting: 2,440,168.33
Ground Elevation: 771.3 feet

Locations to be provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27
Vertical Datum: NGVD29

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	BFS	DATE	MAY, 2009	REVISED	SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1. 3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2. 4.	



NOTES:

1. Installed on 04/29/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden stratigraphy.

PLOT DATE: 06/08/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-VP8.DWG

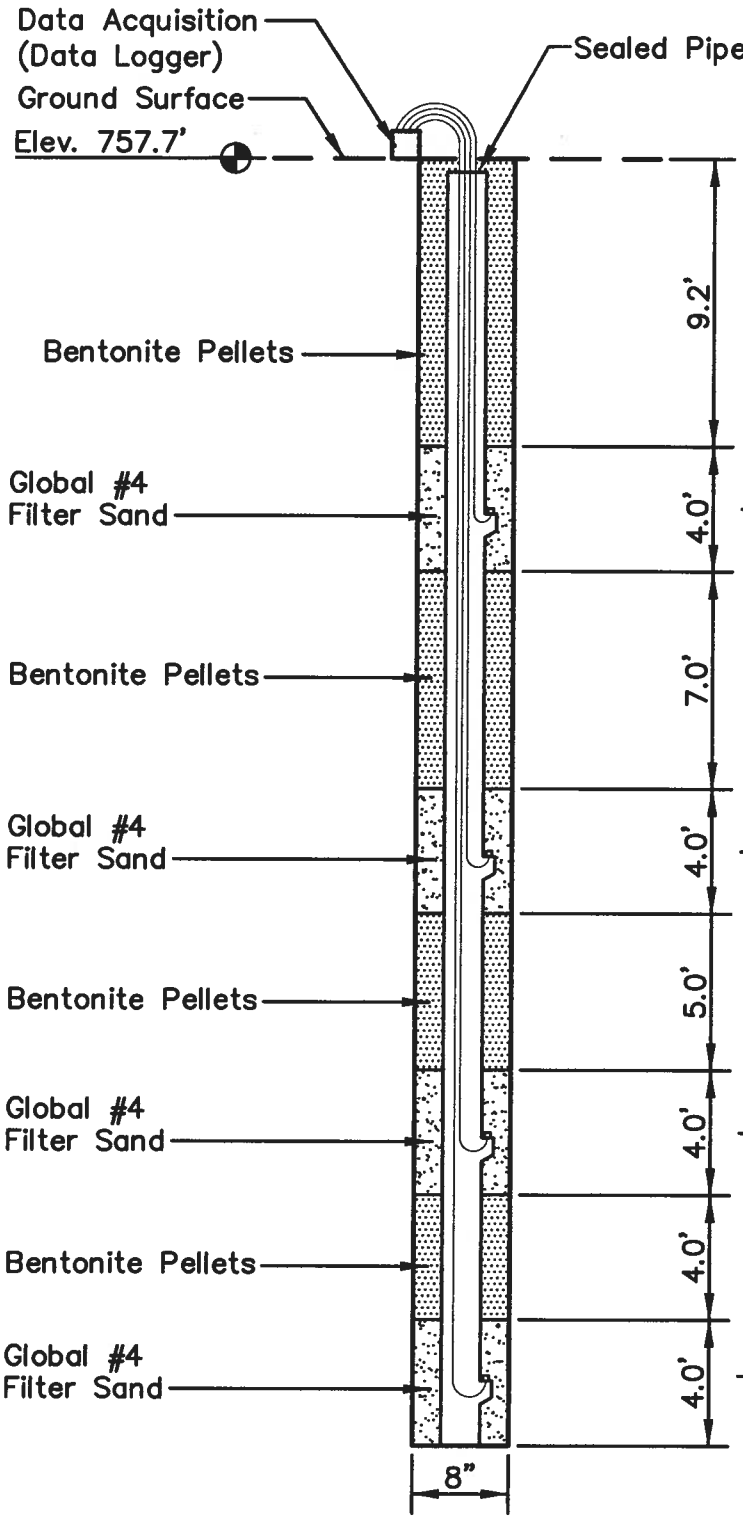
LOCATION
Northing: 556,240.85
Easting: 2,440,301.82
Ground Elevation: 773.1 feet

Locations to be provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27
Vertical Datum: NGVD29

VIBRATING WIRE PIEZOMETER PZ-8
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec
Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	BFS	DATE	MAY, 2009	REVISED		SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	



NOTES:

1. Installed on 08/16/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden stratigraphy.

LOCATION
Northing: 556,356.72
Easting: 2,441,038.11
Ground Elevation: 757.7 feet

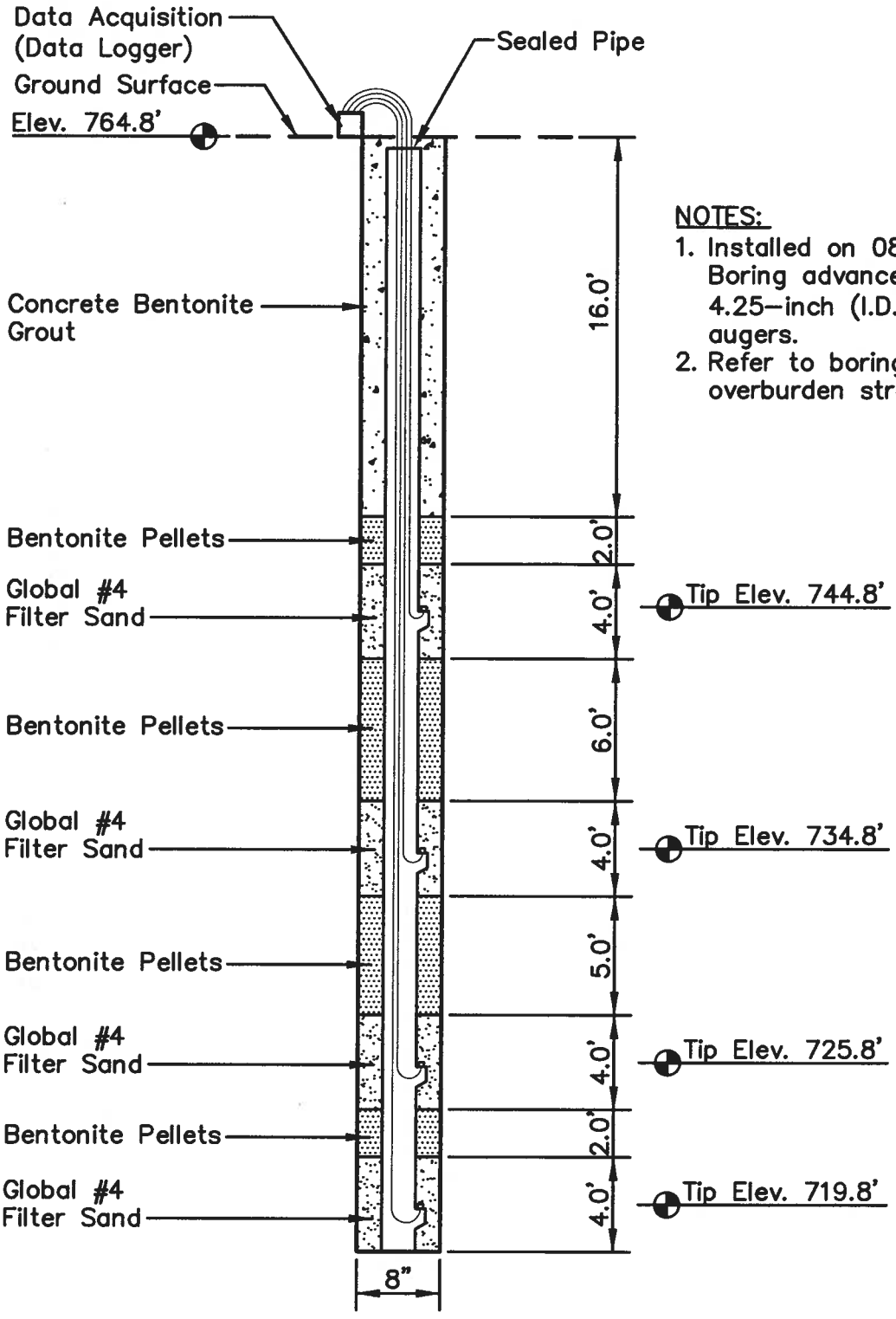
Locations to be provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27
Vertical Datum: NGVD29

VIBRATING WIRE PIEZOMETER PZ-9
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA B

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	RWE	DATE	AUG., 2009	REVISED	SHEET
CHECKED BY	BAH	PROJ. NO.	175669015	1. 3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2. 4.	

PLOT DATE: 08/25/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-VP9.DWG



NOTES:

1. Installed on 08/15/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden stratigraphy.

PLOT DATE: 08/24/2009 USER: ELLISON.DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-VP11.DWG

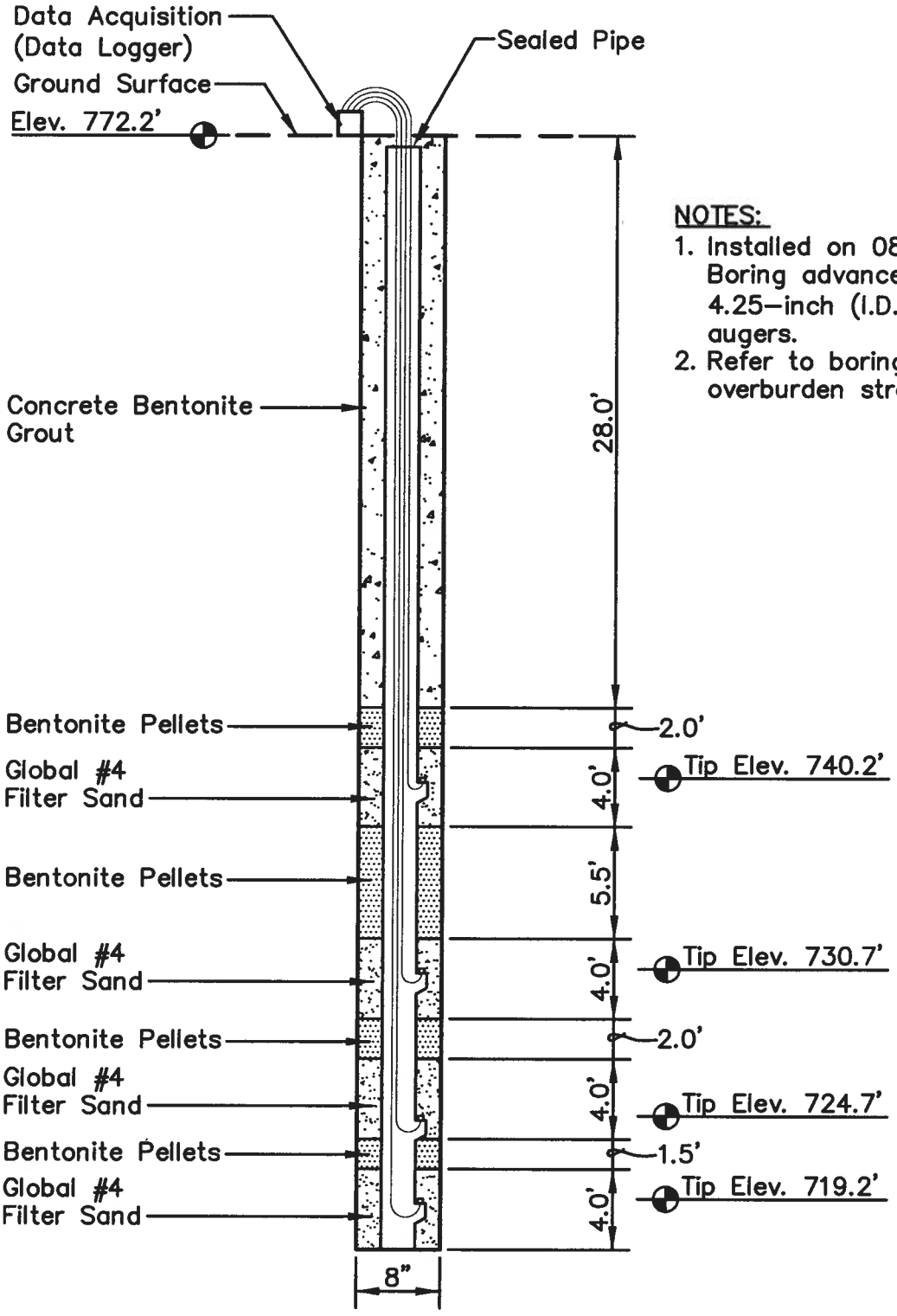
LOCATION
Northing: 556,277.32
Easting: 2,441,146.29
Ground Elevation: 764.8 feet

Locations to be provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27
Vertical Datum: NGVD29

VIBRATING WIRE PIEZOMETER PZ-11
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA B

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	RWE	DATE	AUG., 2009	REVISED		SHEET
CHECKED BY	BAH	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	



NOTES:

1. Installed on 08/17/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden stratigraphy.

PLOT DATE: 08/25/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-VP12.DWG

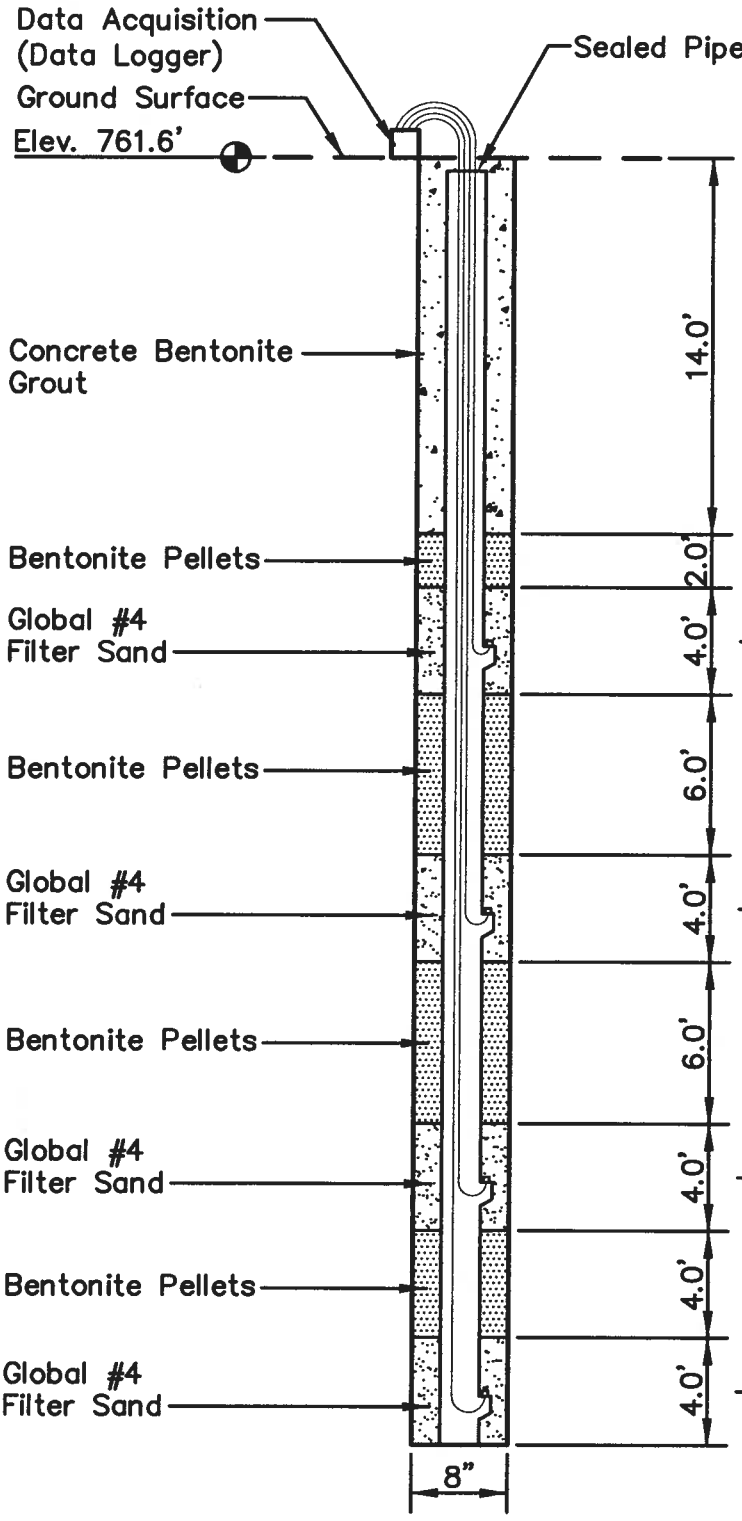
LOCATION
Northing: 555,904.47
Easting: 2,440,978.82
Ground Elevation: 772.2 feet

Locations to be provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27
Vertical Datum: NGVD29

VIBRATING WIRE PIEZOMETER PZ-12
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA B

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	RWE	DATE	AUG., 2009	REVISED		SHEET
CHECKED BY	BAH	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	



NOTES:

1. Installed on 08/15/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden stratigraphy.

PLOT DATE: 08/24/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-VP13.DWG

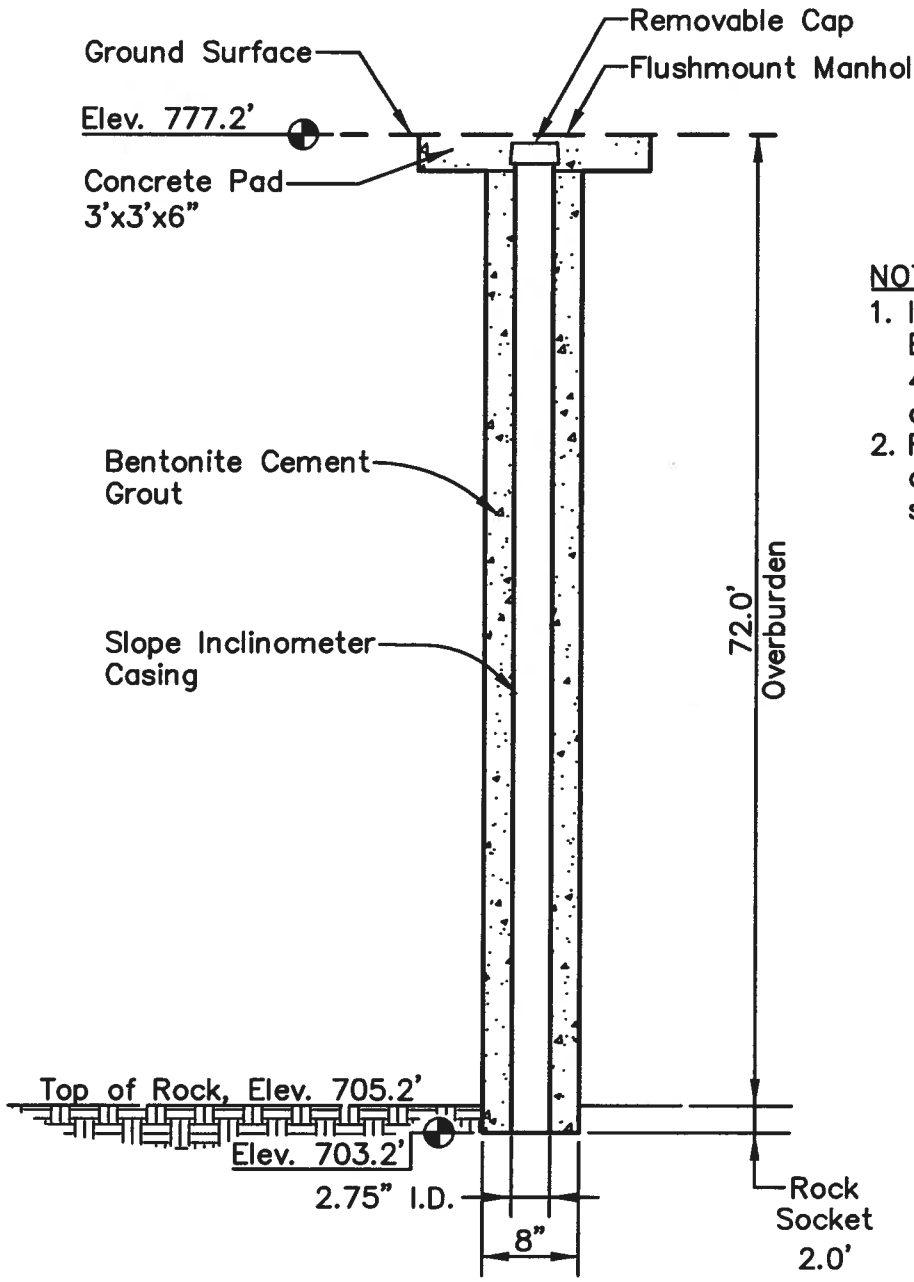
LOCATION
Northing: 555,966.42
Easting: 2,440,940.05
Ground Elevation: 761.6 feet

Locations to be provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27
Vertical Datum: NGVD29

VIBRATING WIRE PIEZOMETER PZ-13
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA B

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	RWE	DATE	AUG., 2009	REVISED		SHEET	
CHECKED BY	BAH	PROJ. NO.	175669015	1.	3.	1 OF 1	
CHECKED BY	AAC	SCALE	NTS	2.	4.		



NOTES:

1. Installed on 04/21/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden and rock stratigraphy.

LOCATION
Northing: 556,399.05
Easting: 2,439,955.4
Ground Elevation: 777.2 feet

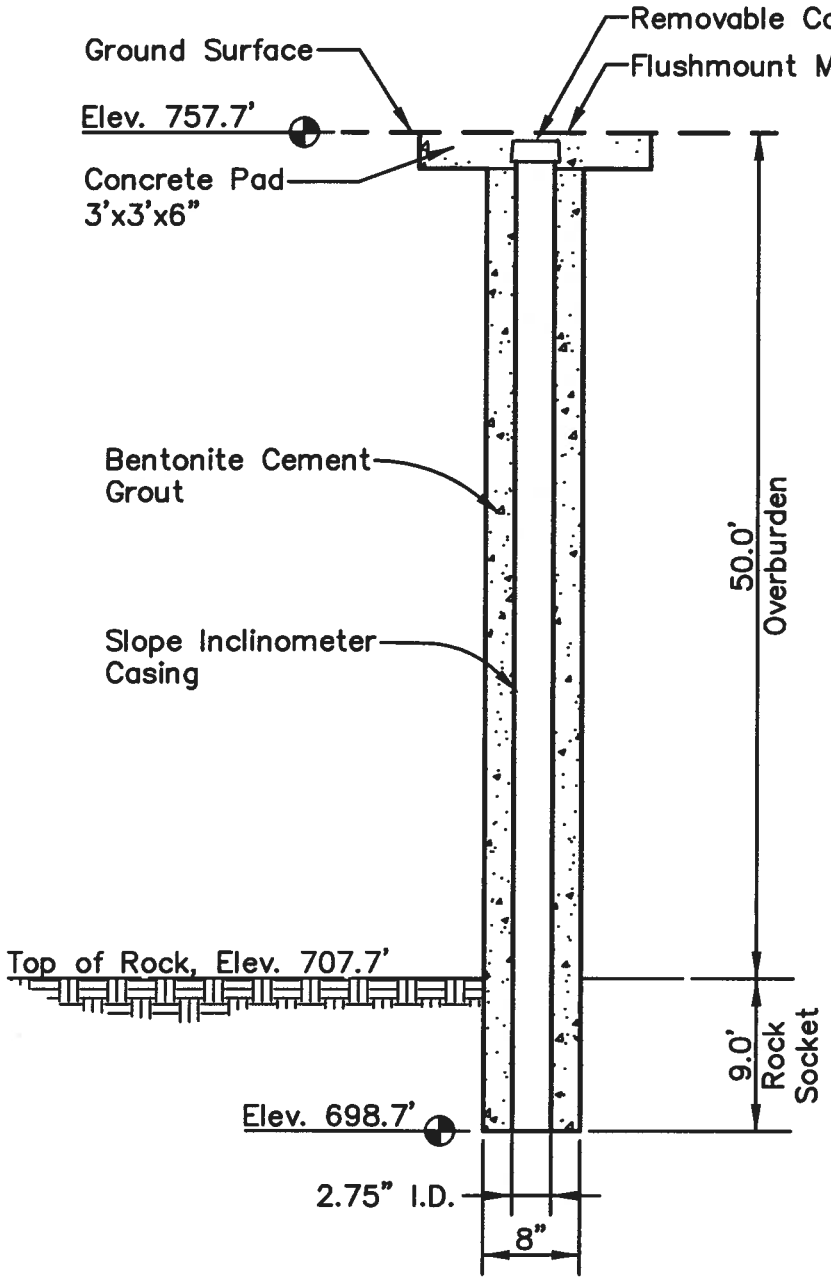
Locations provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27 (Tennessee Lambert)
Vertical Datum: NGVD29

SLOPE INCLINOMETER SI-1
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	BFS	DATE	MAY, 2009	REVISED		SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	

DATE: 12/08/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\690150-KIF-301-SI1.DWG



NOTES:

1. Installed on 04/21/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden and rock stratigraphy.

LOCATION
Northing: 556,717.42
Easting: 2,440,143.33
Ground Elevation: 757.7 feet

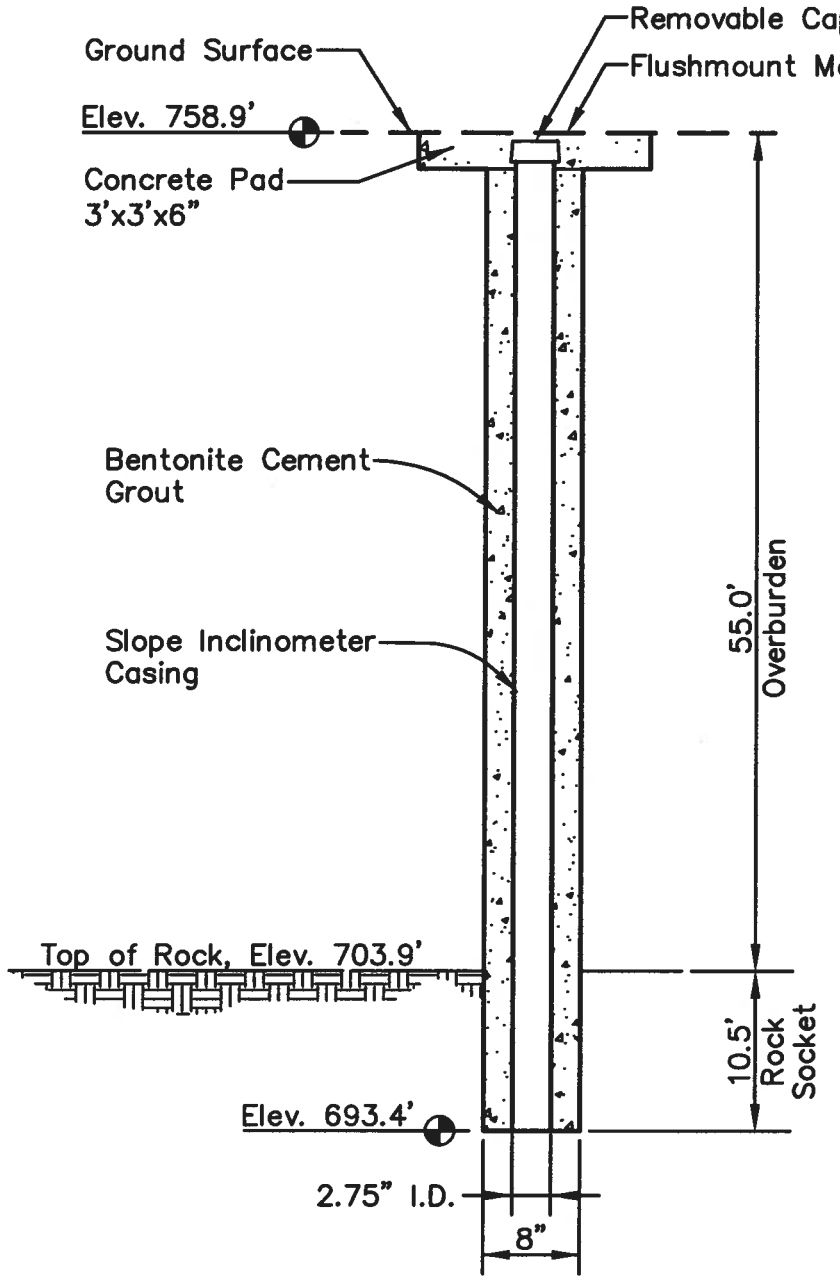
Locations provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27 (Tennessee Lambert)
Vertical Datum: NGVD29

SLOPE INCLINOMETER SI-2
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	BFS	DATE	MAY, 2009	REVISED		SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	

DATE: 06/09/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-SI2.DWG



NOTES:

1. Installed on 05/12/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden and rock stratigraphy.

LOCATION
Northing: 556,658.51
Easting: 2,440,332.04
Ground Elevation: 758.9 feet

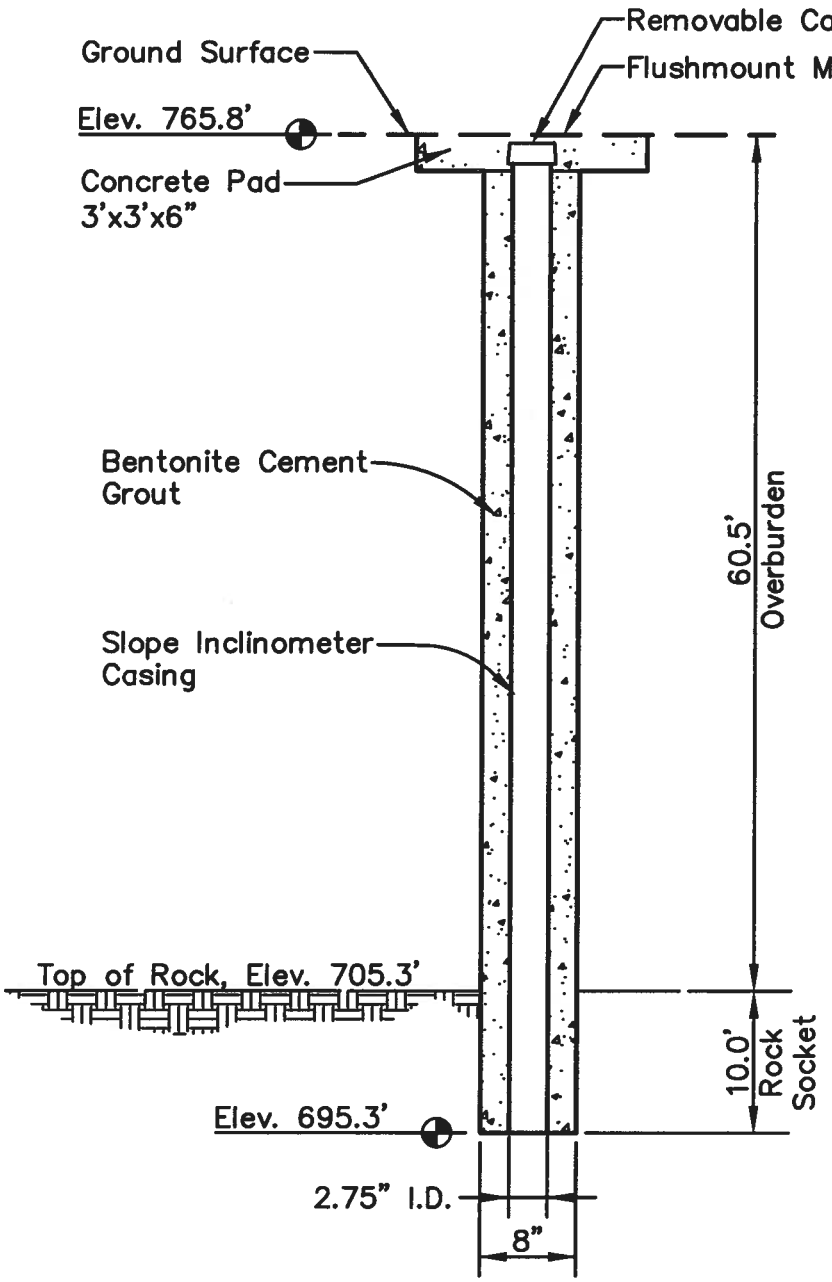
Locations provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27 (Tennessee Lambert)
Vertical Datum: NGVD29

SLOPE INCLINOMETER SI-3
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	PJB	DATE	MAY, 2009	REVISED		SHEET	
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1	
CHECKED BY	AAC	SCALE	NTS	2.	4.		

DATE: 06/09/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\690150-KIF-3D1-SI3.DWG



NOTES:

1. Installed on 05/12/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden and rock stratigraphy.

LOCATION
Northing: 556,450.32
Easting: 2,440,480.28
Ground Elevation: 765.8 feet

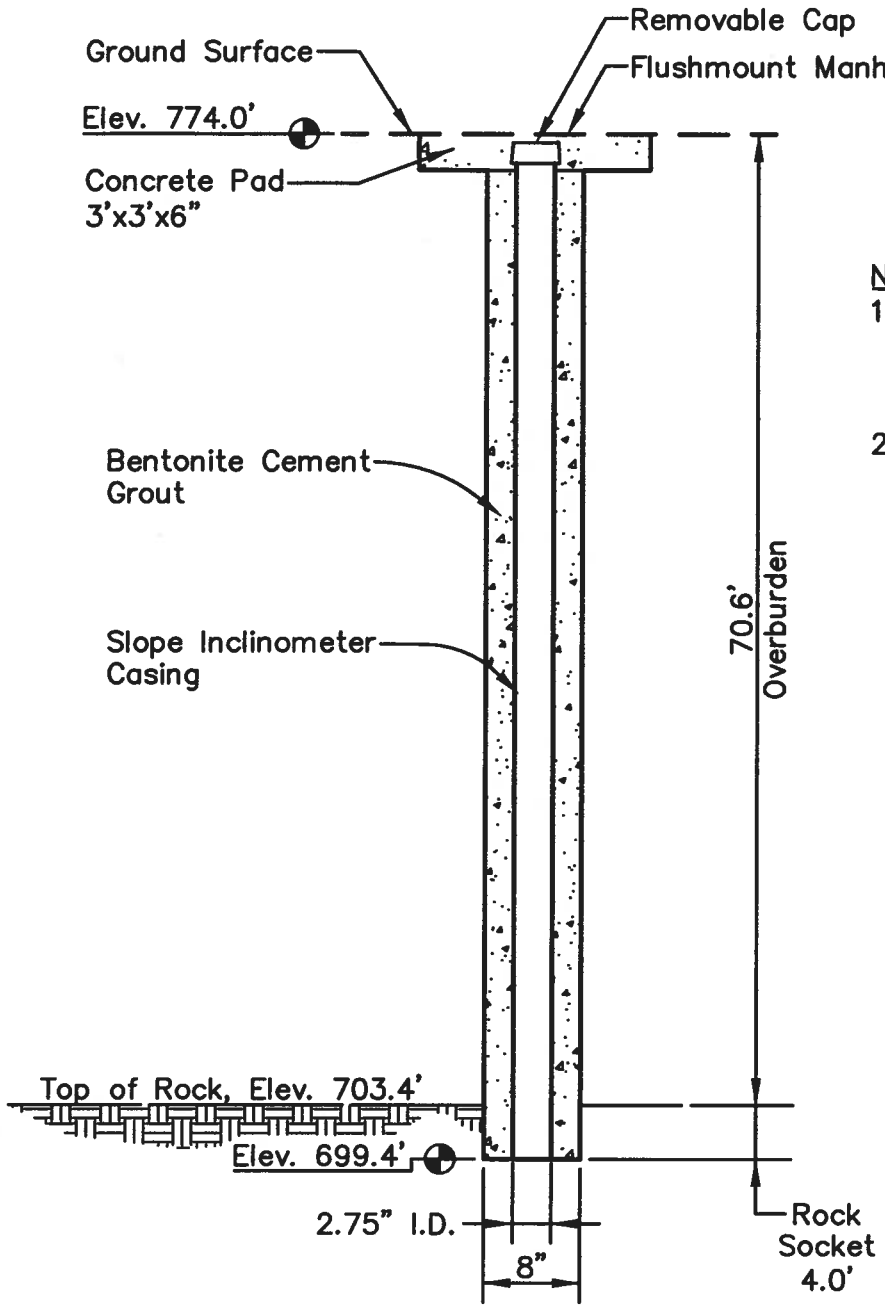
Locations provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27 (Tennessee Lambert)
Vertical Datum: NGVD29

SLOPE INCLINOMETER SI-4
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	PJB	DATE	MAY, 2009	REVISED		SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	

DATE: 06/09/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-SI4.DWG



NOTES:

1. Installed on 04/23/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden and rock stratigraphy.

LOCATION
Northing: 556,228.97
Easting: 2,440,609.05
Ground Elevation: 774.0 feet

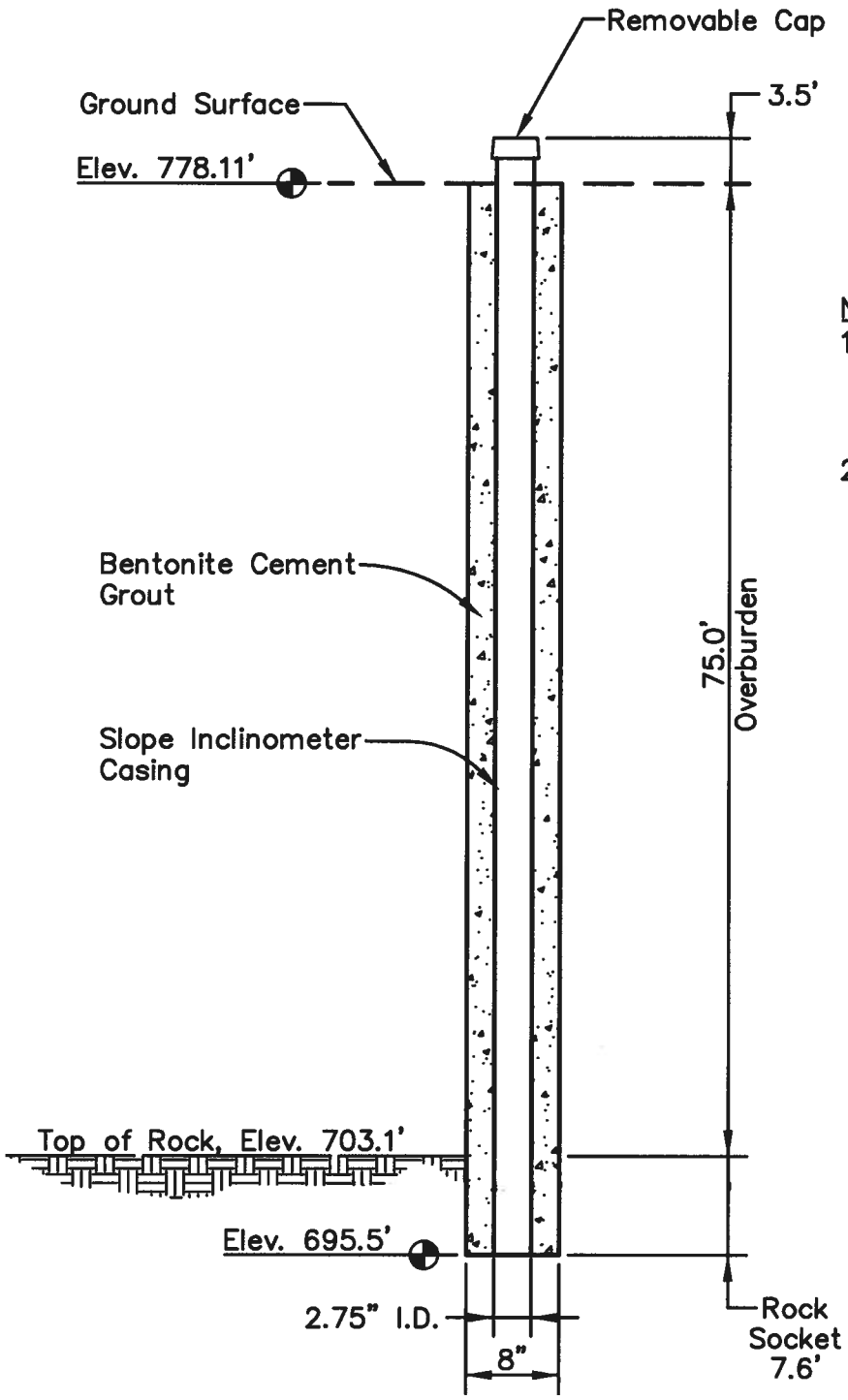
Locations provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27 (Tennessee Lambert)
Vertical Datum: NGVD29

SLOPE INCLINOMETER SI-5
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	BFS	DATE	MAY, 2009	REVISED		SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	

DATE: 06/09/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-SI5.DWG



NOTES:

1. Installed on 01/14/2010. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden and rock stratigraphy.

DATE: 01/20/2010 USER: BELL, JOSH
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-SI6.DWG

LOCATION
Northing: 556,470.91
Easting: 2,440,255.41
Ground Elevation: 778.11 feet

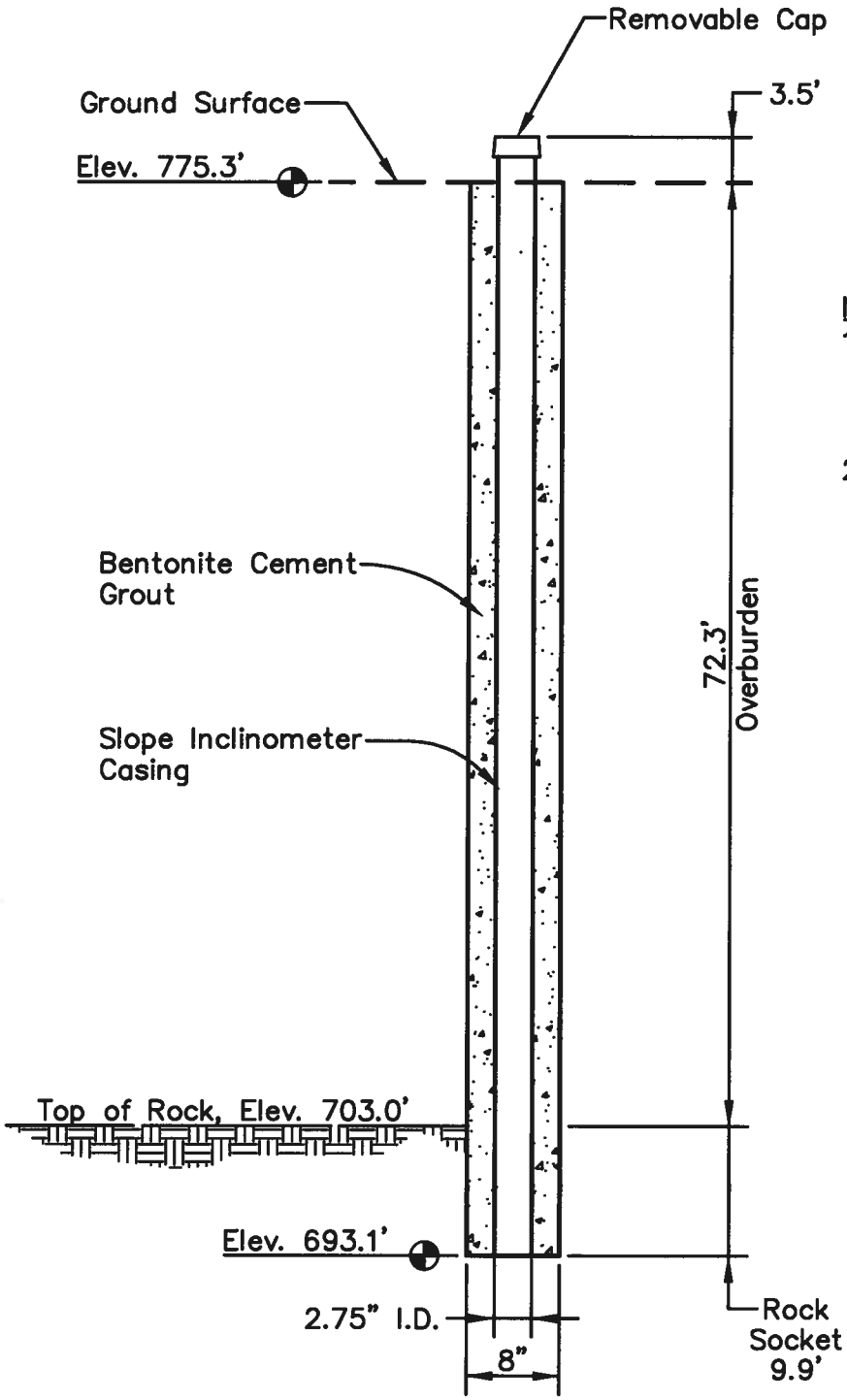
Locations provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27 (Tennessee Lambert)
Vertical Datum: NGVD29

SLOPE INCLINOMETER SI-6
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	ACC	DATE	JAN., 2010	REVISED		SHEET
CHECKED BY	BAH	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	



NOTES:

1. Installed on 01/12/2010. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden and rock stratigraphy.

LOCATION
Northing: 556,377.96
Easting: 2,440,393.10
Ground Elevation: 775.3 feet

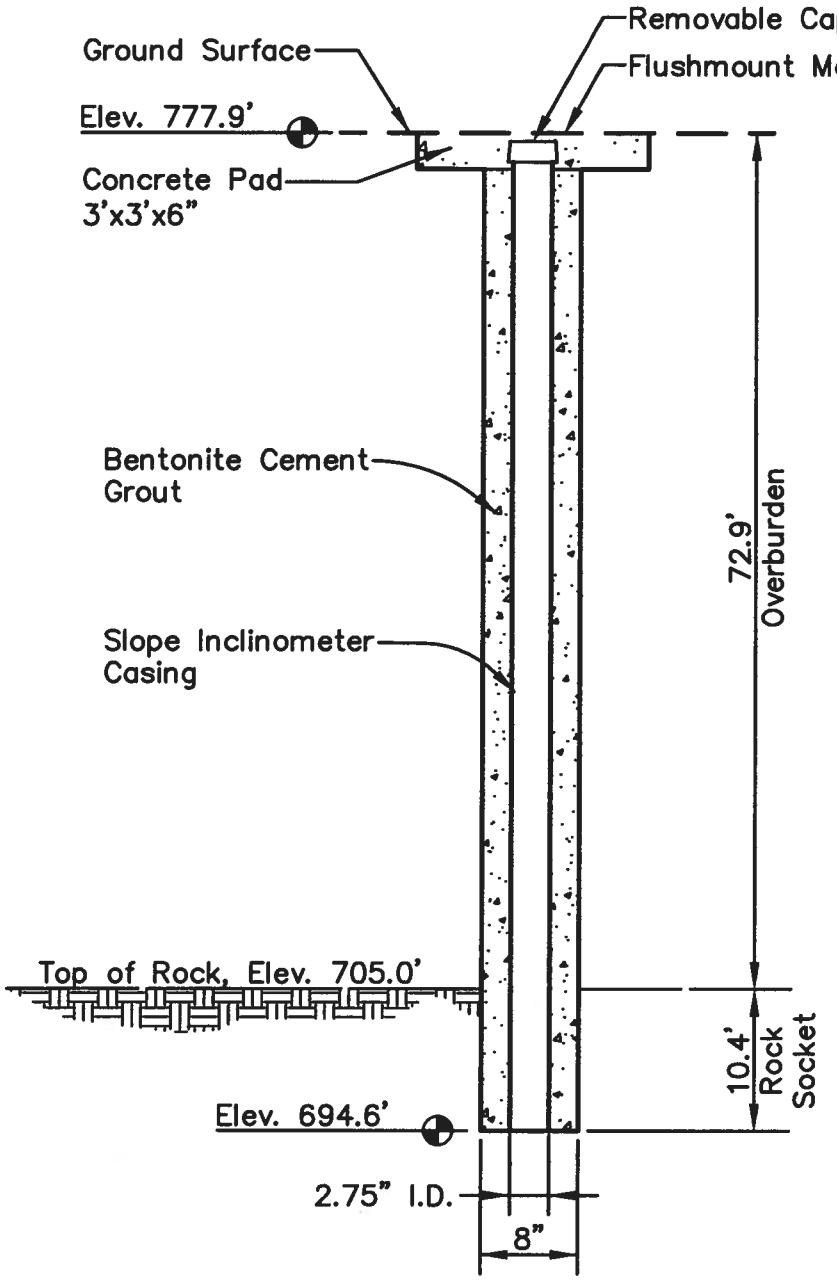
Locations provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27 (Tennessee Lambert)
Vertical Datum: NGVD29

SLOPE INCLINOMETER SI-7
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA A

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	ACC	DATE	JAN., 2010	REVISED		SHEET
CHECKED BY	BAH	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	

DATE: 01/20/2010 USER: BELL, JOSH
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-SI7.DWG



NOTES:

1. Installed on 05/11/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden and rock stratigraphy.

LOCATION
Northing: 556,088.48
Easting: 2,440,789.54
Ground Elevation: 777.9 feet

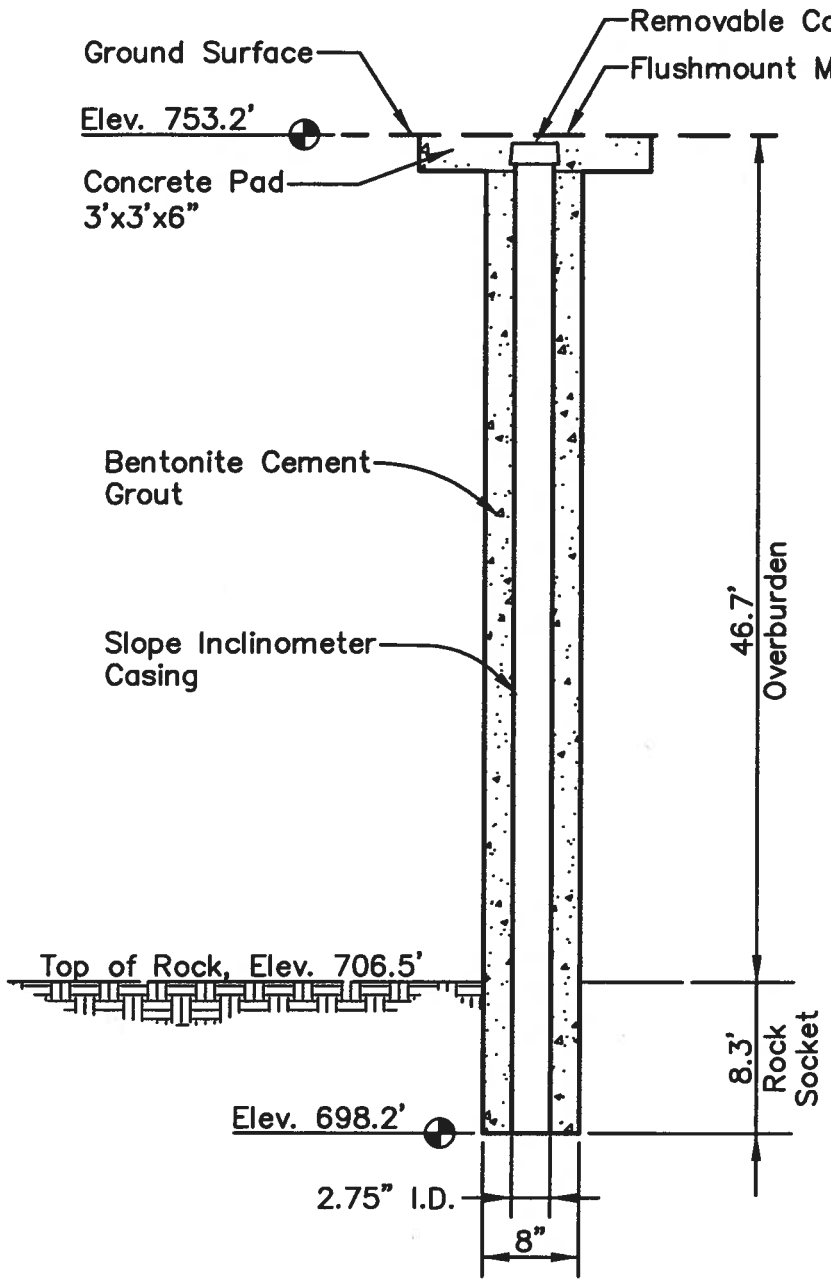
Locations provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27 (Tennessee Lambert)
Vertical Datum: NGVD29

SLOPE INCLINOMETER SI-9
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA B

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	PJB	DATE	MAY, 2009	REVISED		SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	

DATE: 06/09/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\690150-KIF-301-SI9.DWG



NOTES:

1. Installed on 08/17/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden and rock stratigraphy.

DATE: 08/24/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-SI10.DWG

LOCATION
Northing: 556,396.47
Easting: 2,440,972.31
Ground Elevation: 753.2 feet

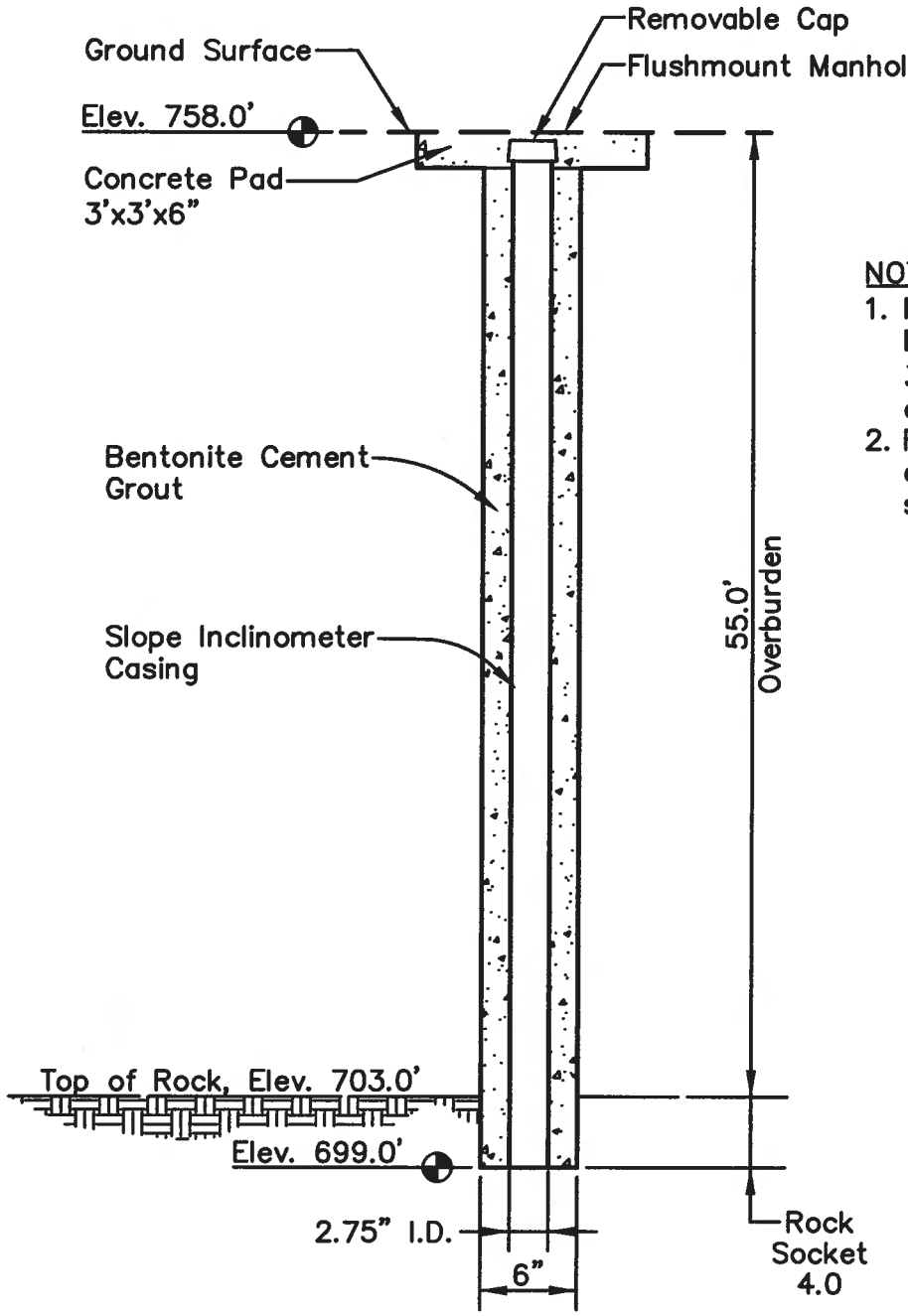
Locations provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27 (Tennessee Lambert)
Vertical Datum: NGVD29

SLOPE INCLINOMETER SI-10
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA B

Stantec

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	RWE	DATE	AUG., 2009	REVISED		SHEET
CHECKED BY	BAH	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	



NOTES:

1. Installed on 04/20/2009. Boring advanced with 3.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden and rock stratigraphy.

LOCATION
Northing: 557,066.19
Easting: 2,441,439.93
Ground Elevation: 758.0 feet

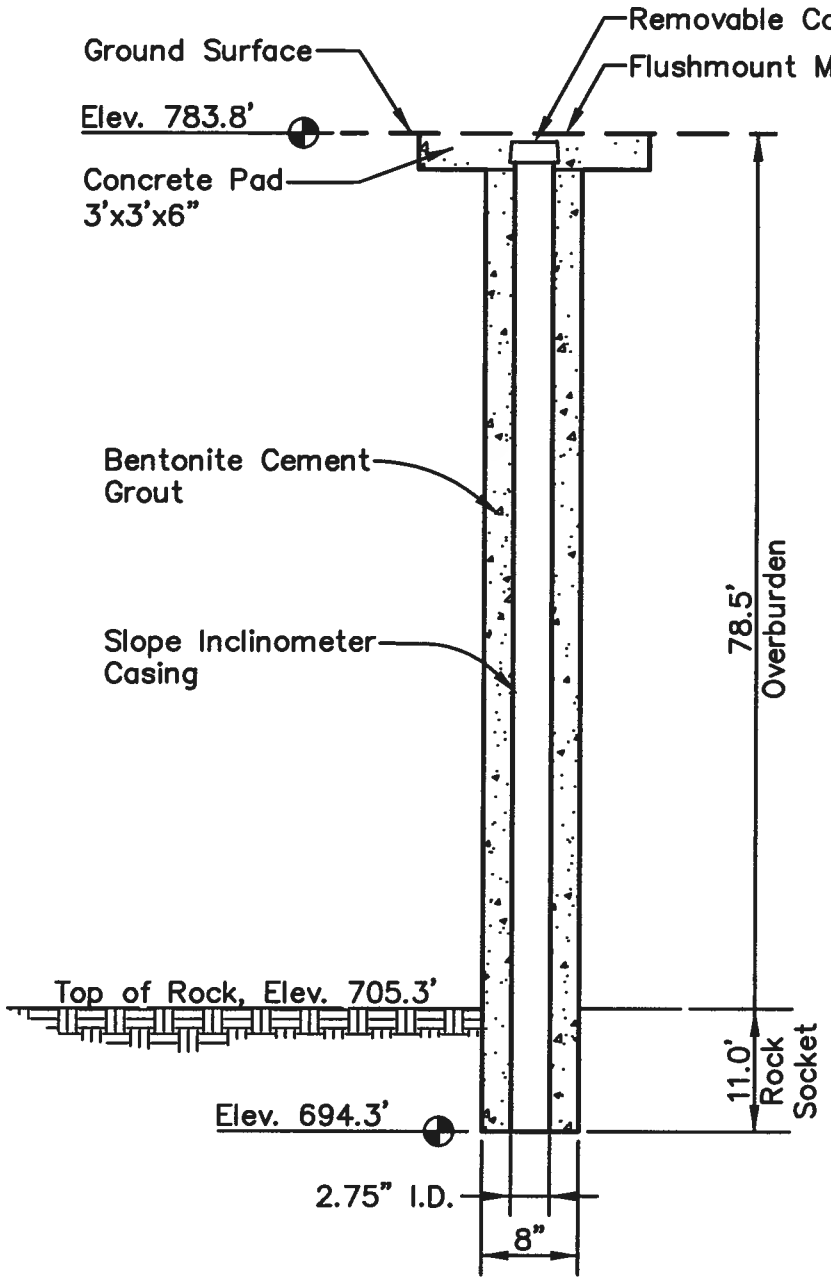
Locations provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27 (Tennessee Lambert)
Vertical Datum: NGVD29

SLOPE INCLINOMETER SI-11
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA B

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	BFS	DATE	MAY, 2009	REVISED		SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	

DATE: 06/09/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-SI11.0WG



NOTES:

1. Installed on 04/21/2009. Boring advanced with 4.25–inch (I.D.) hollow stem augers.
2. Refer to boring log for overburden and rock stratigraphy.

LOCATION
Northing: 555,868.69
Easting: 2,441,062.49
Ground Elevation: 783.8 feet

Locations provided by TVA, Power Systems Operations, Surveying and Project Services.
Horizontal Datum: NAD 27 (Tennessee Lambert)
Vertical Datum: NGVD29

SLOPE INCLINOMETER SI-12
KINGSTON FOSSIL PLANT
TEST EMBANKMENT AREA B

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

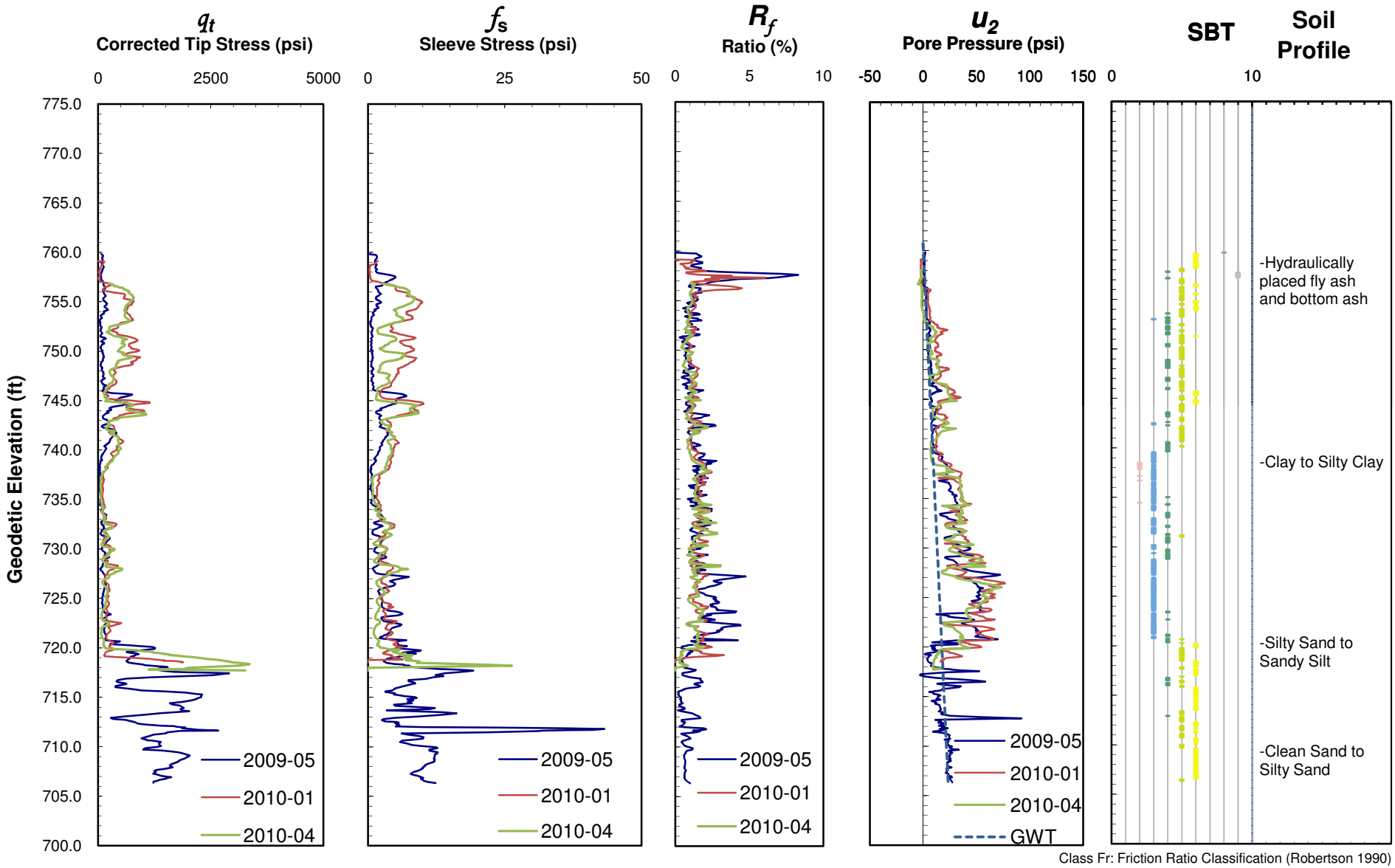
DRAWN BY	BFS	DATE	MAY, 2009	REVISED		SHEET
CHECKED BY	ZCM	PROJ. NO.	175669015	1.	3.	1 OF 1
CHECKED BY	AAC	SCALE	NTS	2.	4.	

DATE: 06/09/2009 USER: ELLISON, DOC
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\INSTRUMENTS\69015C-KIF-301-SI12.DWG

Appendix C

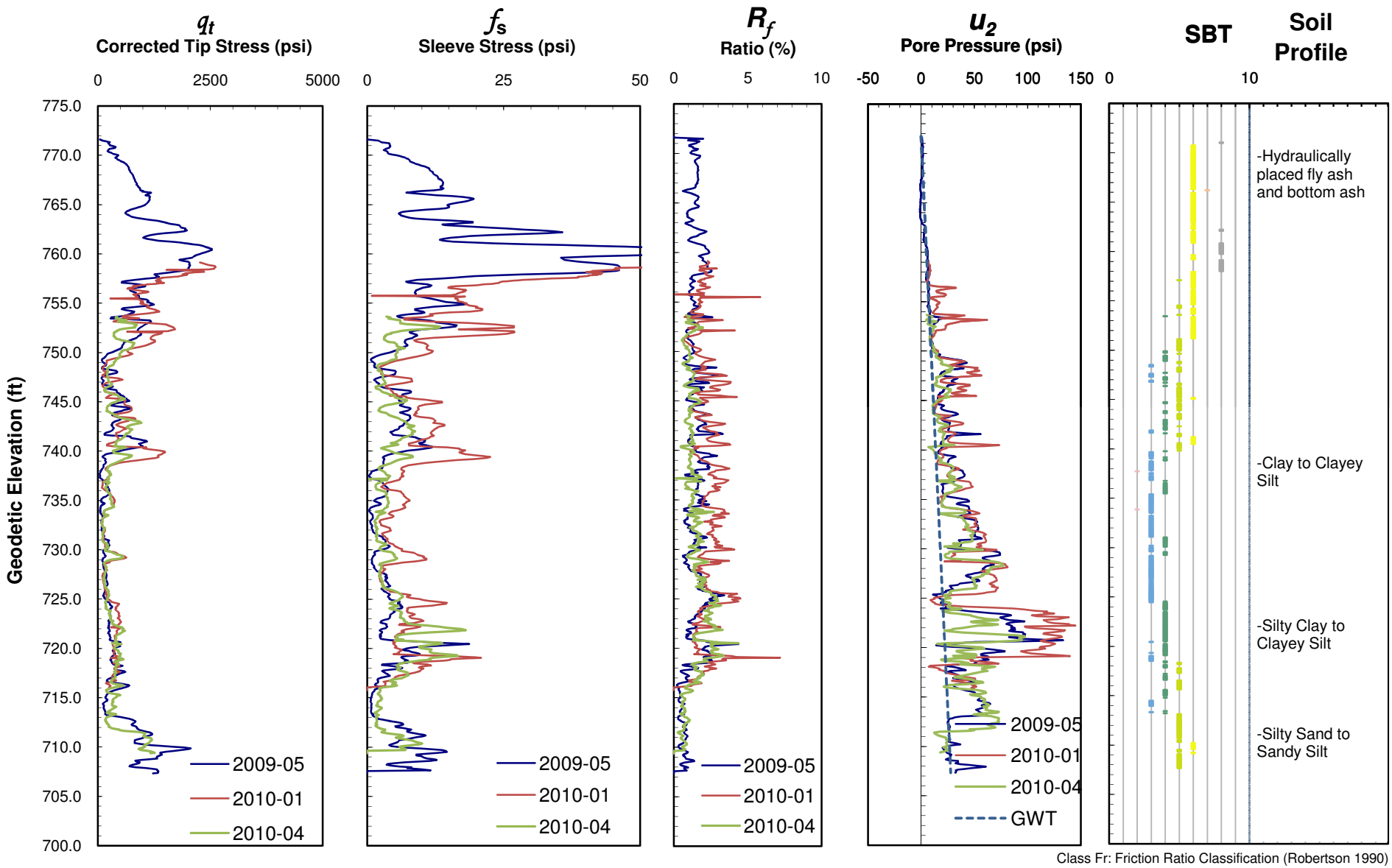
CPT Data

Stantec Consulting Inc.	Elevation: 776.96 ft SCPTu Start Elevation: 758.15 ft Groundwater Elevation: 760.70 ft	Test Date: April 6, 2010 Project No. 175669015	CPT-1
	Client: TVA Project: Kingston Ash Pond		



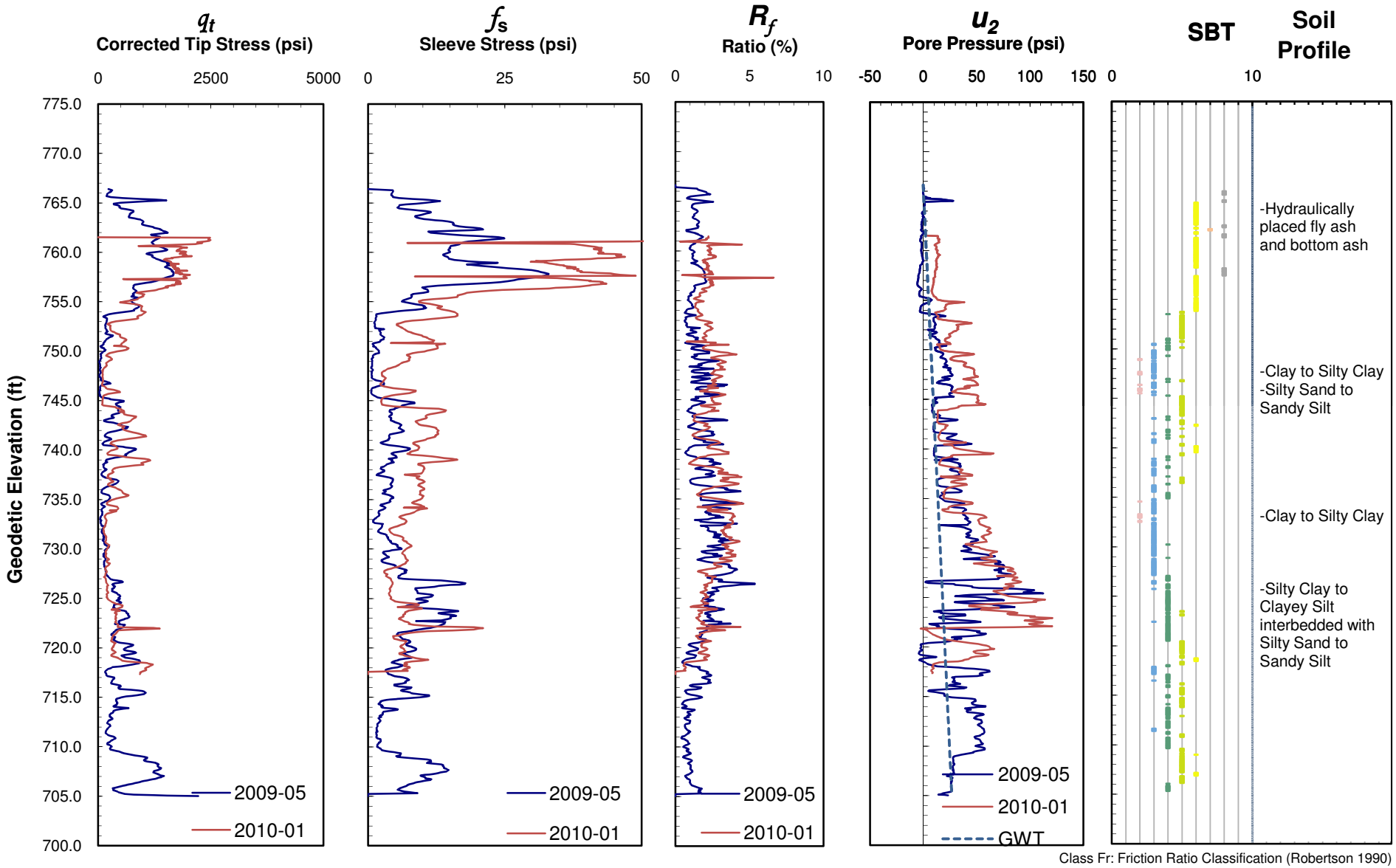
Class Fr: Friction Ratio Classification (Robertson 1990)

Stantec Consulting Inc.	Elevation: 799.45 ft SCPTu Start Elevation: 753.82 ft Groundwater Elevation: 766.30 ft	Test Date: April 7, 2010 Project No. 175669015	CPT-2
	Client: TVA Project: Kingston Ash Pond		



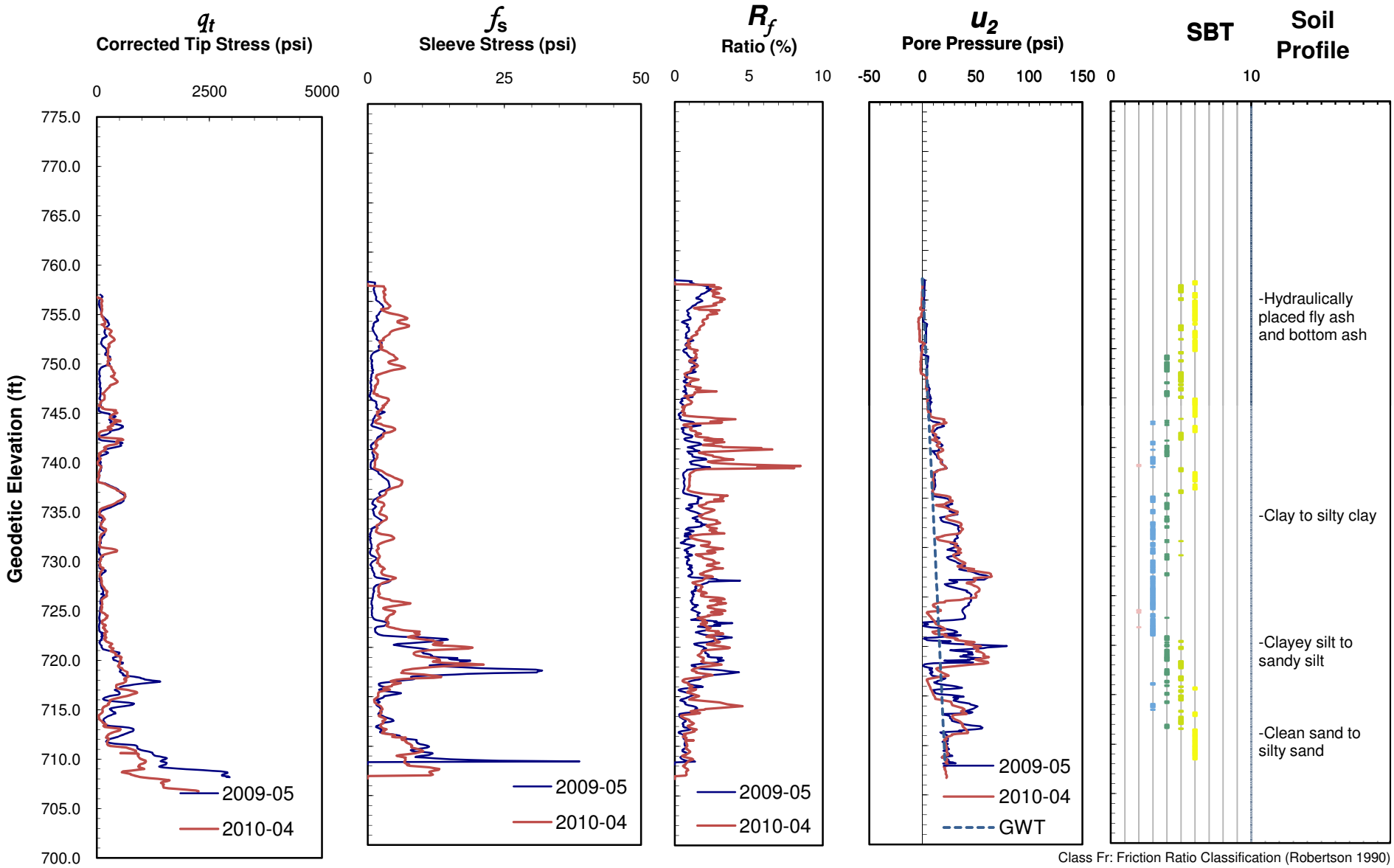
Class Fr: Friction Ratio Classification (Robertson 1990)

Stantec Consulting Inc.	Elevation: 787.52 ft SCPTu Start Elevation: 761.52 ft Groundwater Elevation: 764.30 ft	Test Date: January 14, 2010 Project No. 175669015	CPT3
	Client: TVA Project: Kingston Ash Pond		



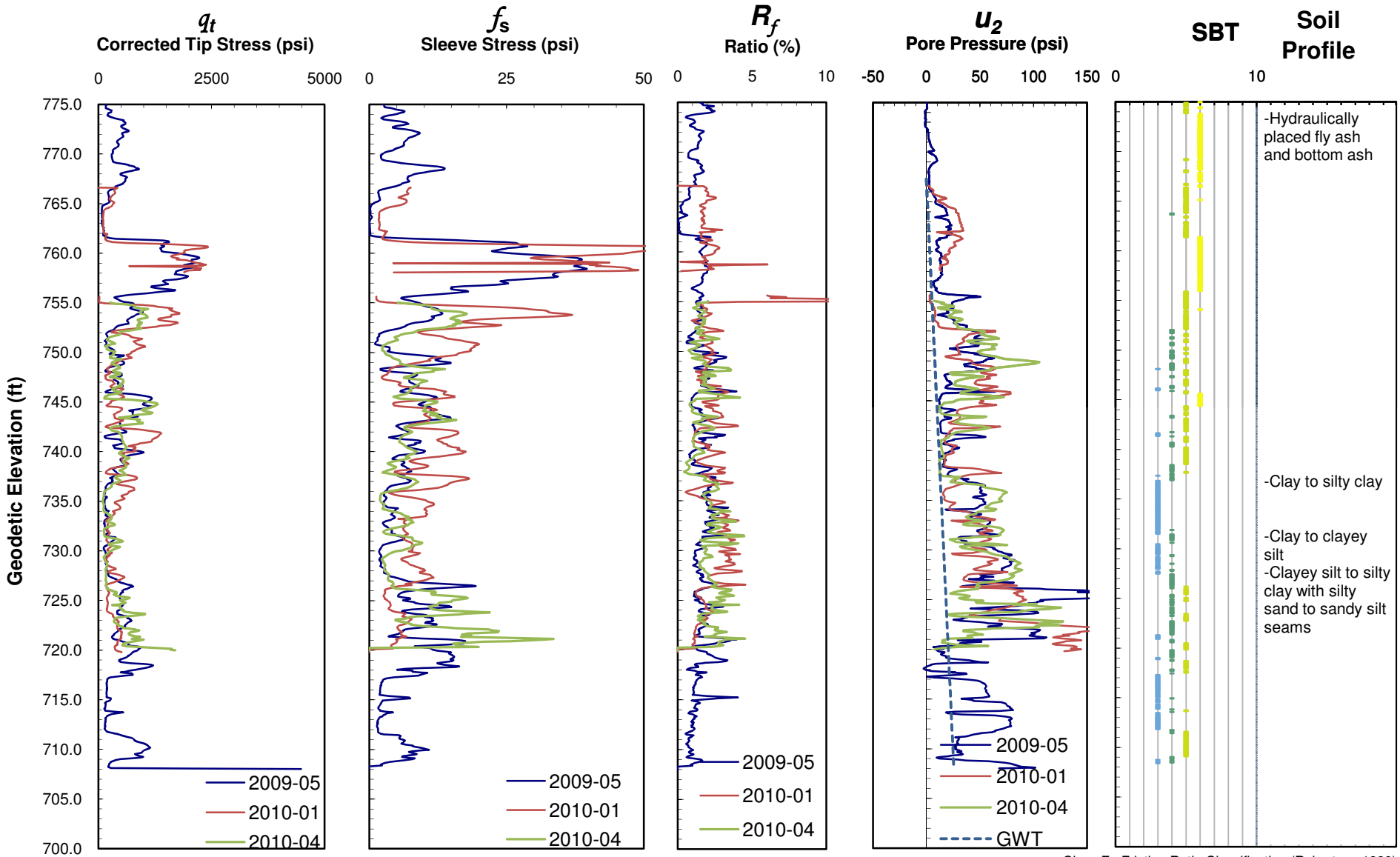
Class Fr: Friction Ratio Classification (Robertson 1990)

Stantec Consulting Inc.	Elevation: 756.77 ft SCPTu Start Elevation: 756.77 ft Groundwater Elevation: 761.90 ft	Test Date: April 7, 2010 Project No. 175669015	CPT4
	Client: TVA Project: Kingston Ash Pond		



Class Fr: Friction Ratio Classification (Robertson 1990)

Stantec Consulting Inc.	Elevation: 800.59 m SCPTu Start Elevation: 755.19 m Groundwater Elevation: 767.30 m	Test Date: April 7, 2010 Project No. 175669015	CPT5
	Client: TVA Project: Kingston Ash Pond		



Class Fr: Friction Ratio Classification (Robertson 1990)

Appendix D

Daily Construction Field Reports

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 18	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/3/09	Day of the Week: Monday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill:

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,	Type/Model	Manufacturer	Ser. No./ID No.
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	Density Meter/3440	Troxler	19084/16
Compactor, (1) Pinoth Snow Plow			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observe test embankment construction.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 18	Date: 8/3/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Arrived onsite and met w/ Mr. Jim Andrew. Mr. Andrew explained to Mr. Russell Mehnert a general site overview (site instrumentation and the test embankment).

Mr. Mehnert observed test embankment construction performed by Civil Projects. The test embankment construction was within section A. Three laborers, an excavator, and a snow plow installed geogrid within section A. An area in section A, along the northern embankment limit (approximately 140'x 80') appeared to be too soft for installation of geogrid. Mr. Andrew suggested to Civil Projects that they could let the area dry before installing the geogrid/drainage layer.

Civil Projects used articulating dump trucks to haul 1 ½" rock and placed in on top of the geogrid in section A of the test embankment. Then the 1 ½" rock was spread using a dozer in approximately a 12" lift over the geogrid from southwestern limit to the northeastern limit. Civil Projects also began placement of #10 screenings in the western part of the test embankment and bladed material towards the northern corner of the test embankment. The #10 screening was placed in approximately a 3" lift.

Two subgrade moistures were taken in conjunction with the two field density tests performed by Mr. Mehnert to check the integrity of the gauge. The tests were taken in the southeastern corner and the northern corner of the test embankment.

Stantec Field Representative's Activities

Arrive	7:30AM
Depart	8:30PM

7:30AM – 4:30PM
Observation of test embankment construction

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/3/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/03/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 19	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/4/09	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill:

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor, (1)CAT 325B excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observe test embankment construction.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 19	Date: 8/4/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Throughout the day, Civil Projects laborers continued rolling geogrid across the test embankment area. The laborer crew rolled out geogrid with the aid of an excavator. Geogrid was overlapped end to end at approximately 3 to 4 feet and overlapped adjacently by approximately 2 feet. Civil Projects hauled 1 ½" stone to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement. The stone was bladed into place utilizing a dozer in an approximate 6" lift. Civil Projects continued hauling # 10 screenings to the western corner of the test embankment area. Material was pushed toward the north and south eastern limits.

At around 11:45AM, Mr. Mehnert and Mr. Andrew observed the delivery of settlement plates and equipment in the Main Access Point where 1 ½" rock and #10 screenings is staged in the northern corner of the site.

Mr. Andrew and Mr. Mehnert observed a soft blister-like area where the geo-grid had worked its way up and could be seen on top of the rock layer. This area was approximately 20'x 20'and located 95 degrees east of PZ-7 at a distance 65'. Mr. Andrew suggested to Mr. Kilby that he place geogrid over top of the exposed geogrid and re-cover the area with six more inches of stone.

Mr. Layton and Mr. Mehnert read all Piezometers and one slope inclinometer within the test embankment.

Mr. Andrew met with Mr. Kilby to discuss a saturated area along the northeastern embankment limit. Mr. Andrew advised Civil Projects to keep heavy equipment away from the saturated area to allow the material to dry.

Stantec Field Representative's Activities

Arrive	7:00AM
Depart	8:00PM

7:30AM – 4:30PM
Observation of test embankment construction

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/4/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/05/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 19	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/5/09	Day of the Week: Wednesday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill:

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,	Type/Model	Manufacturer	Ser. No./ID No.
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	Density Gauge/3440	Troxler	19084/16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observation of test embankment construction.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Aaron Morgan	Report No: 19	Date: 8/5/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Jim Andrew requested that Mr. Mehnert and Ms. Berryman meet with Mr. Joshua Munyon (Inspector for Tennessee Department of Radiological Health.) Mr. Munyon requested a formal inspection of nuclear density gauge equipment and documentation for reciprocity in the State of Tennessee. Mr. Munyon informed Mr. Mehnert and Ms. Berryman that Stantec met the inspection requirements for nuclear density gauge testing, operation, and transportation in Tennessee.

Throughout the day, Civil Projects laborers continued rolling geogrid across the test embankment area. The laborer crew rolled out geogrid with the aid of an excavator. Geogrid was overlapped end to end at approximately 3 to 4 feet and overlapped adjacently by approximately 2 feet. Civil Projects hauled 1 ½" stone to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the north east. The stone was bladed into place utilizing a dozer in an approximate 6" lift. Civil Projects continued hauling # 10 screenings to the middle areas of the test embankment. Material was bladed in around cross section two. The number 10 material was pushed toward the north and south eastern limits.

Mr. Mehnert and Ms. Berryman read vibrating wire piezometers 1-8 in the test embankment area. Results were recorded and given to Mr. Morgan who logged the data onto a spreadsheet.

Three subgrade moistures were taken in conjunction with the three field density tests performed by Mr. Mehnert to check the integrity of the gauge. Results of the test are as follows:
Moisture Test 003 – 19.4% moisture – 80ºE of SI 4 at a distance of 50'
Moisture Test 004 – 14.7% moisture - 85º E of SI 9 at a distance of 128'
Moisture Test 005 – 20.7% moisture - 350º N of PZ 2 at a distance of 21'

Stantec Field Representative's Activities

Arrive	7:30AM
Depart	5:30PM

7:30AM – 4:30PM
Observation of test embankment construction.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/5/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/06/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 19	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/6/09	Day of the Week: Wednesday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill:

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 19	Date: 8/6/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Throughout the day, Civil Projects laborers continued rolling geogrid across the test embankment area. The laborer crew rolled out geogrid with the aid of an excavator. Geogrid was overlapped end to end at approximately 3 to 4 feet and overlapped adjacently by approximately two feet. Civil Projects hauled 1 ½" to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the north east. The stone was bladed into place utilizing a dozer in an approximate 6" lift. Civil Projects continued hauling number ten screenings to the western corner of the test embankment area. The # 10 material was pushed toward the north and south eastern limits.

At approximately 1:00PM a proof roll was observed utilizing a loaded articulating dump truck in the middle of the test embankment just to the north west of cross section 3. The proof roll was observed by Mr. Morgan, Mr. Layton, Ms. Berryman, and Mr. Mehnert of the Stantec QC Team. The southern area was observed to have a slight amount of deflection at approximately 1 to 2 inches. As the dump truck progressed toward the north eastern limit, heavier pumping was observed. Deflection was noted across the area and the truck created ruts approximately 3" to a 1 ½' deep. Mr. Morgan and Mr. Layton discussed with Mr. Kilby that the area observed to have deflection appeared to be shaped like a bowl and appeared to have a thin layer of stone approximately 6 " deep. Mr. Layton advised Mr. Kilby to spread another 6" of stone over the area and stated that a second proof roll could be observed the following morning.

A dozer feathered ash material into windrows on top of the relic structure for an articulating tractor with two carryall scrapers. This process made scraping existing dredge cell material easier for the articulating tractor. The tractor hauled its scraped material to the relic placement area where a dozer bladed in the material, filling in the existing erosion ditch.

Mr. Layton, Ms. Berryman, Mr. Morgan and Mr. Mehnert began reading Slope Inclinometers on Dike C, beginning w/ STN-71. Drag was noticed as the probe was lowered into the SI well. Both readings (A and B) were taken. Mr. Layton sent the probe to RST to be repaired and set up a rental of a new probe.

Stantec Field Representative's Activities

Arrive	7:30AM
Depart	5:30PM

7:30AM – 5:30PM
Observation of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/6/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/06/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 12	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/7/09	Day of the Week: Friday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert / Arron Morgan

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill:

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 12	Date: 8/7/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Throughout the day, Civil Projects laborers continued rolling geogrid across the test embankment area. The laborer crew rolled out geogrid with the aid of an excavator. Geogrid was overlapped end to end at approximately 3 to 4 feet and overlapped adjacently by approximately two feet. Civil Projects hauled 1 ½" to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the north east. The stone was bladed into place utilizing a dozer in an approximate 6" lift. Civil Projects continued hauling number ten screenings to the western corner of the test embankment area. The # 10 material was pushed toward the north and south eastern limits.

At approximately 1:00PM the first ash loads where brought to the test embankment. Approx. 80 feet of the working platform is ready to receive ash. Mr. Mehnert and Mr. Morgan, reviewed the ash pile in the East Embayment prior to this ash being transported.

A dozer feathered ash material into windrows on top of the relic structure for an articulating tractor with two carryall scrapers. This process made scraping existing dredge cell material easier for the articulating tractor. The tractor hauled its scraped material to the relic placement area where a dozer bladed in the material, filling in the existing erosion ditch.

Mr. Layton, Ms. Berryman, Mr. Morgan and Mr. Mehnert began reading Slope Inclinometers on Dike C, beginning w/ STN-71. Drag was noticed as the probe was lowered into the SI well. Both readings (A and B) were taken. Mr. Layton sent the probe to RST to be repaired and set up a rental of a new probe.

A total of seven loads of ash where placed this date.

Stantec Field Representative's Activities

Arrive	7:30AM
Depart	5:30PM

7:30AM – 5:30PM
Observation of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/7/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 8/7/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 13	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/8/09	Day of the Week: Saturday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert / Arron Morgan

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill:

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 13	Date: 8/8/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Throughout the day, Civil Projects laborers continued rolling geogrid across the test embankment area. The laborer crew rolled out geogrid with the aid of an excavator. Geogrid was overlapped end to end at approximately 3 to 4 feet and overlapped adjacently by approximately two feet. Civil Projects hauled 1 ½" to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the north east. The stone was bladed into place utilizing a dozer in an approximate 6" lift. Civil Projects continued hauling number ten screenings to the western corner of the test embankment area. The # 10 material was pushed toward the north and south eastern limits.

At approximately 8:30 AM ash loads where brought to the test embankment. Approx. 80 feet of the working platform is ready to receive ash. Mr. Mehnert and Mr. Morgan, reviewed the ash pile in the East Embayment prior to this ash being transported.

A dozer feathered ash material into windrows on top of the relic structure for an articulating tractor with two carryall scrapers. This process made scraping existing dredge cell material easier for the articulating tractor. The tractor hauled its scraped material to the relic placement area where a dozer bladed in the material, filling in the existing erosion ditch.

No slope inclinometers where read this date. Stantec is waiting to receive the rental unit while the probe is being repaired.

A total of 41 loads of ash where placed this date.

Stantec Field Representative's Activities

Arrive	7:30AM
Depart	5:30PM

7:30AM – 5:30PM
Observation of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/8/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 8/10/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 24	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/10/09	Day of the Week: Monday	
	Weather: Sunny/Raining	Temperature: 80's to 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	Density Meter/3440	Troxler	19084/16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cone/moisture.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Russell Mehnert	Report No: 24	Date: 8/10/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Throughout the day, Civil Projects performed many construction activities on the test embankment. Civil Projects hauled one and a half inch stone to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the north/south east and up dike d to make another access to the test embankment. The stone was bladed into place utilizing a dozer in an approximate 12" lift.

Civil Projects continued hauling number 10 screenings to the eastern corner of the test embankment area. The number 10 material was pushed toward the north and southeastern limits in an approximate 3" lift.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using three articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from west to east. On completion of a section a smooth drum compactor would run over the lift to seal it off, compacting the lift to 6".

Mr. Andrew requested that Mr. Mehnert perform density tests approximately 50' apart on the section that is marked on the following diagram. Mr. Mehnert coinciding with three-drive tube tests ran by Mr. Clark, Mr. Andrew and Ms. Berryman performed three density tests. The results from the density tests are shown on the following data sheet.

At around 1:30PM, Mr. Layton met with Mr. Barnes to give direction to new cross sections that needed to be surveyed in the test embankment and borings that had been moved that needed new elevations. Around that same time it began to rain for approximately 30 minutes, which ended the test embankment ash placement. Mr. Layton informed Civil Projects that the fly ash that was previously placed must be sealed from the weather (rain) using the smooth drum compactor. A second lift, approximately 20'x 100', was placed and bladed out in the lower northwestern area of the test embankment. This area was also smooth drum compacted.

Six plies of fly ash were placed before the rain had occurred, but not spread out. Due to the rain, these plies of fly ash were spread out to dry towards the northeastern section of the test embankment.

Mr. Mehnert used the Troxler 3440 to perform three moisture tests on the embankment material from the stockpile and three moistures were taken to run in the lab.

Stantec Field Representative's Activities

Arrive	7:30 a.m.
Depart	7:00p.m.

7:30AM-4:30PM
Observations of test embankment construction, density testing and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/10/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/11/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

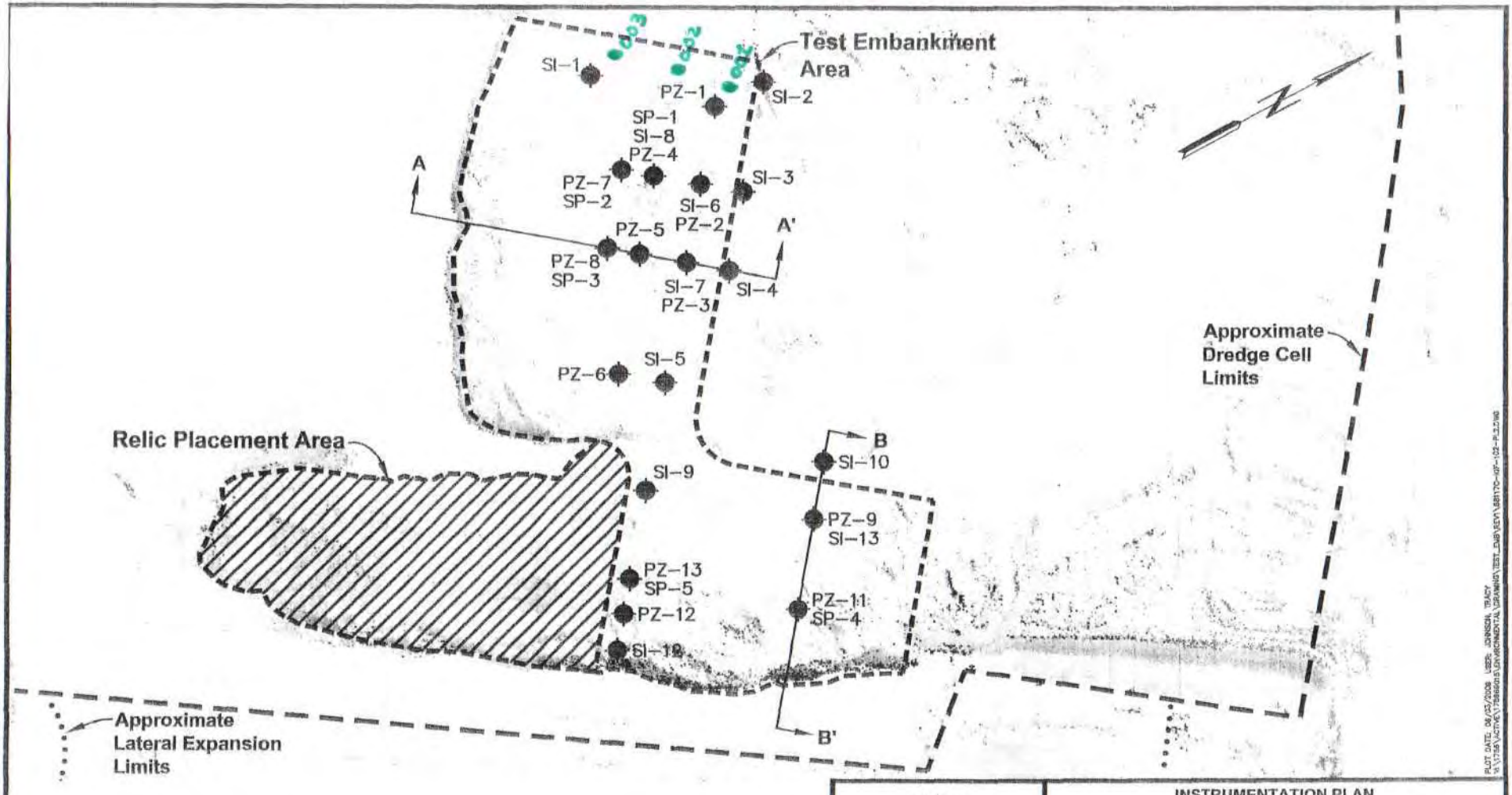
Daily Field Report
Field Density Test

Project Name: KINGSTON TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 43	of 54
Field Representative: RUSSELL MENNERT	Report No:	Date: 8/10/09	

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture -4 (%) +2	Compaction (%)	Required Compaction (%)	Pass or Fail
001	14FT ∧ 345° NORTH OF PZ-1 @ A DISTANCE OF 54'	84.3	28.4	82.8	24.9	101.8	90.0	
002	14FT. ∧ 281° WEST OF PZ-1 @ A DISTANCE OF 53'	84.2	28.1	82.8	24.9	101.7	90.0	
003	14FT 251° WEST OF PZ-1 @ A DISTANCE OF 95'	86.0	27.6	82.8	24.9	103.9	90.0	

Remarks: NOTE ALL TESTS PERFORMED ON THE TEST EMBANKMENT (8/10/09) ALSO REPRESENT DRIVE TUBES (DT-002 THROUGH DT-003).

• NOT TO SCALE · DENSITY TESTS 001 THROUGH 003



LEGEND

PZ-1 Piezometer
SI-1 Slope Inclinometer
SP-1 Settlement Platform

100 0 200 400 FEET
GRAPHIC SCALE: 1" = 200'

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

6/3/2009

INSTRUMENTATION PLAN
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1. 3.	2 OF 7
CHECKED BY	MJS	SCALE	1"=200'	2. 4.	

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 15	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/11/09	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 80's to 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	Density Meter/3440	Troxler	19084/16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cone/moisture.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Russell Mehnert	Report No:	Date: 8/11/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Andrew met to discuss stockpile optimum moisture. After their discussion, Mr. Mehnert and Ms. Berryman performed moisture testing using a density gauge and took grab samples for comparison on the stockpile.

Throughout the day, Civil Projects performed many construction activities on the test embankment. Civil Projects hauled one and a half inch stone to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the east and also up the relic dike, to make another access to the test embankment. The access road within the test embankment was installed east to west using geogrid and 1 1/2" rock. The stone was bladed into place utilizing a dozer in an approximate 12" lift.

Civil Projects continued hauling #10 screenings to the east in the test embankment area. The #10 material was pushed toward the eastern limits in an approximate 3" lift overtop of the 2' rock lift. A proof roll was performed in areas where the drainage (geo grid, 1 ½" rock and #10 screenings) layer had been completed so fly ash could be placed.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using three articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from west to east. On completion of a section a smooth drum compactor would run over the lift to seal it off at approximately 6". A second fly ash lift was placed, bladed and sealed in the northwestern corner of the test embankment. This area was approximately 200' x 325".

Mr. Andrew requested that Mr. Mehnert perform density tests approximately 50' apart on the sealed off fly ash sections which is marked on the following diagram. Mr. Mehnert performed five density tests. Three of the density tests performed on the second lift area coincides with three drive cylinder tests. The results from the density tests are shown on the following data sheet.

A site diagram at the closing of test embankment construction has been enclosed for reference.

Stantec Field Representative's Activities

Arrive	7:30 a.m.
Depart	7:45p.m.

7:30AM-7:00PM
Observations of test embankment construction, density testing and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/11/09
[ ] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/13/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: KINGSTON TEST EMBANKMENT PROJECT	Project No: 175669015	Page No: 43	of 4
Field Representative: RUSSELL MEHNERT	Report No:	Date: 8/11/09	

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture -4 (%) +2	Compaction (%)	Required Compaction (%)	Pass or Fail
004*	2 LIFT, 248° WEST OF PZ-1 @ A DISTANCE OF 210'	85.4	28.5	82.8	24.9	103.1	90.0	
005*	2 LIFT, 322° WEST OF PZ-7 @ A DISTANCE OF 129'	85.1	29.3	82.8	24.9	102.8	90.0	
006*	2 LIFT, 130° EAST OF PZ-1 @ A DISTANCE OF 95'	85.6	29.6	82.8	24.9	103.4	90.0	
007	1 LIFT 298° WEST OF PZ-4 @ A DISTANCE OF 70'	85.6	29.6	82.8	24.9	103.4	90.0	
008	1 LIFT 332° WEST OF PZ-7 @ A DISTANCE OF 60'	83.5	31.0	82.8	24.9	100.9	90.0	

Remarks: * NOTE: THAT TESTS 004 THROUGH 006 CORRESPOND TO THREE DRIVE CYLINDER TESTS.

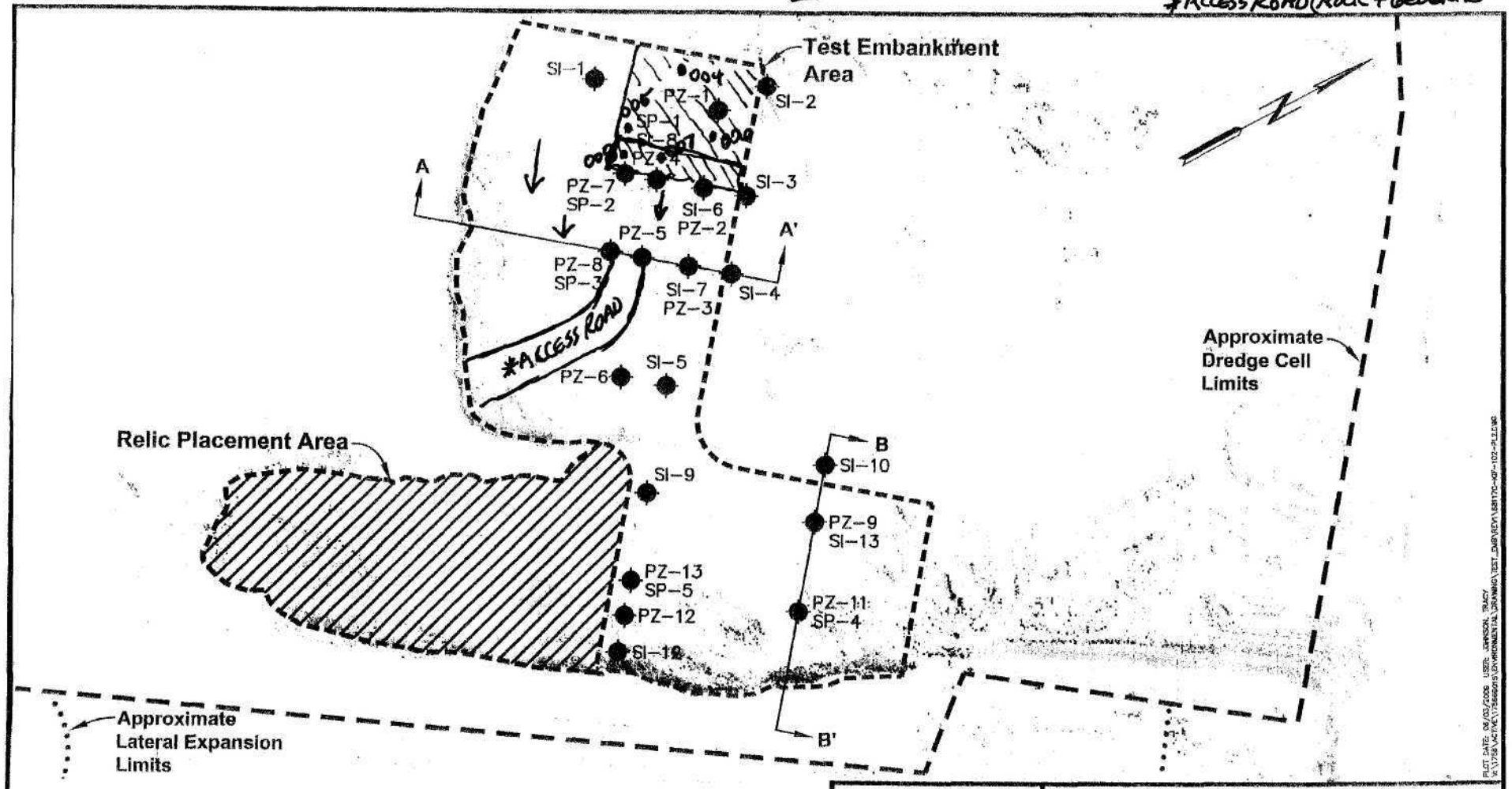
● DENSITY TEST PERFORMED - NOT TO SCALE

▨ - 2 LIFTS OF FLY ASH

▨ - 1 LIFT OF FLY ASH

→ - WORKING ~~SAND~~ & #10 SCREENING AND 1½" ROCK

*ACCESS ROAD (ROCK + GEOGRID



NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

LEGEND

PZ-1 Piezometer
SI-1 Slope Inclinometer
SP-1 Settlement Platform

100 0 200 400 FEET
GRAPHIC SCALE: 1" = 200'

INSTRUMENTATION PLAN
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1. 3.	2 OF 7
CHECKED BY	MJS	SCALE	1"=200'	2. 4.	

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 16	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/12/09	Day of the Week: Thursday	
	Weather: Sunny	Temperature: 80's to 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	Density Gauge/3440	Troxler	19084/16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cone/moisture.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 16	Date: 8/12/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Ms. Berryman read test embankment instrumentation.

Mr. Mehnert was advised by Mr. Andrew to take a couple of moisture readings and grab samples of the stockpile. Results are on the following data sheet.

Throughout the day, Civil Projects performed many construction activities on the test embankment. The laborer crew rolled out geo grid with the aid of an excavator within the northeast of the test embankment. Geo grid was overlapped end-to-end at approximately three to four feet and overlapped adjacently by approximately two feet. Civil Projects hauled one and a half inch stone to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the east in the test embankment.

A proof roll was performed northeast and southeast of PZ-8, approximately 50250 ft^2. Another proof roll was performed on the test embankment in the area where rutting was observed the previous day (8/12/09). No rutting was observed and Mr. Kilby was informed.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using three articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from west to east. On completion of a section a smooth drum compactor would run over the lift to seal it off at approximately 6". A second fly ash lift was placed, bladed and sealed in the northwestern corner of the test embankment. This area was to the west of PZ-2.

TVA surveyors to an elevation and location of SP-3 and grade of each drainage layer of material (stone, screening and ash).

A completion sketch is enclosed.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	9:00 p.m.

7:30AM-7:00PM
Observations of test embankment construction, density testing and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/12/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/13/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 17	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/13/09	Day of the Week: Wednesday	
	Weather: Sunny	Temperature: 80's to 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,	Type/Model	Manufacturer	Ser. No./ID No.
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	Density Gauge/3440	Troxler	19084/16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cone/moisture.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Russell Mehnert	Report No:	Date: 8/13/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Layton observed the 2 lift of fly ash that was previously placed and sealed and noticed that it seemed to be very loose and wet. Mr. Norsleet was informed and said that it would be scarified up, let dry and resealed when the equipment arrived (a John Deer 7600 tractor w/ a scarifying attachment.

Throughout the day, Civil Projects performed many construction activities on the test embankment. The laborer crew rolled out geo grid with the aid of an excavator within the north and south east of the test embankment. Geo grid was overlapped end-to-end at approximately three to four feet and overlapped adjacently by approximately two feet. Civil Projects hauled one and a half inch stone to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the west to east in the test embankment. The access road within the test embankment was installed east to west using geogrid and 1 1/2" rock. The stone was bladed into place utilizing a dozer in an approximate 12" lift.

Civil Projects continued hauling #10 screenings to the east of the test embankment area. The #10 material was pushed toward the north and southeastern limits in an approximate 3" lift overtop of the 2' rock lift.

A proof roll was performed on the 1 ½" rock that was placed in the embankment, an area of approximately 105' x 90'. Rutting was noticed in the northeastern section of the test embankment and Mr. Kilby was informed. More 1 ½" rock was placed in the area that area of rutting but not in excess of 2". Mr. Layton and Mr. Mehnert also observed a proof roll on the completed drainage layer from PZ-2 to PZ-3. No rutting was observed. Mr. Kilby was informed on the results of the proof roll.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using three articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from west to east. On completion of a section a smooth drum compactor would run over the lift to seal it off at approximately 6". A second fly ash lift was placed, bladed and sealed in the northwestern corner of the test embankment. This area was approximately 200' x 325".

Mr. Layton and Mr. Andrew installed SP-3 in the test embankment.

Stantec Field Representative's Activities

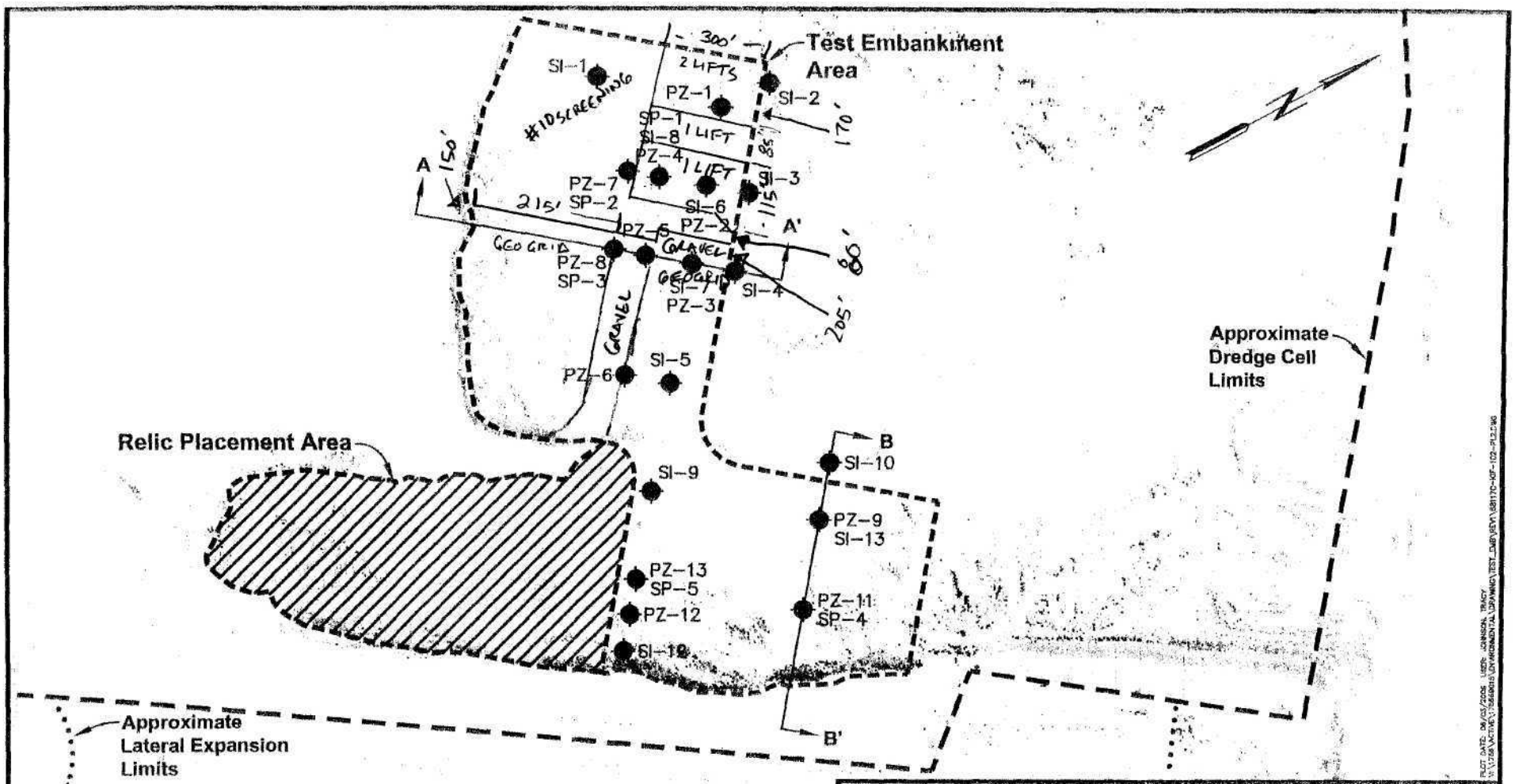
Arrive	7:30 a.m.
Depart	7:45p.m.

7:30AM-7:00PM
Observations of test embankment construction, density testing and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/13/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/22/09

8/13/07



LEGEND

PZ-1	Piezometer
SI-1	Slope Inclinometer
SP-1	Settlement Platform

100 0 200 400 FEET

GRAPHIC SCALE: 1" = 200'

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

6/3/2009

INSTRUMENTATION PLAN
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1400 N. Hobson Rd.
Louisville, Kentucky
40511-2650
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED		SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1.	3.	2 OF 7
CHECKED BY	MJS	SCALE	1"=200'	2.	4.	

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 18	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/14/09	Day of the Week: Friday	
	Weather: Sunny	Temperature: 80's to 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,	Type/Model	Manufacturer	Ser. No./ID No.
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	Density Gauge/3440	Troxler	19084/16
Compactor, (1) John Deer 7600 w/ scarifying attachment			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cone/moisture.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Russell Mehnert	Report No: 18	Date: 8/14/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert arrived on site and observed Civil Projects working on the test embankment. Civil Projects was working #10 screening towards the east over the 1 ½" rock that was previously placed. Civil projects hauled 1 ½" rock to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the east in the test embankment using a John Deer 850J Bulldozer. Fly ash was also being placed in the test embankment, from north to south, approximately in 8" to 10" lifts and using a smooth drum compactor to seal it. A daily completion sketch is enclosed.

Mr. Layton and Mr. Mehnert observed a proof roll that was performed on #10 screening in the test embankment (approximately 32,400 ft^2). No pumping or rutting was observed. Mr. Kilby was informed of the observations.

Mr. Mehnert performed three density tests. The density tests performed coincide with three drive cylinder tests. The results from the density tests are shown on the following data sheet.

Mr. Andrew and Mr. Kilby discussed the moisture requirements for the test embankment. Mr. Kilby scarified the second lift of the test embankment using a John Deer 7600 tractor equipped with a scarifying disk. The fly ash was left open to dry. Before the day had ended, Civil projects sealed the open fly ash using a smooth drum compactor.

Mr. Mehnert observed an area of fly ash that appeared to be dry. Mr. Mehnert contacted Mr. Andrew and discussed the area. Mr. Andrew suggested to Mr. Kilby to water the dry fly ash area.

TVA surveyors to an elevation and location of each SP and grade of each drainage layer of material (stone, screening and ash).

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:30 p.m.

7:30AM-7:00PM
Observations of test embankment construction, density testing and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/14/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/15/09

Stantec

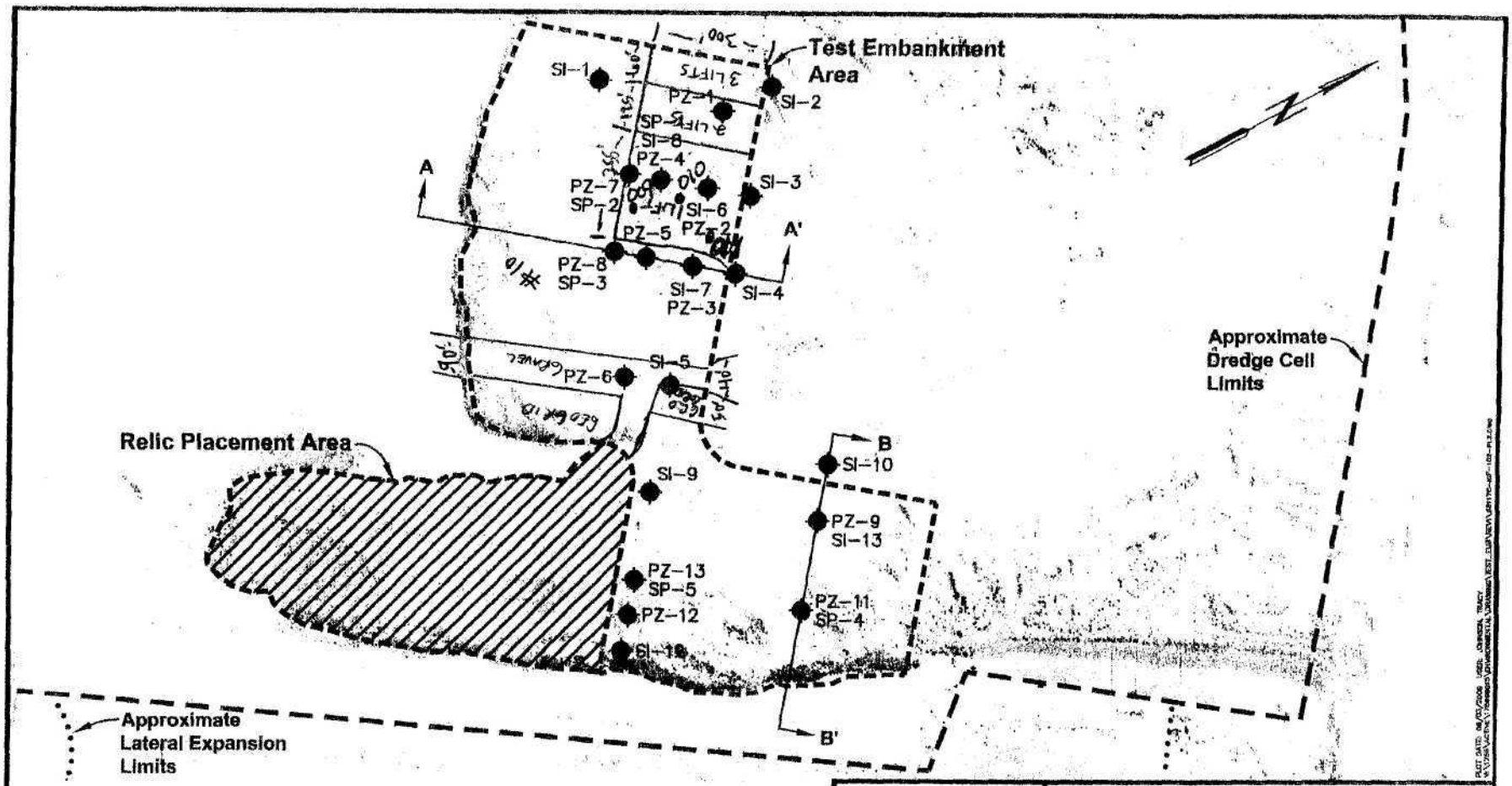
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: KINGSTON TEST EMBANKMENT PROGRAM	Project No: 175d69015	Page No: of
Field Representative: RUSSELL MEHNERT	Report No:	Date: 8/14/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture -4 (%) +2	Compaction (%)	Required Compaction (%)	Pass or Fail
009*	1ST LIFT, 120° EAST OF PZ-7 @ A DISTANCE OF 36'	83.9	29.4	82.8	24.9	101.3	90.0	
010*	1ST LIFT, 160° EAST OF PZ-4 @ A DISTANCE OF 65'	82.4	29.1	82.8	24.9	99.5	90.0	
011*	1ST LIFT, 126° EAST OF PZ-2 @ A DISTANCE OF 18'	83.9	29.5	82.8	24.9	101.3	90.0	

Remarks: ~~*NOTE DRIVE TUBES CYLINDER TESTS PERFORMED ALSO.~~ RM *NOTE TEST 009 & 010 CORRESPOND TO DRIVE CYLINDER TESTS.



LEGEND

- PZ--1 Piezometer
- SI--1 Slope Inclinometer
- SP--1 Settlement Platform

100 0 200 400 FEET

GRAPHIC SCALE: 1" = 200'

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

INSTRUMENTATION PLAN
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1. 3.	2 OF 7
CHECKED BY	MJS	SCALE	1"=200'	2. 4.	

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 19	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/15/09	Day of the Week: Saturday	
	Weather: Sunny	Temperature: 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,	Type/Model	Manufacturer	Ser. No./ID No.
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	Density Gauge/3440	Troxler	19084/16
Compactor, (1) John Deer 7600 w/ scarifying attachment			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cone/moisture. Read instrumentation.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Russell Mehnert	Report No: 19	Date: 8/15/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Civil project hauled 1 ½" rock into the test embankment using articulated dump trucks and dumped the rock near the placement area. After the stone was placed a John Deer 850J bulldozer bladed the rock in approximately 2' in thickness in the southeastern corner of the test embankment. This are was approximately 40,500 ft^2. Once the rock was in place, Mr. Mehnert observed a proof roll. Mr. Mehnert observed no rutting or pumping during the proof roll. Mr. Mehnert noticed that a section in the above area had the geo grid showing and needed more rock. Mr. Mehnert informed Mr. Kilby of the area (approximately 50 ft^2). More 1 ½" rock was added to the area. After the area was proof rolled, #10 screening was hauled in and bladed out in an approximately 3" lift.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:30 p.m.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/15/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/16/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

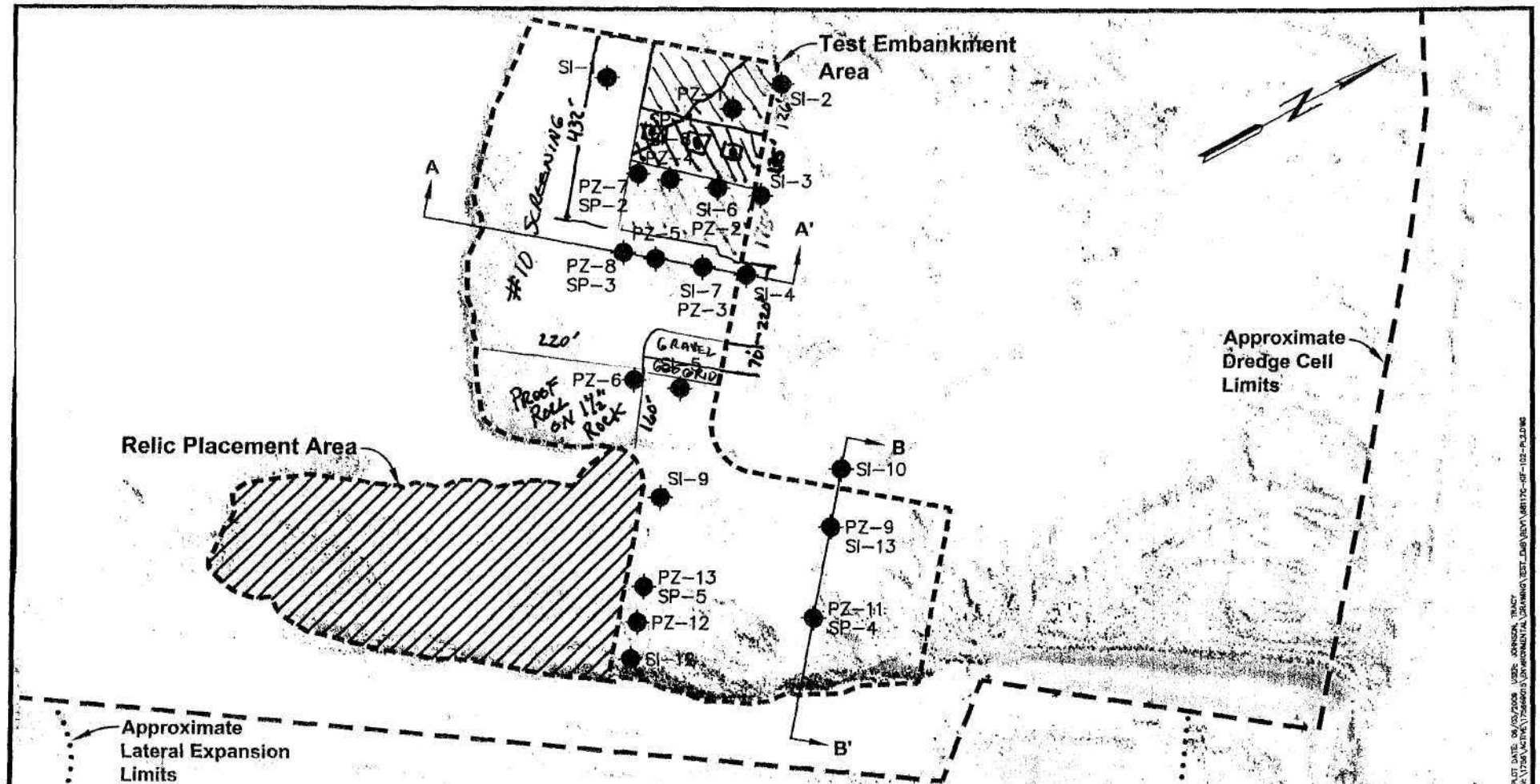
Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM | Project No: 175669015 | Page No: 4 of 4
Field Representative: RUSSELL MEHNERT | Report No: | Date: 8/15/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
012	346° WEST OF PZ-7, @ A DISTANCE OF 96'	83.9	29.1	82.8	24.9	101.3	90.0	
013	312° WEST OF PZ-4, @ A DISTANCE OF 54'	82.5	29.9	82.8	24.9	99.6	90.0	
014	308° WEST OF PZ-2, @ A DISTANCE OF 94'	79.5	23.8	82.8	24.9	96.0	90.0	

Remarks: ALL TESTS WERE PERFORMED ON ~~SECOND~~ 1ST RM LIFT

- 3 LIFTS
- 2 LIFTS
- 1 LIFT
- DENSITY TESTS 012, 013, 014

- BERM TO DEFLECT WATER



LEGEND

PZ-1	Piezometer
SI-1	Slope Inclinometer
SP-1	Settlement Platform

100 0 200 400 FEET

GRAPHIC SCALE: 1" = 200'

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

MICHAEL J. STEELE REGISTERED ENGINEER AGRICULTURE COMMERCE STATE OF TENNESSEE 6/3/2009

INSTRUMENTATION PLAN
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1400 N. Forbes Rd
Lexington, Kentucky
40511-2050
860-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED		SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1.	3.	2 OF 7
CHECKED BY	MJS	SCALE	1"=200'	2.	4.	

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/16/09	Day of the Week: Sunday	
	Weather: Sunny	Temperature: 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cone/moisture. Read instrumentation.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No:	Date: 8/16/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Upon arrival Mr. Mehnert met with Mr. Thompson, Stantec Senior Driller, to figure out when they would be ready to work on CPT-7.

Mr. Mehnert read SI-2.

Mr. Mehnert worked on CPT-7 with drill crew until completion.

Stantec Field Representative's Activities

Arrive	8:30 a.m.
Depart	3:00 p.m.

8:30 a.m. –3:00 p.m.
read instrumentation, set up cpt equipment, run cpt, and clean up

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 8/16/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/17/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 8/17/09	Day of the Week: Monday
	Weather: Sunny	Temperature: 80's to 90's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 8/17/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Andrew met to discuss stockpile optimum moisture. After their discussion, Mr. Mehnert took moisture content samples from fly ash delivered to test embankment area before it was bladed. Mr. Mehnert, Mr. Clark, and Mrs. Berryman observed proof roll of 1 ½" rock northeastern corner of test embankment area. The area was approximately 185' x 140'.

Throughout the day, Civil Projects performed many construction activities on the test embankment. Civil Projects hauled one and a half inch stone to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the north/south east in the southeastern corner. The stone was bladed into place utilizing a dozer in an approximate 12" lift.

Civil Projects continued hauling #10 screenings to the east of the test embankment area. The #10 material was pushed toward the north and south eastern limits in an approximate 3" lift overtop of the 2' rock lift.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using three articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from west to east. On completion of a section a smooth drum compactor would run over the lift to seal it off at approximately 6". A second fly ash lift was placed, bladed and sealed in the northwestern corner of the test embankment. This area was approximately 200' x 325".

Mr. Andrew requested that Mr. Mehnert and Mr. Clark perform density tests approximately 50' apart on the sealed off fly ash sections which is marked on the following diagram. Sixteen density tests were performed by Mr. Clark. Three of the density tests performed on the second lift area coincides with three drive cylinder tests performed by Mr. Mehnert. The results from the density tests are shown on the following data sheet.

73 loads of ash where placed today.

Stantec Field Representative's Activities

Arrive	7:30 a.m.
Depart	7:00p.m

7:30AM-7:00PM
Observations of test embankment construction, density testing and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/17/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/20/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 21	Page No: 1 of 5
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/18/09	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 80's to 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,	Type/Model	Manufacturer	Ser. No./ID No.
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	Density Gauge/3440	Troxler	19084/16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 5
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No: 21	Date: 8/18/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Andrew met to discuss stockpile optimum moisture. After their discussion, Mr. Mehnert took moisture content samples from fly ash delivered to test embankment area before it was bladed. Mr. Mehnert, Mr. Clark, and Mrs. Berryman observed proof roll of 1 ½" rock northeastern corner of test embankment area. The area was approximately 185' x 140'.

Throughout the day, Civil Projects performed many construction activities on the test embankment. Civil Projects hauled one and a half inch stone to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the north/south east in the southeastern corner. The stone was bladed into place utilizing a dozer in an approximate 12" lift.

Civil Projects continued hauling #10 screenings to the east of the test embankment area. The #10 material was pushed toward the north and south eastern limits in an approximate 3" lift overtop of the 2' rock lift.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using three articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from west to east. On completion of a section a smooth drum compactor would run over the lift to seal it off at approximately 6". A second fly ash lift was placed, bladed and sealed in the northwestern corner of the test embankment. This area was approximately 200' x 325".

Mr. Andrew requested that Mr. Mehnert and Mr. Clark perform density tests approximately 50' apart on the sealed off fly ash sections which is marked on the following diagram. Sixteen density tests were performed by Mr. Clark. Three of the density tests performed on the second lift area coincides with three drive cylinder tests performed by Mr. Mehnert. The results from the density tests are shown on the following data sheet.

68 loads of ash placed

Stantec Field Representative's Activities

Arrive	7:30 a.m.
Depart	7:00p.m

7:30AM-7:00PM
Observations of test embankment construction, density testing and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/18/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/20/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: of
Field Representative: RYAN CLARK / RUSSELL-MEHNERT	Report No:	Date: 8/18/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
015 ~~012~~ *	3rd LIFT, N35°54.703', W084°30.838', WP307	88.8	28.9	82.8	24.9	107.2	90.0	
016 ~~013~~	3rd LIFT, N35°54.696', W084°30.827', WP308	85.3	27.9	82.8	24.9	102.9	90.0	
017 ~~014~~	3rd LIFT, N35°54.695', W084°30.815', WP309	85.2	29.4	82.8	24.9	102.7	90.0	
018 ~~015~~	3rd LIFT, N35°54.702', W084°30.824', WP310	86.0	28.2	82.8	24.9	103.8	90.0	
019 ~~016~~	3rd LIFT, N35°54.708', W084°30.834', WP311	84.5	28.7	82.8	24.9	102.1	90.0	
020 ~~017~~	3rd LIFT, N35°54.717', W084°30.828', WP312	81.5	28.3	82.8	24.9	98.4	90.0	
021 ~~018~~	3rd LIFT, N35°54.711', W084°30.819', WP313	81.8	28.2	82.8	24.9	98.8	90.0	
022 ~~019~~ *	3rd LIFT, N35°54.701', W084°30.807', WP314	84.7	28.2	82.8	24.9	102.3	90.0	
023 ~~020~~	3rd LIFT, N35°54.698', W084°30.774', WP315	85.0	23.2	82.8	24.9	102.6	90.0	
024 ~~021~~	3rd LIFT, N35°54.691', W084°30.783', WP317	82.1	23.6	82.8	24.9	99.1	90.0	
025 ~~022~~	1st LIFT, N35°54.681', W084°30.791', WP318	81.2	22.6	82.8	24.9	98.0	90.0	
026 ~~023~~	1st LIFT, N35°54.673', W084°30.801', WP319	82.0	22.6	82.8	24.9	99.0	90.0	

Remarks: * NOTE: DRIVE CYLINDER TESTS PERFORMED

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM		Project No: 175669015	Page No: of
Field Representative: RYAN CLARK / RUSSELL MEHNERT		Report No:	Date: 8/18/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
027 ~~026~~	3rd LIFT, N35°54.713', W084°30.798', WP320	83.4	28.6	82.8	24.9	100.8	90.0	
028 ~~025~~	3rd LIFT, N35°54.707', W084°30.787', WP321	82.8	29.4	82.8	24.9	100.1	90.0	
029 ~~026~~	3rd LIFT, N 35°54.721', W084°30.806', WP322	83.7	29.3	82.8	24.9	101.1	90.0	
030 ~~027~~ *	3rd LIFT, N35° 54.730', W084° 30.824', WP 323	84.1	27.8	82.8	24.9	101.6	90.0	

Remarks: * NOTE: DRIVE CYLINDER TEST PERFORMED

Stantec

Density of Soil in Place by the Drive-Cylinder Method
ASTM D 2937

Project Name TVA - KINGSTON TEST EMBANKMENT

Project Number 175669015
Technician RM / RC
Date 8/18/09

NUKE M%	Drive Cylinder ID	Ref Tag	Source	Depth	Description	Wet Soil and Cylinder Mass (g)	Moisture Content (%)	Moisture Content Method
28.9	DC-12	L	LIFT 3, N35°54.703' W084° 30.838'	4"	FLY ASH	728.0	25.7	HOT PLATE
28.2	DC-16	P	LIFT 3, N35°54.701' W 084° 30.807'	4"	FLY ASH	727.1	25.6	HOT PLATE
27.8	DC-19	S	LIFT 3, N35°54.730' W084 30.824'	4"	FLY ASH	728.1	26.8	HOT PLATE

Comments _____

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/19/09	Day of the Week: Wednesday	
	Weather: Sunny/Raining	Temperature: 80's to 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No:	Date: 8/19/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Layton met to discuss stockpile moisture. Mr. Mehnert and Mr. Clark visually observed stockpile. Mr. Layton suggested that Civil Projects cut off top layer of saturated fly ash and use dryer material. Mr. Mehnert took moisture content sample of material that was delivered to the test embankment area before it was bladed. Mr. Layton suggested that Civil Projects fix washout areas due to rain from the previous night. The area was 50' by 260'.

Throughout the day, Civil Projects performed many construction activities on the test embankment. Civil Projects hauled base stone to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the north/south east in the southeastern corner.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using two articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from west to east. On completion of a section a smooth drum compactor would run over the lift to seal it off at approximately 6". This area was approximately 70' x 260'.

Mr. Kilby informed Mr. Mehnert that Civil Projects was done for the day due to rain.

Stantec Field Representative's Activities

Arrive	7:30 a.m.
Depart	7:00p.m.

7:30AM-7:00PM
Observations of test embankment construction, density testing and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/19/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/20/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/20/09	Day of the Week: Thursday	
	Weather: Sunny/Raining	Temperature: 80's to 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 8/20/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert, Mr. Clark and Mr. Layton met with M. Kilby to discuss today's activities. Mr. Layton informed Mr. Kilby to cut berms into previously sealed lifts to deflect water. Mr. Mehnert, Mr. Clark, and Mr. Layton visually checked the stockpile to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash before it was bladed in. Mr. Layton and Ms. Berryman observed a proof roll of base stone placed on the northeastern corner of the test embankment area.

Throughout the day, Civil Projects performed many construction activities on the test embankment. Civil Projects hauled base stone to the embankment area utilizing articulated dump trucks. The dump trucks end dumped the stone near the area of placement and bladed material toward the north/east end of the embankment area. The stone was bladed into place utilizing a dozer in an approximately 3" lift.

Civil Projects used a dozer and an excavator to dress the slope of the relic structure which had been washed out due to excess rain from the previous night.

Civil Projects continued placing fly ash in the northeastern corner of the test embankment using four articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northeast to southeast. On completion of a section a smooth drum compactor would run over the lift to seal it off at approximately 6". This area was approximately 272' x 140'.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30p.m.

7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/20/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/21/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 24 / Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 8/21/09	Day of the Week: Friday
	Weather: Sunny/Raining	Temperature: 80's to 90's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 8/21/09

Field Observation/Contractor Activities and Discussions:24
Indicate activities you did and did not observe.

Mr. Mehnert, Mr. Clark and Mr. Layton met with M. Kilby to discuss today's activities. Mr. Layton informed Mr. Kilby to cut berms into previously sealed lifts to deflect water. Mr. Mehnert and Mr. Clark visually checked the stockpile to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash before it was bladed in.

Civil Projects used a dozer and an excavator to dress the slope of the relic structure which had been washed out due to excess rain from the previous night.

Civil Projects continued placing fly ash in the northeastern corner of the test embankment using four articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northeast to southeast. This area was approximately 582' x 244'. Towards the end of Civil Projects shift, four loads of fly ash were placed in the north western area of the test embankment area. The loads were bladed in using a dozer.

67 loads of ash where placed today.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	5:30p.m.

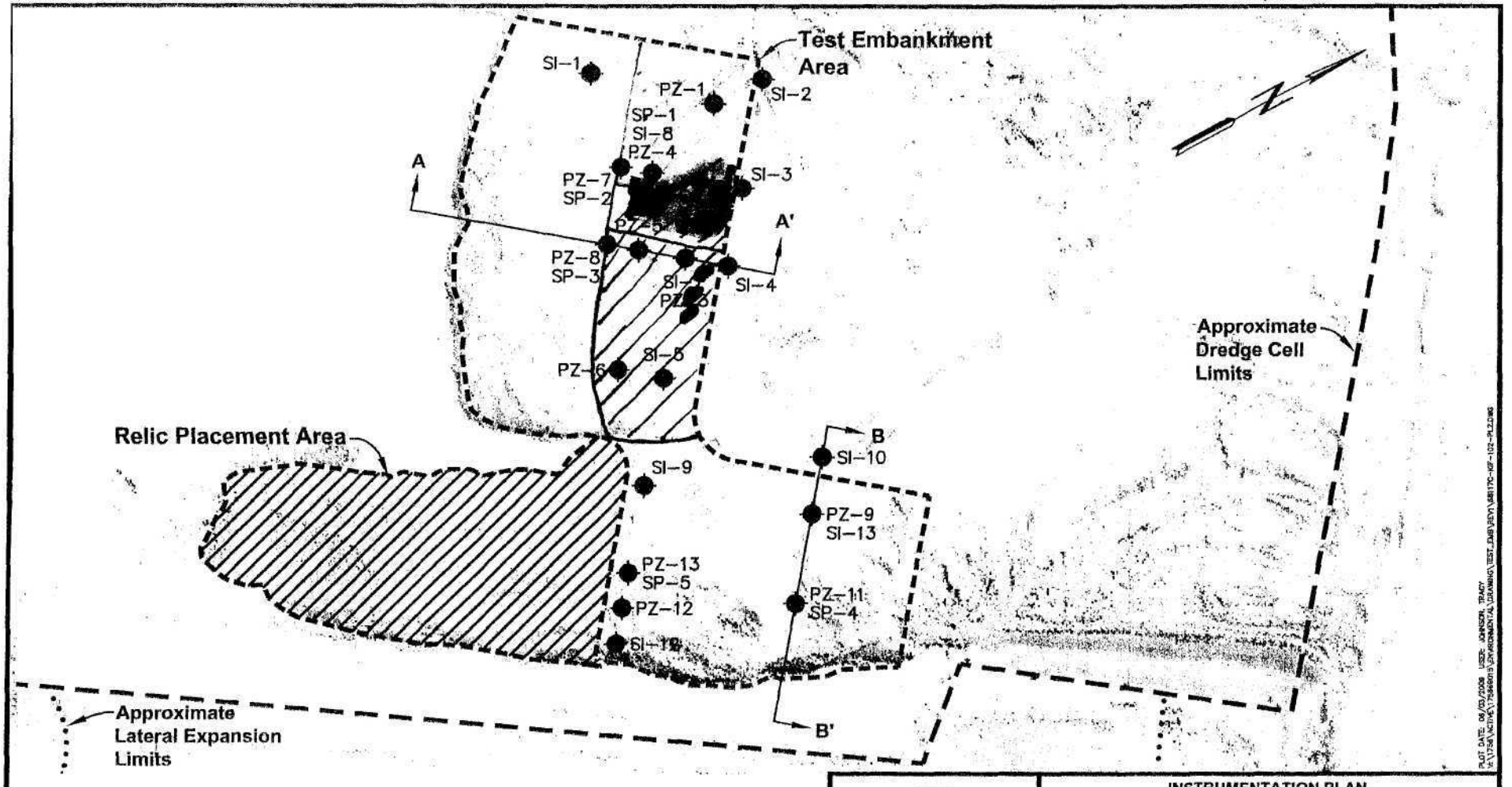
7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/21/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/21/09

8-21-09

- area where lift 1 was placed
- area where lift 2 was placed
- WASHES INCREASING IN DEPTH TOWARDS TOE OF EMBANKMENT (1" to 4')
- SINKHOLES (3 @ 50' SOUTH OF SI-4) @ 3.5' DIA
- LARGE WASHES (DOWN TO 1½" ROCK)



LEGEND

PZ-1 Piezometer
SI-1 Slope Inclinometer
SP-1 Settlement Platform

100 0 200 400 FEET
GRAPHIC SCALE: 1" = 200'

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

MICHAEL J. [illegible] REGISTERED ENGINEER AGRICULTURAL COMMONWEALTH OF KENTUCKY STATE OF [illegible] 6/3/2009

INSTRUMENTATION PLAN
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1405 N. Forbes Rd.
Lexington, Kentucky
40511-2053
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1. 3.	2 OF 7
CHECKED BY	MJS	SCALE	1"=200'	2. 4.	

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 25	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/22/09	Day of the Week: Saturday	
	Weather: Sunny/Raining	Temperature: 80's to 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test. Check for rutting and pumping.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No: 25	Date: 8/22/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert, Mr. Clark and Mr. Layton met with M. Kilby to discuss today's activities. Mr. Layton informed Mr. Kilby to cut berms into previously sealed lifts to deflect water. Mr. Mehnert and Mr. Clark visually checked the stockpile to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash before it was bladed in.

Civil Projects used a dozer and an excavator to dress the slope of the relic structure which had been washed out due to excess rain from the previous night.

Civil Projects continued placing fly ash in the northeastern corner of the test embankment using four articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northeast to southeast.

Light rains slowed production so that a total of 64 articulated trucks placed ash on this date.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	5:30p.m.

7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/22/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 8/24/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 26	Page No: 1 of 8
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/24/09	Day of the Week: Monday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) Dozers (7) Articulated Trucks, (1) Smooth Drum Roller	3440	Troxler	16

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cone/moisture. Read instrumentation.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 8
Stantec Field Representative: Russell Mehnert	Report No: 26	Date: 8/24/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Arrived on site and met with Mr. Andrew to discuss today's activities. Mr. Andrew suggested that Mr. Clark and Mr. Mehnert visually check the stock pile moisture content. Mr. Mehnert took moisture content samples from fly ash that was hauled to the test embankment area before it was bladed in.

Civil Projects continued to haul fly ash to the test embankment area using articulated trucks. The fly ash was end dumped in the northeastern end of the test embankment area and was bladed towards the northwestern corner. The fly ash was placed in a one foot loose lift and was compacted with the smooth drum roller. The approximate area was 871' x 118'. Mr. Clark and Mr. Mehnert performed field density tests on the fly ash. Drive tubes were also taken by Mr. Mehnert. Civil Projects also placed Lift 4 of fly ash in the northeastern area of the test embankment area. The material was bladed in using the dozer. The approximate area was 82' x 245'.

202 loads of ash where placed.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	5:30 p.m.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/24/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/25/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: of
Field Representative: RYAN CLARK / RUSSELL MENNERT	Report No:	Date: 8/24/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
015	1st LIFT, N 35°54.662', W084° 30.776', WP324	79.6	23.5	89.7	23.0	88.7	90.0	
016	1st LIFT, N 35°54.671', W084°30.770', WP325	81.1	~~23.5~~ 24.6 RM	89.7	23.0	90.4	90.0	
017	1st LIFT, N 35°54.678', W084°30.765', WP326	84.7	26.1	89.7	23.0	94.4	90.0	
018	1st LIFT, N 35°54.686', W084°30.763', WP327	83.5	25.6	89.7	23.0	93.1	90.0	
*019	1st LIFT, N35°54.683', W084°30.750', WP328	82.0	26.2	89.7	23.0	91.4	90.0	
020	1st LIFT, N35°54.677', W084°30.754', WP329	80.2	24.9	89.7	23.0	89.4	90.0	
021	1st LIFT, N35°54.672', W084°30.759', WP330	81.9	26.4	89.7	23.0	91.3	90.0	
022	1st LIFT, N35°54.663', W084°30.764', WP331	83.2	28.6	89.7	23.0	92.8	90.0	
023	1st LIFT, N35°54.655', W084°30.760', WP332	83.1	29.4	89.7	23.0	92.6	90.0	
024	1st LIFT, N35°54.661', W084°30.757', WP333	80.7	28.5	89.7	23.0	90.0	90.0	
025	1st LIFT, N35°54.665', W084°30.751', WP334	80.3	30.1	89.7	23.0	~~90.0~~ 89.5 RM	90.0	
026	1st LIFT, N 35°54.676', W084°30.746', WP335	81.0	29.5	89.7	23.0	90.3	90.0	

Remarks: * TEST No. 019 CORRESPONDS TO DT-012

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: of
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 8/24/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
027	1st LIFT, N35°54.676', W084° 30.737', WP336	79.9	29.5	89.7	23.0	89.1	90.0	
*028	1st LIFT, N35°54.672', W084°30.734', WP337	82.0	29.0	89.7	23.0	91.4	90.0	
029	1st LIFT, N 35°54.656', W084°30.746', WP338	84.4	29.7	89.7	23.0	94.1	90.0	
030	1st LIFT, N35°54.649', W084°30.753', WP339	84.2	29.8	89.7	23.0	93.9	90.0	
031	1st LIFT, N35°54.643', W084° 30.744', WP340	82.1	30.2	89.7	23.0	91.5	90.0	
032	1st LIFT, N35° 54.651', W084°30.737', WP341	83.6	28.2	89.7	23.0	93.2	90.0	
033	1st LIFT, N35° 54.658', W084° 30.729', WP342	78.6	27.7	89.7	23.0	87.6	90.0	
034	1st LIFT, N 35°54.667', W084°30.723', WP 343	81.8	29.5	89.7	23.0	91.2	90.0	
035	1st LIFT, N35°54.661', W084° 30.713', WP 344	80.9	29.7	89.7	23.0	90.2	90.0	
036	1st LIFT, N35°54.~~646~~ 653' RM, W084°30.~~721~~ 718' RM, WP345	77.8 9 RM	30.5	89.7	23.0	86.8	90.0	
037	1st LIFT, N35°54.646', W084°30.721', WP 346	81.6	29.0	89.7	23.0	90.9	90.0	
038	1st LIFT, N35° 54.646', W084°30.710', WP347	85.2	24.1	89.7	23.0	95.0	90.0	

Remarks: TEST No. 028 CORRESPONDS TO DT-013

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: of
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 8/24/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
*039	1st LIFT, N35°54.654', W084°, 30.704', WP348	80.9	25.0	89.7	23.0	90.2	90.0	
040	1st LIFT, N 35°54.660', W084° 30.699', WP349	80.7	27.1	89.7	23.0	89.9	90.0	
041	1st LIFT, N 35°54.655', W 084° 30.690', WP350	79.6	26.8	89.7	23.0	88.7	90.0	
042	1st LIFT, N 35°54.649', W084°30.694', WP351	78.8	27.8	89.7	23.0	87.8	90.0	
043	1st LIFT, N 35°54.679', W084° 30.863', WP352	85.1	28.8	89.7	23.0	94.9	90.0	
044	1st LIFT, N35°54.686', W084°54.686', WP353	80.1	30.8	89.7	23.0	89.3	90.0	
045	1st LIFT, N 35°54.694', W084°30.849', WP354	82.3	29.0	89.7	23.0	91.7	90.0	
046	1st LIFT, N 35°54.688', W084°30.841', WP355	85.1	28.1	89.7	23.0	94.9	90.0	
047	1st LIFT, N 35°54.681', W084°30.846', WP356	82.9	~~29.1~~ 29.1	89.7	23.0	92.4	90.0	
048	1st LIFT, N 35°54.675', W084°30.849', WP357	85.1	~~29.7~~ 29.7	89.7	23.0	94.9	90.0	
049	1st LIFT, N35°54.669', W084° 30.840', WP358	83.5	~~30.6~~ 30.6	89.7	23.0	93.0	90.0	
*050	1st LIFT, N35°54.674', W084° 30.833', WP359	79.0	29.5	89.7	23.0	88.1	90.0	

Remarks: *TEST No. 039 CORRESPONDS TO DT-014
*TEST No. 050 CORRESPONDS TO DT-015

Stantec

Density of Soil in Place by the Drive-Cylinder Method
ASTM D 2937

Project Name TVA KINGSTON TEST EMBANKMENT PROGRAM

Project Number 175669015
Technician RM/RC
Date 8/24/09

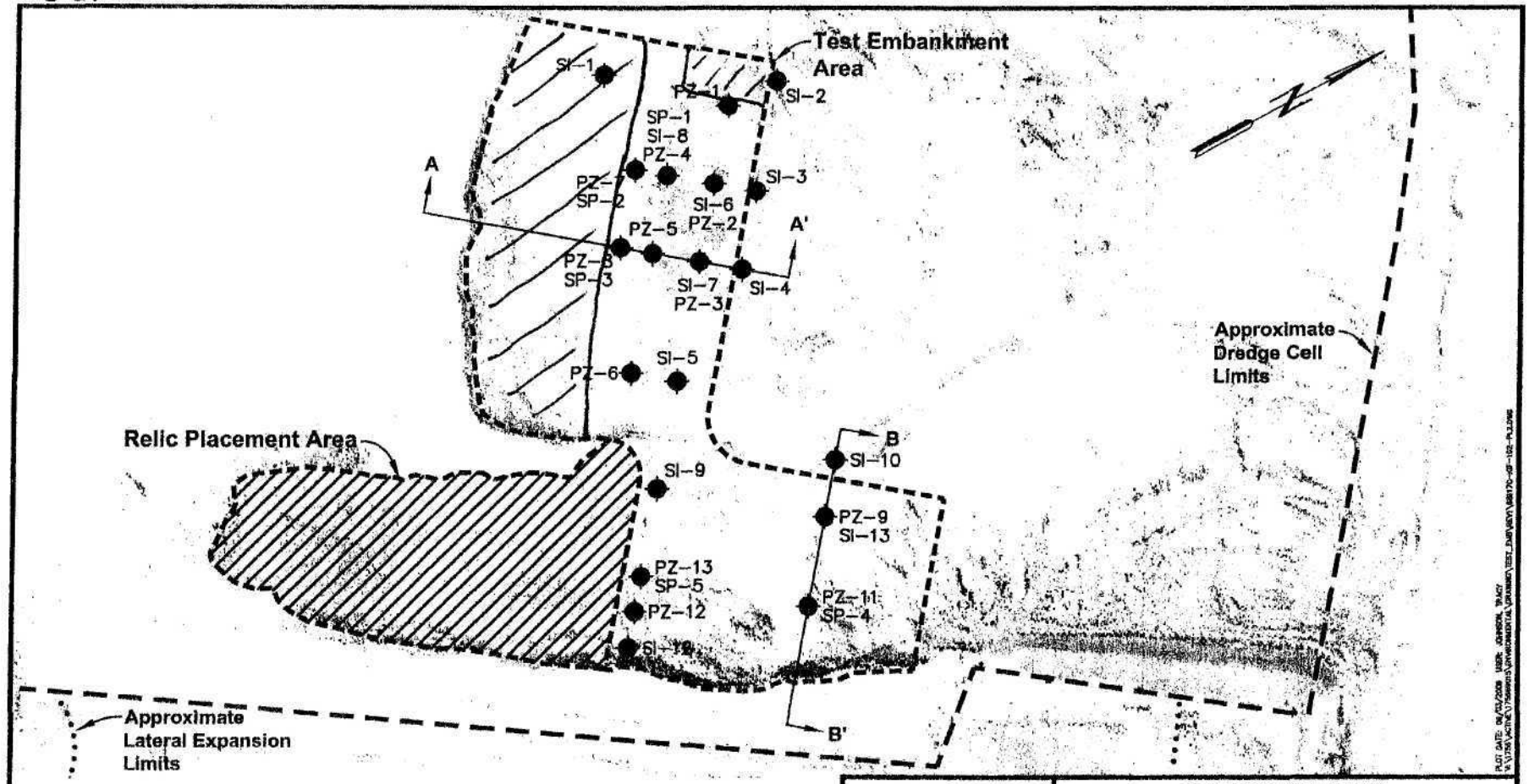
Nuke Gauge M%	Drive Cylinder ID	Ref Tag	Source	Depth	Description	Wet Soil and Cylinder Mass (g)	Moisture Content (%)	Moisture Content Method
26.2	DT-012	O	1st LIFT, N35°54.683' W084°30.750'	4"	FLY ASH 702.0	709.2	14.06	
29.0	DT-013	P	1st LIFT, N35°54.672' W084°30.734'	4"	FLY ASH	727.5	28.66	
25.0	DT-014	J	1st LIFT, N35°54.654' W084°30.704'	4"	FLY ASH	667.8	23.81	
25.5	DT-015	S	1st LIFT, N 35°54.674' W084°30.836'	4"	FLY ASH	741.7	25.04	

Comments _____

- area where lift 1 was placed

- area where lift 4 was placed

8-24-09



LEGEND

PZ-1	Piezometer
SI-1	Slope Inclinometer
SP-1	Settlement Platform

100 0 200 400 FEET

GRAPHIC SCALE: 1" = 200'

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

MICHAEL J. STEELE
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE
6/3/2009

INSTRUMENTATION PLAN
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1400 N. Forbes Rd.
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED		SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1.	3.	2 OF 7
CHECKED BY	MJS	SCALE	1"=200'	2.	4.	

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 27	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/25/09	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 80's to 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	3440	Troxler	16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No: 27	Date: 8/25/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Clark met with Mr. Kilby to discuss today's activities. Mr. Mehnert visually checked the stockpile to make sure it was ready to be hauled for placement. Mr. Mehnert informed the excavator operator to mix the fly ash before it was hauled to test embankment area. Mr. Mehnert took moisture content samples of ash before it was bladed in and also a area where fly ash visually looked to dry.

Mr. Mehnert and Mr. Clark re-tested field density tests that failed the previous day due to low compaction. The results of re-tests are shown on the attached data sheet. On the areas where compaction was low, a smooth drum roller was used by Civil Projects to re-compact area. Civil Project also scarified the surface where moisture contents were high.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using four articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northwest to southeast. The material was not sealed off due to wet fly ash. Mr. Andrew informed Mr. Kilby to let the fly ash dry overnight and seal it first thing tomorrow morning. The approximate area of lift 3 was 260' x 180'. The approximate area of lift 2 was 260' x 100'.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/25/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/26/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: of
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 8/25/09

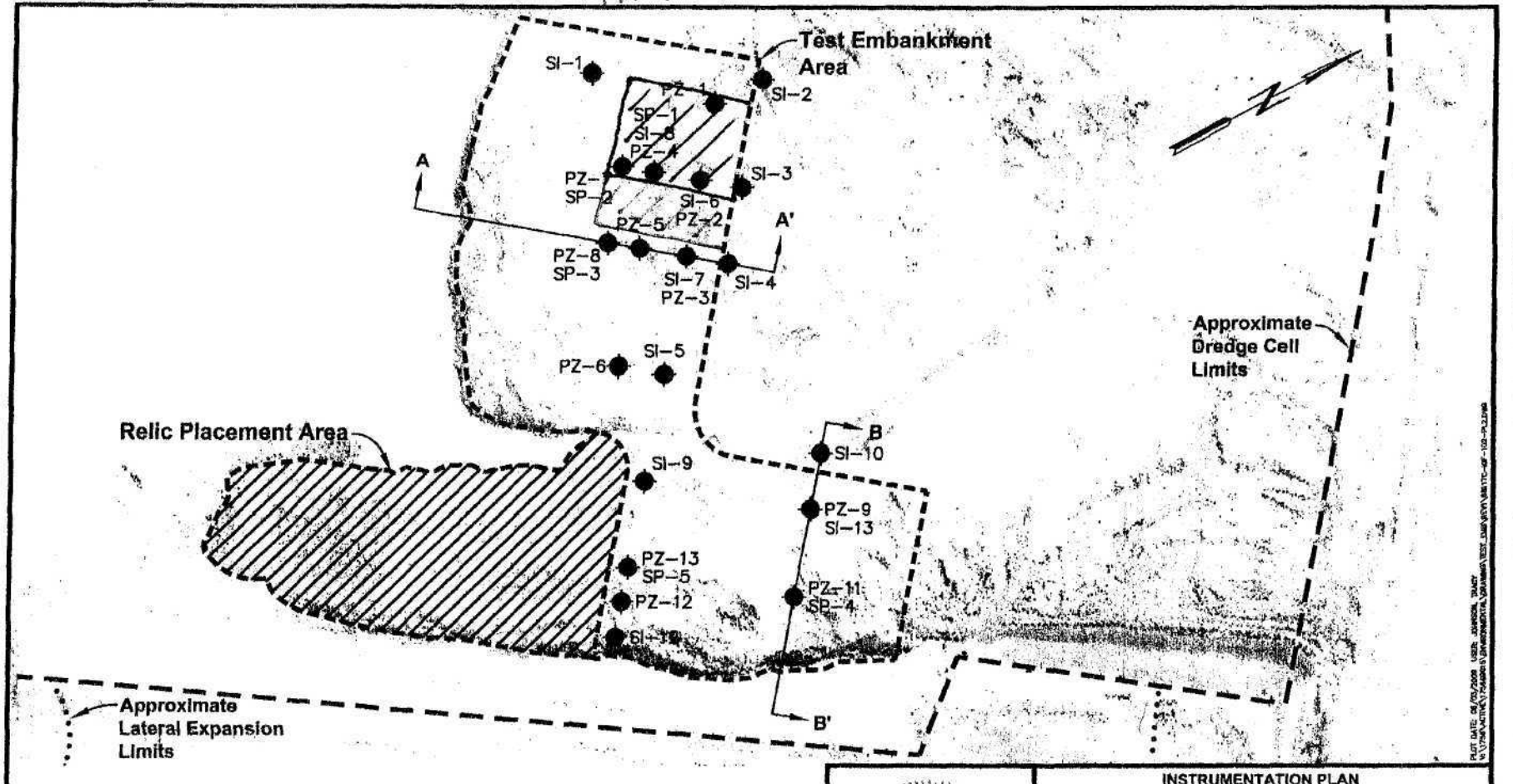
Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
055	RETEST OF 015	82.7	22.8	89.7	23.6	92.2 *	90.0	
056	RETEST OF 020	845	24.5	89.7	23.6	94.2	90.0	
057	RETEST OF 025	83.7	26.5	89.7	23.6	93.3	90.0	
058	RETEST OF 027	81.7	26.9	89.7	23.0	91.1	90.0	
059	RETESTOF 033	80.5	25.8	89.7	23.0	90.0	90.0	
060	RETEST OF ~~040~~ RM 040	83.1	25.3	89.7	23.0	92.6	90.0	
061	RETEST OF 041	80.5	24.5	89.7	23.0	90.0	90.0	
062	RETEST OF 042	81.1	24.8	89.7	23.0	90.4	90.0	
Ø								

Remarks: SEE PREVIOUS DAY (8/24/09) FOR DENSITY TEST LOWER THAN 90% COMPACTION.

8-25-09

- area where lift 3 was placed

- area where lift 2 was placed



LEGEND

PZ-1 Piezometer
SI-1 Slope Inclinometer
SP-1 Settlement Platform

100 0 200 400 FEET
GRAPHIC SCALE: 1" = 200'

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

MICHAEL J STEELE REGISTERED ENGINEER COMMONWEALTH OF KENTUCKY No. 11311 STATE OF KENTUCKY 6/3/2009

INSTRUMENTATION PLAN
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2060
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1. 3.	2 OF 7
CHECKED BY	MJS	SCALE	1"=200'	2. 4.	

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	
Distribution:	

Project No.: 175669015	Rep No.: 28	Page No: 1 of 10
Project Name: TVA Kingston – Test Embankment Program		
Location or Address: Kingston, Tennessee		
Date: 8/26/09	Day of the Week: Wednesday	
Weather: Sunny	Temperature: 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 10
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No: 28	Date: 8/26/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Clark met with Mr. Kilby to discuss the test embankment area. Mr. Mehnet visually checked the stockpile to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash before it was bladed in. Mr. Clark and Mr. Andrew met with Mr. Kilby to discuss lifts 2 and 3. Mr. Andrew suggested that lifts 2 and 3 be scarified and left open to dry due to high moistures.

Civil Projects continued placing fly ash in the northeastern corner of the test embankment using four articulating dump trucks for the morning and seven articulating dump trucks for the afternoon. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northeast to southeast. This area was approximately 260" x 432'. Mr. Clark and Mr. Mehnert ran field density tests on this area. Mr. Mehnert also performed 2 drive tube density tests corresponding with 2 field density tests.

148 loads of ash where placed today.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/26/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/28/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: of
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 8/26/09

Test No.	Test Location / Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
063	RETEST OF 044	~~87.2~~ 86.8	28.8	89.7	23.0	96.7	90.0	
064	RETEST OF 050	83.8	30.6	89.7	23.0	93.4	90.0	
065	LIFT 1, N35°54.671', W084° 30.816', WP364	85.6	29.5	89.7	23.0	95.5	90.0	
*066	LIFT 1, N35°54.668', W084° 30.804', WP365	86.7	29.2	89.7	23.0	96.6	90.0	
067	LIFT 1, N35° 54.666, W084° 30.796', WP366	81.8	27.1	89.7	23.0	91.2	90.0	
068	LIFT 1, N35°54657', W084° 30.791', WP367	86.3	28.0	89.7	23.0	96.2	90.0	
069	LIFT 1, N35°54.~~649~~ 653', W084° 30.~~774~~ 780', WP368	86.1	27.4	89.7	23.0	96.0	90.0	
070	LIFT 1, N 35° 54.649', W084° 30.774', WP369	86.3	29.0	89.7	23.0	96.2	90.0	
071	LIFT 1, N35°54.644', W084 30.767', WP370	87.6	26.1	89.7	23.0	97.7	90.0	
072	LIFT 1, N 35° 54.638', W084° 30.756', WP 371	81.1	29.0	89.7	23.0	90.4	90.0	
073	LIFT 1, N 35° 54.632', W084° 30.746', WP372	82.4	30.8	89.7	23.0	91.9	90.0	
074	LIFT 1, N 35° 54.631', W084° 30.736', WP 373	80.9	32.6	89.7	23.0	90.1	90.0	

Remarks: * TEST No. 066 CORRESPONDS TO DT-016

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: of
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 8/26/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
075	LIFT 1, N35°54.630', W084°30.723', WP 374	82.8	32.3	89.7	23.0	92.4	90.0	
076	LIFT 1, N35°54.627', W084°30.735', WP375	89.2	26.4	89.7	23.0	99.4	90.0	
077	LIFT 1, N35°54.624', W084°30.747', WP376	89.4	26.1	89.7	23.0	99.6	90.0	
078	LIFT 1, N35°54.629', W084°30.755', WP377	83.2	30.5	89.7	23.0	92.8	90.0	
079	LIFT 1, N35°54.630', W084°30.769', WP378	81.6	30.9	89.7	23.0	91.0	90.0	
080	LIFT 1, N35°54.638', W084°30.778', WP379	87.1	28.3	89.7	23.0	97.1	90.0	
081	LIFT 1, N35°54.642', W084°30.786', WP380	84.1	28.8	89.7	23.0	93.7	90.0	
*082	LIFT 1, N35°54.643', W084°30.797', WP 381	82.8	28.9	89.7	23.0	92.3	90.0	
083	LIFT 1, N35°54.651', W084°30.809', WP382	84.2	28.5	89.7	23.0	93.9	90.0	
084	LIFT 4, N35°54.716', W084°30.795', WP 383	83.5	29.1	89.7	23.0	93.1	90.0	
085	LIFT 4, N35°54.716', W084°30.829', WP 384	82.8	27.4	89.7	23.0	92.3	90.0	
086	LIFT 4, N35°54.709', W084°30.840', WP 385	81.6	30.6	89.7	23.0	90.9	90.0	

Remarks: TEST No 082 CORRESPONDS TO DT-017

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: ~~Georgetown Airport Apron Expansion~~ RM TUNKINGSTON - TEST EMBANKMENT PROGRAM	Project No: ~~175558033~~ 175669015	Page No: of
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 8/26/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
087	LIFT 4, N35°54.703', W084°30.845', WP 386	81.4	27.1	89.7	23.0	90.7	90.0	
088	LIFT 4, N35°54.696', W084°30.854', WP 387	83.2	28.9	89.7	23.0	92.7	90.0	
089	LIFT 3, N35°54.691', W084°30.846', WP 388	80.2	21.3	89.7	23.0	89.4	90.0	
090	LIFT 3, N35°54.698', W084°30.839', WP 389	82.0	22.0	89.7	23.0	91.4	90.0	
091	LIFT 3, N35°54.704', W084°30.832', WP 390	80.5	27.7	89.7	23.0	89.7	90.0	
092	LIFT 3, N35°54.712', W084°30.824', WP 391	81.2	29.2	89.7	23.0	90.5	90.0	
093	LIFT 3, N35°54.713', W084°30.816', WP 392	80.7	28.4	89.7	23.0	89.9	90.0	
094	LIFT 3, N35°54.716', W084°30.798', WP 393	81.9	28.3	89.7	23.0	91.3	90.0	
095	LIFT 3, N35°54.707', W084°30.812', WP 394	81.5	29.9	89.7	23.0	90.8	90.0	
096	LIFT 3, N35°54.700', W084°30.818', WP 395	80.8	29.9	89.7	23.0	90.1	90.0	
097	LIFT 3, N35°54.694', W084°30.825', WP 396	81.1	29.0	89.7	23.0	90.4	90.0	
098	LIFT 3, N35°54.687', W084°30.835', WP 397	84.3	27.4	89.7	23.0	94.0	90.0	

Remarks: ~~±2% MC Requirement~~ RM

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: of
Field Representative: RYAN CLARK/RUSSELL MEHNERT	Report No:	Date: 8/26/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
099	LIFT 3, N 35°54.681', W084°30.840', WP 398	85.9	26.8	89.7	23.0	95.7	90.0	
100	LIFT 3, N 35°54.677', W084°30.830', WP 399	84.7	28.6	89.7	23.0	94.4	90.0	
101	LIFT 3, N 35°54.687', W084 30.824', WP 400	83.3	25.7	89.7	23.0	92.9	90.0	
102	LIFT 3, N 35°54.694', W084 30.818', WP 401	83.6	27.5	89.7	23.0	93.3	90.0	
103	LIFT 3, N 35°54.702', W084 30.808', WP 402	82.8	29.4	89.7	23.0	92.3	90.0	
104	LIFT 3, N 35°54.706', W084 30.803', WP 403	81.2	27.0	89.7	23.0	90.5	90.0	
105	LIFT 3, N 35°54.705', W084°30.792', WP 404	80.7	28.7	89.7	23.0	89.9	90.0	
106	LIFT 3, N 35°54.698', W084° 30.799', WP 405	80.5	30.1	89.7	23.0	89.7	90.0	
107	LIFT 3, N 35°54.690', W084°30.807', WP 406	80.8	29.3	89.7	23.0	90.1	90.0	
108	LIFT 3, N 35°54.683', W084°30.813', WP 407	80.8	27.3	89.7	23.0	90.1	90.0	
109	LIFT 2, N 35°54.676', W084° 30.803', WP 408	81.2	26.9	89.7	23.0	90.5	90.0	
110	LIFT 2, N 35°54.684', W084°30.794', WP 409	81.1	26.3	89.7	23.0	90.4	90.0	

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: of
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 8/26/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
111	LIFT 2, N 35° 54.697', W084° 30.783', WP410	80.3	26.4	89.7	23.0	89.5	90.0	
112	~~LIFT2, N35° 54.697~~ RM RETEST 0 RM LIFT2, N 35° 54.697', W084° 30.783', WP411	83.0	27.5	89.7	23.0	92.6	90.0	
113	LIFT2, N 35° 54.692', W084° 30.769', WP 412	82.9	25.3	89.7	23.0	92.5	90.0	
114	LIFT2, N35° 54.686', W084° 30.775', WP 413	82.5	26.4	89.7	23.0	92.0	90.0	
115	LIFT2, N35° 54.677', W084° 30.782', WP 414	81.6	26.7	89.7	23.0	91.0	90.0	
116	LIFT2, N 35° 54.669', W084° 30.789', WP 415	86.3	25.6	89.7	23.0	96.2	90.0	
117	LIFT2, N 35° 54.663', W084° 30.780', WP 416	87.0	22.2	89.7	23.0	97.0	90.0	
118	LIFT 2, N 35° 54.670', W084° 30.775', WP 417	82.4	27.6	89.7	23.0	91.9	90.0	
119	LIFT2, N35° 54.678', W084° 30.768', WP418	83.8	26.3	89.7	23.0	93.5	90.0	
120	LIFT2, N 35° 54.685', W084° 30.759', WP419	81.6	25.7	89.7	23.0	91.0	90.0	
121	LIFT2, N 35° 54.679', W084° 30.750', WP420	80.9	24.8	89.7	23.0	90.2	90.0	
122	LIFT 2, N 35° 54.672', W084° 30.753', WP421	87.6	24.7	89.7	23.0	97.6	90.0	

Remarks:

Stantec

Density of Soil in Place by the Drive-Cylinder Method
ASTM D 2937

Project Name TVA KINGSTON - TEST EMBANKMENT PROGRAM

Project Number 175669015
Technician 8/26/09
Date RC/RM

Nuke Gauge 29.7
M% 28.9
M% 28.9

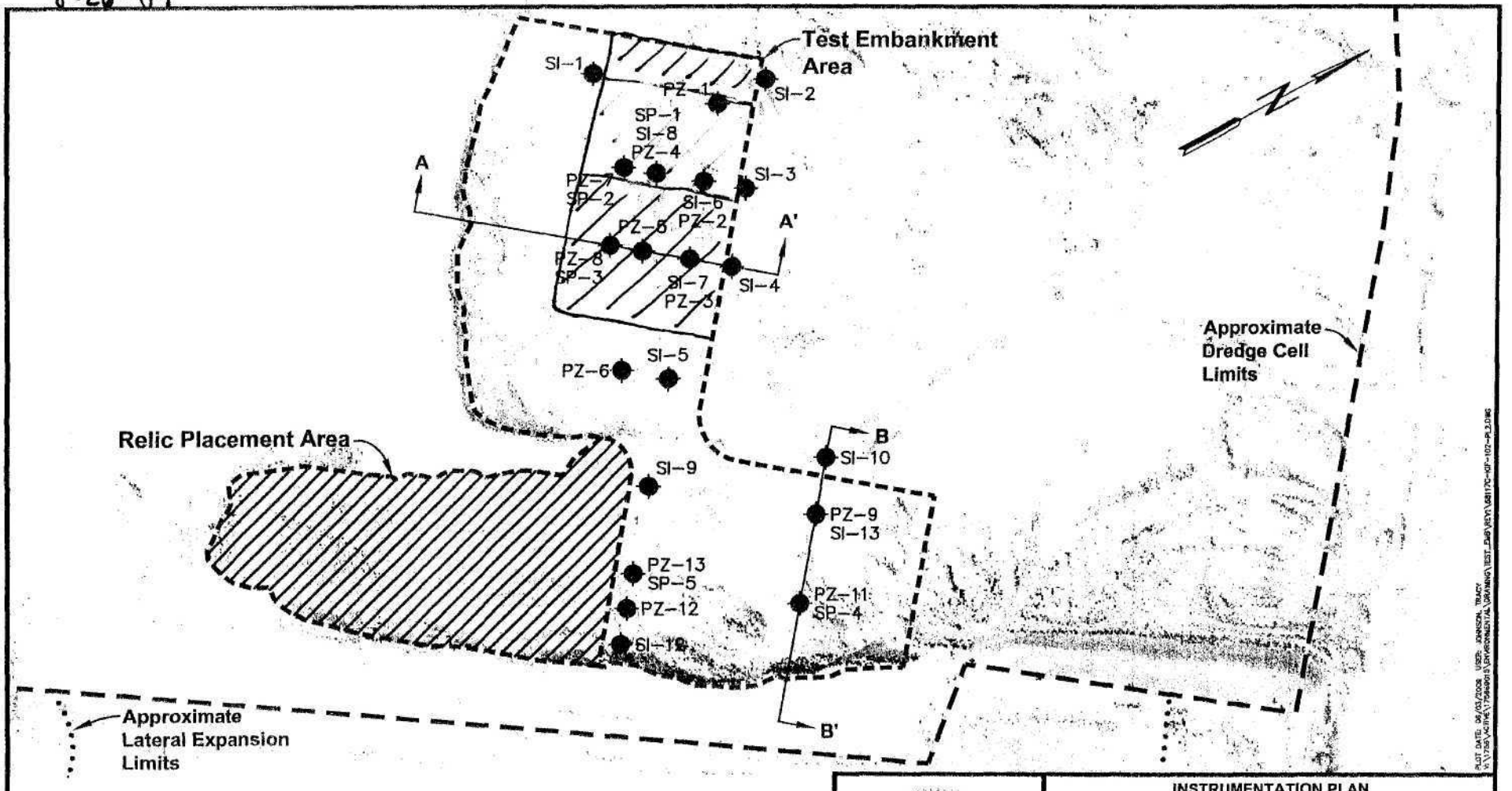
Drive Cylinder ID	Ref Tag	Source	Depth	Description	Wet Soil and Cylinder Mass (g)	Moisture Content (%)	Moisture Content Method
DT-016	I	N35°54.666', W084° 30.796'	4"	FLY ASH	741.1	27.93	
DT-017	O	N35°54.643', W084° 30.797	4"	FLY ASH	727.3	26.41	

Comments _____

- area where lift 2 was placed

- area where lift 4 was placed

8-26-09



LEGEND

PZ-1 Piezometer
SI-1 Slope Inclinometer
SP-1 Settlement Platform

100 0 200 400 FEET
GRAPHIC SCALE: 1" = 200'

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

MICHAEL J. STE... REGISTERED ENGINEER ... AGRICULTURE ... COMMONWEALTH OF KENTUCKY ... STATE OF KY
6/3/2009

INSTRUMENTATION PLAN
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1409 N Forbes Rd
Lexington, Kentucky
40511-2050
859-422-3000
www.stantec.com

DRAWN BY	TJ	DATE JUNE, 2009	REVISED		SHEET
CHECKED BY	KDL	PROJ. NO. 175669015	1.	3.	2 OF 7
CHECKED BY	MJS	SCALE 1"=200'	2.	4.	

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 29	Page No: 1 of 7
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/27/09	Day of the Week: Thursday	
	Weather: Sunny	Temperature: 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 7
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No: 29	Date: 8/27/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Clark met with Mr. Kilby to discuss the test embankment area. Mr. Mehnet visually checked the stockpile to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash before it was bladed in. Mr. Mehnert and Mr. Clark ran spot check density tests on lifts 2, 3, and 4 before Civil Projects began to scarify the surface.

Civil Projects continued placing fly ash in the northeastern corner of the test embankment using seven articulating dump trucks for the morning and eleven articulating dump trucks for the afternoon. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northeast to southeast. This area of lift 2 was approximately 205' x 337'. Civil Projects also placed lifts 5 and 4 in the northwest corner of the test embankment area. The approximate area of lifts 5 and 4 was 205' x 337'. Mr. Clark and Mr. Mehnert ran field density tests on these areas. Mr. Mehnert also performed 2 drive tube density tests corresponding with 2 field density tests.

At the end of Civil Projects shift, Mr. Kilby and Mr. Andrew met to discuss water deflection for the test embankment area. Mr. Andrew suggested that berms be cut on the whole test embankment area. Civil Projects used two dozers to cut 8 berms southeast to northwest across the embankment area.

169 loads of ash placed today.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/27/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/28/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Kingston – KIF , Test Embankment Program	Project No: 175569015	Page No: ~~3~~ 4 of ~~5~~ 5
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 8/27/09

Test No.	Test Location / Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
124	RETEST OF 089	~~82.5~~ 10:14 PM	22.9	89.7	23.0	92.0	90.0	
125	2nd LIFT, N35°54.679', W084°30.747', WP423	86.3	24.4	89.7	23.0	96.2	90.0	
126	2nd LIFT, N35°54.672', W084°30.751', WP424	87.1	23.5			97.1		
127	2nd LIFT, N35°54.666', W084°30.759', WP425	~~88.1~~ 82.0 PM	~~23.2~~ 24.3 PM			91.4		
128	2nd LIFT, N35°54.661', W084°30.763', WP426	85.9	22.8			95.7		
129	2nd LIFT, N35°54.654', W084°30.757', WP427	87.1	24.1			97.1		
*130	2nd LIFT, N35°54.660', W084°30.750', WP428	82.7	26.2			92.2		
131	2nd LIFT, N35°54.667', W084°30.744', WP429	86.9	24.5			96.9		
132	2nd LIFT, N35°54.673', W084°30.740', WP430	88.7	23.1			98.9		
133	2nd LIFT, N35°54.670', W084°30.727', WP431	83.2	25.9			92.7		
134	2nd LIFT, N35°54.664', W084°30.732', WP432	87.6	24.7			97.6		
135	2nd LIFT, N35°54.657', W084°30.739', WP433	85.3	23.8			95.1		

Remarks: * TEST No 130 CORRESPONDS TO DT-018
* TEST No 141 CORRESPONDS TO DT-019

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Kingston – KIF , Test Embankment Program	Project No: 175569015	Page No: ~~3~~ of ~~5~~
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 8/27/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
136	2nd LIFT, N35°54.648', W084°30.749', WP434	82.1	27.9	89.7	23.0	91.5	90.0	
137	2nd LIFT, N35°54.644', W084°30.738', WP435	87.1	22.3			97.1		
138	2nd LIFT, N35°54.649', W084°30.732', WP436	81.2	28.4			90.5		
139	2nd LIFT, N35°54.657', W084°30.727', WP437	82.3	25.3			91.8		
140	2nd LIFT, N35°54.663', W084°30.721', WP438	88.5	22.9			98.7		
*141	2nd LIFT, N35°54.663', W084°30.709', WP439	86.5	23.9			96.4		
142	2nd LIFT, N35°54.655', W084°30.715', WP440	84.0	28.3			93.7		
143	2nd LIFT, N35°54.649', W084°30.721', WP441	84.4	27.4			94.1		
144	2nd LIFT, N35°54.641', W084°30.727', WP442	85.3	23.5			95.1		
145	2nd LIFT, N35°54.639', W084°30.719', WP443	84.8	25.7			94.5		
146	2nd LIFT, N35°54.646', W084°30.712', WP444	85.9	25.8			95.8		
147	2nd LIFT, N35°54.653', W084°30.708', WP445	88.6	23.3	↓	↓	98.8	↓	

Remarks:

Slantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Kingston – KIF , Test Embankment Program	Project No: 175569015	Page No: ~~3~~ of ~~5~~
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 8/27/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
148	2nd LIFT, N35°54.658', W084°30.701', WP446	82.6	28.2	89.7	23.0	92.1	90.0	
149	2nd LIFT, N35°54.653', W084°30.691', WP447	87.1	25.1	"	"	97.1	"	
150	2nd LIFT, N35°54.643', W084°30.694', WP448	84.2	27.3	"	"	93.9	"	
151	2nd LIFT, N35°54.641', W084°30.704', WP449	81.5	24.4	"	"	90.8	"	

Remarks:

Stantec

Density of Soil in Place by the Drive-Cylinder Method
ASTM D 2937

Project Name TVA-Kingston Ash Recovery Project

Project Number 1756069015
Technician DB
Date 8/27/09

Nuke MC%
26.2
~~26.2~~ 23.9

Drive Cylinder ID	Ref Tag	Source	Depth	Description	Wet Soil and Cylinder Mass (g)	Moisture Content (%)	Moisture Content Method
DT-018	U	2nd Lift, N35°54660, W084°30.750	4"	Fly Ash	728.5	24.7	Hot Plate
DT-019	L	2nd Lift, N35°54663, W084°30.709	4"	Fly Ash	720.0	19.1	Hot Plate

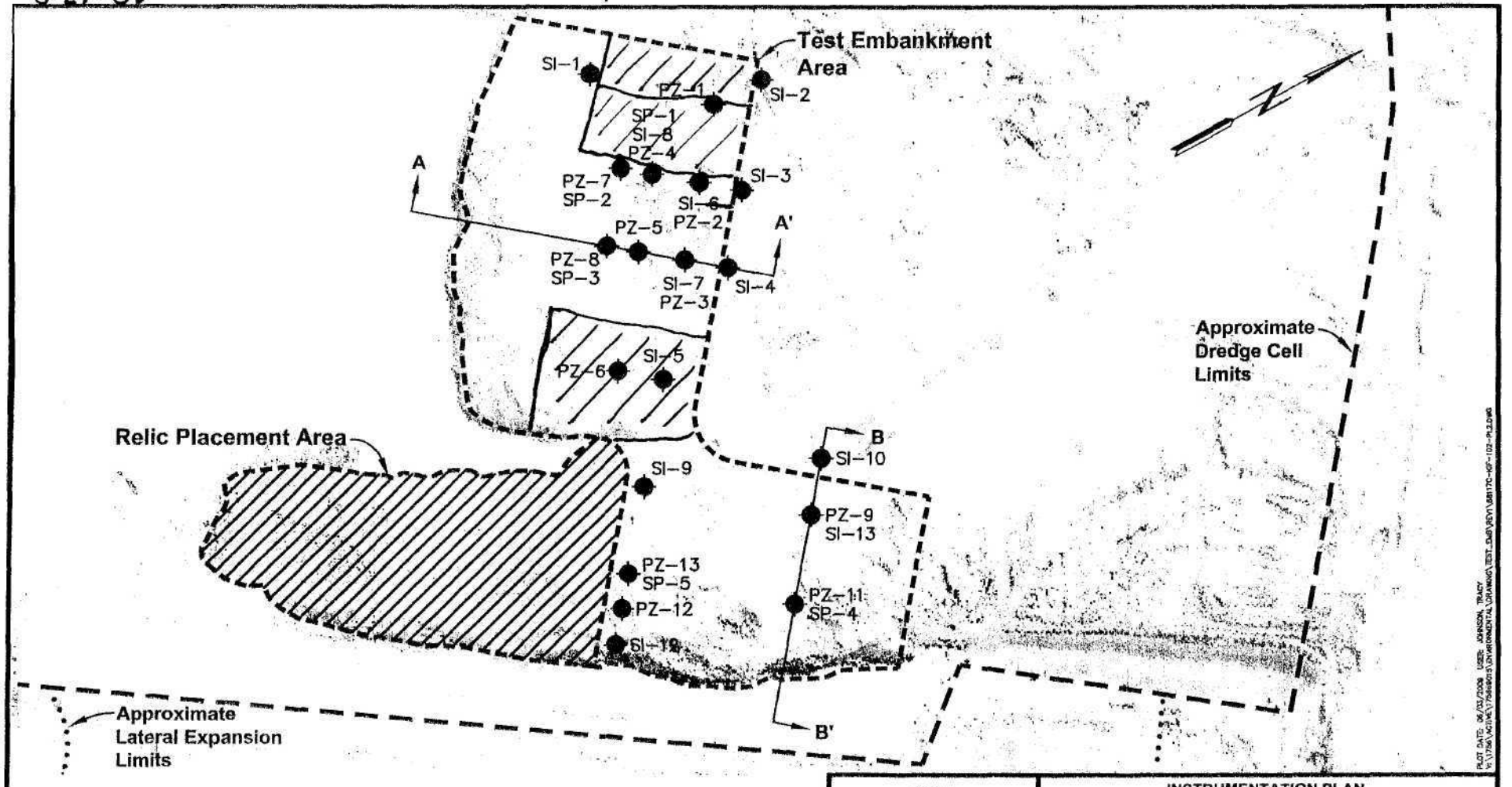
Comments Hot Plate Method

- area where lift 2 was placed

- area where lift 4 was placed

- area where lift 5 was placed

8-27-09



LEGEND

PZ-1	Piezometer
SI-1	Slope Inclinometer
SP-1	Settlement Platform

100 0 200 400 FEET

GRAPHIC SCALE: 1" = 200'

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

MICHAEL J. STEELE REGISTERED ENGINEER AGRICULTURE COMMERCE STATE OF TENNESSEE 6/3/2009

INSTRUMENTATION PLAN
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY

Stantec

Stantec Consulting Services Inc.
1400 N. Forbes Rd.
Lexington, Kentucky
40511-2050
860-422-3000
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED		SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1.	3.	2 OF 7
CHECKED BY	MJS	SCALE	1"=200'	2.	4.	

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 30	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/28/09	Day of the Week: Friday	
	Weather: Sunny/Rainy	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No: 30	Date: 8/28/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Clark met with Mr. Kilby to discuss the test embankment area. Mr. Mehnet visually checked the stockpile to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash before it was bladed in.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using nine articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northeast to northwest. This area of lift 3 was approximately 120' x 337' and 203' x 337'. Mr. Layton met with Mr. Kilby after the rain had occurred. Mr. Layton suggested that a section of the test embankment which was approximately 165' x 337' be left alone due to the rain and to prevent rutting.

Civil Projects used two dozers to cut 8 berms southeast to northwest across the embankment area. The berms were cut to deflect water.

Civil Projects utilizing nine articulated dump trucks place 169 loads.

169 loads of ash where placed today.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

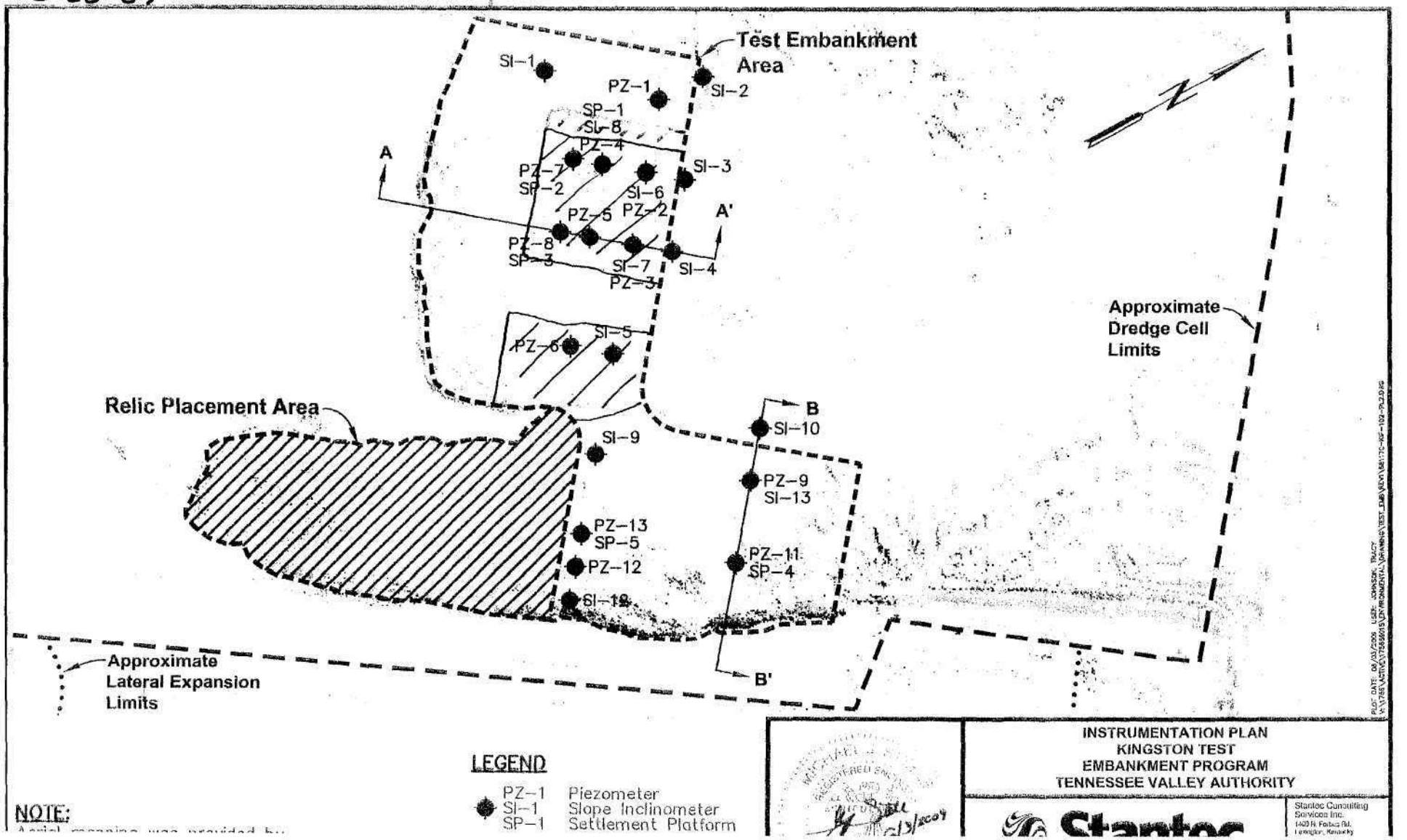
7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/28/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/30/09

/// - area where lift 3 was placed

8-28-09



Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 31	Page No: 1 of 6
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/29/09	Day of the Week: Saturday	
	Weather: Sunny/Rainy	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,	Type/Model	Manufacturer	Ser. No./ID No.
(9) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	3440	Troxler	16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes _____
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes _____

Did you observe anything unexpected? ☒ No ☐ Yes _____

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes _____

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 6
Stantec Field Representative: Ryan Clark	Report No: 31	Date: 8/29/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark met with Mr. Layton to discuss the test embankment area. Mr. Layton suggested that Mr. Clark perform field density tests on lift 3. Mr. Clark visually checked the fly ash that was brought to the test embankment area before the dozers bladed it in.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using nine articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northeast to northwest. This area of lift 3 was approximately 120' x 337' and 165' x 337'. Mr. Layton met with Mr. Kilby after the rain had occurred. Mr. Layton suggested that the wet locations of the test embankment area be left open to air dry. Civil Projects placed fly ash in the southern section of the test embankment area and bladed it in from southwest to southeast. This area of lift 3 was left open to dry and was approximately 130' x 395'. Mr. Clark ran field density tests on the areas of lift 3 which had been rolled in with the smooth drum compactor. Mr. Clark also performed two drive tube tests corresponding with two density tests.

Civil Projects utilizing nine articulated dump trucks place 204 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 8/29/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 8/30/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: 3 of
Field Representative: **Ryan Clark**	Report No:	Date: 8 - 29 - 09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
152	Lift 3, Wp 450, N 35° 54.664', W084° 30.718'	85.3	30.0	89.7	23.0	95.1	90.0	
153	" Wp 451, N 35° 54.659', W084° 30.705'	83.0	30.2			92.6		
154	" Wp 452, N35° 54.656', W084° 30.698'	83.4	28.8			93.0		
155	" Wp 453, N35° 54.651', W084° 30.696'	81.9	31.5			91.3		
156	" Wp 454, N35° 54.651', W084° 30.707'	85.1	28.6			94.9		
157	" Wp 455, N35° 54.655', W084° 30.717'	86.7	27.9			96.6		
158	" Wp 456, N35° 54.649', W084° 30.726'	88.0	28.8			98.1		
T-20 * 159	" Wp 457, N35° 54.644', W084° 30.718'	83.4	30.5			93.0		
160	" Wp 458, N35° 54.642', W084° 30.727'	84.7	25.4			94.4		
161	" Wp 459, N35° 54.636', W084° 30.717'	82.7	30.5			92.2		
162	" Wp 460, N35° 54.634', W084° 30.707'	85.4	29.0			95.2		
163	Lift 5, Wp 461, N35° 54.728', W084° 30.823'	84.1	29.2			93.7		

Remarks:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Kingston-KIF Test Embankment Program	Project No: 175569015	Page No: 4 of
Field Representative: Ryan Clark	Report No:	Date: 8-29-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
164	L:f+5, Wp462, N35°54.719', W084°30.826'	88.8	28.7	89.7	23.0	99.0	90.0	
165	" Wp463, N35°54.712', W084°30.834'	82.2	28.9			91.6		
166	" Wp464, N35°54.703', W084°30.842'	87.8	26.0			97.9		
167	" Wp465, N35°54.696', W084°30.849'	83.9	28.8			93.5		
168	L:f+4, Wp466, N35°54.691', W084°30.838'	86.5	25.2			96.4		
169	", Wp467, N35°54.697', W084°30.830'	84.1	26.4			93.7		
170	" Wp468, N35°54.704', W084°30.824'	83.8	25.3			93.4		
171	" Wp469, N35°54.712', W084°30.815'	82.4	24.2			91.9		
172	" Wp470, N35°54.718', W084°30.807'	85.4	24.5			95.2		
173	" Wp471, N35°54.711', W084°30.797'	83.1	23.5			92.7		
174	" Wp472, N35°54.703', W084°30.804'	82.4	23.7			91.8		
175	" Wp473, N35°54.696', W084°30.814'	86.5	26.8			96.4		

Remarks:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Kingston-KIF Test Embankment Program	Project No: 175569015	Page No: 5 of
Field Representative: Ryan Clark	Report No:	Date: 8-29-09

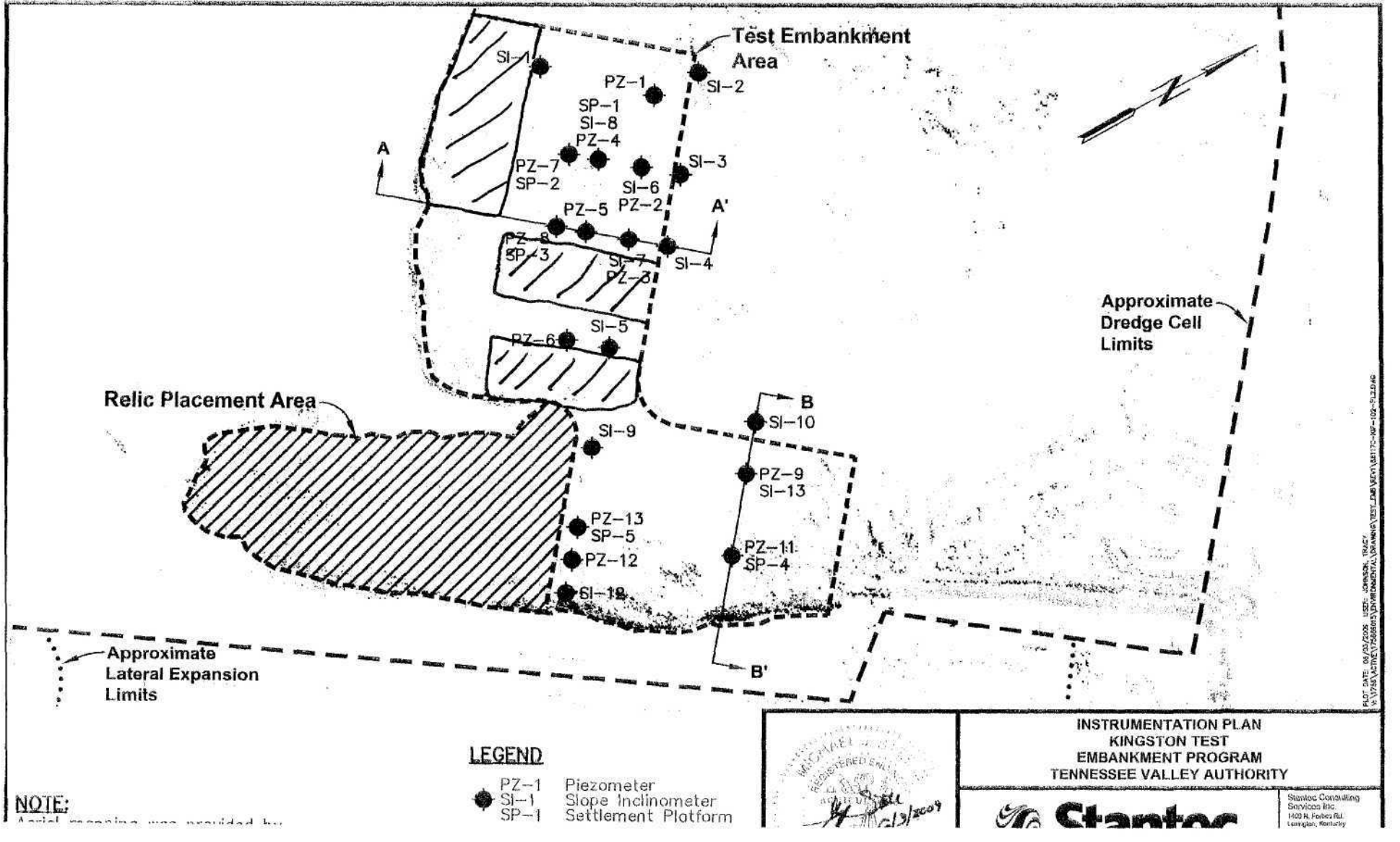
Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
176	Lift 4, Wp 474, N35° 54.689', W084.° 30.822'	84.0	29.3	89.7	23.0	93.6	90.0	
177	" , Wp 475, N35° 54.679', W084° 30.817'	83.3	27.5			92.8		
178	" , Wp 476, N35° 54.687', W084° 30.810'	82.4	30.2			91.9		
179	" Wp 477, N35° 54.694', W084° 30.802'	83.4	29.2			92.9		
180	" Wp 478, N35° 54.702', W084° 30.794'	80.8	31.1			90.1		
181	" Wp 479, N35° 54.707', W084° 30.787'	90.6	25.0			101.0		

Remarks:

/// - area where lift 3 was placed

/// - area where lift 3 was placed

8-29-09



Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 32	Page No: 1 of 7
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/31/09	Day of the Week: Monday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
	Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	VW Data Recorder/	Slope Indicator	32890
Compactor	52613500		
	SI/IC32120	RST	DP0463/75081/DR1013

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation readings in test embankment Area.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 7
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No: 32	Date: 8/31/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Andrew read PZ-1 through PZ-8. The data was entered into a spread sheet by Mr. Mehnert and sent the data via e-mail to Stantec in Nashville for analysis.

Mr. Mehnert, assisted by Mr. Clark and Mr. Andrew read all Slope Inclinometers within the test embankment (SI-1, SI-2, SI-3, SI-4, SI-5, and SI-9). After the readings were completed, Mr. Mehnert downloaded the data and sent the data via e-mail to Stantec in Nashville for analysis.

227 loads of ash where placed to

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Instrumentation readings

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/31/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/02/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: of
Field Representative: **Ryan Clark / RUSSELL MEHNERT**	Report No:	Date: **8/31/09**

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
182	LIFT3, WP480, N35°54.718', W084°30.781'	85.0	29.3	89.7	23.0	94.8	90.0	
183	LIFT3, WP481, N35°54.696', W084°30.785'	82.9	30.3			92.4		
184	LIFT3, WP482, N35°54.686', W084°30.794'	83.6	29.3			93.2		
185	LIFT3, WP483, N35°54.681', W084°30.799'	84.9	28.4			94.2		
186	LIFT3, WP484, N35°54.674', W084°30.807'	85.7	29.6			95.6		
187	LIFT3, WP485, N35°54.667', W084°30.796'	82.4	23.8			91.9		
188	LIFT3, WP486, N35°54.676', W084°30.791'	82.9	24.0			92.4		
189	LIFT3, WP487, N35°54.681', W084°30.786'	81.6	27.6			91.0		
190	LIFT3, WP488, N35°54.687', W084°30.779'	82.1	29.4			91.6		
191	LIFT3, WP489, N35°54.674', W084°30.774'	82.5	28.4			92.0		
192	LIFT3, WP490, N35°54.691', W084°30.763'	81.1	25.6			90.4		
193	LIFT3, WP491, N35°54.683', W084°30.770'	81.7	27.3			91.1		

Remarks:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Kingston-KIF Test Embankment Program	Project No: 175569015	Page No: of
Field Representative: Ryan Clark / Russell Mehnert	Report No:	Date: 8/31/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
194	LIFT3, WP492, N35°54.676', W084°30.775'	83.9	29.2	89.7	23.0	93.5	90.0	
195	LIFT3, WP493, N35°54.668', W084°30.782'	83.1	26.5			92.7		
196	LIFT3, WP494, N35°54.663', W084°30.786'	84.6	25.0			94.4		
197	LIFT3, WP495, N35°54.656', W084°30.782'	82.7	29.9			92.2		
198	LIFT3, WP496, N35°54.660', W084°30.780'	85.9	25.8			95.7		
199	LIFT3, WP497, N35°54.669', W084°30.775'	81.1	29.9			90.4		
200	LIFT3, WP498, N35°54.678', W084°30.766'	83.6	27.5			93.2		
201	LIFT3, WP499, N35°54.687', W084°30.759'	82.7	28.0			92.2		
202	LIFT3, WP500, N35°54.683', W084°30.748'	85.4	25.7			95.2		
203	LIFT3, WP501, N35°54.675', W084°30.754'	82.8	24.4			92.4		
204	LIFT3, WP502, N35°54.668', W084°30.762'	83.6	29.7			93.2		
205	LIFT3, WP503, N35°54.660', W084°30.767'	85.0	28.7			94.7		

Remarks:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Kingston-KIF Test Embankment Program	Project No: 175569015	Page No: of
Field Representative: Ryan Clark / Russell Mehnert	Report No:	Date: 8/31/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
206	LIFT3, WP504, N 35°54.654', W084° 30.773'	82.5	29.4	89.7	23.0	91.9	90.0	
207	LIFT3, WP505, N35°54.650', W084° 30.776'	84.5	28.6			94.2		
208	LIFT3, WP506, N35°54.659', W084°30.759'	81.9	29.4			91.3		
209	LIFT3, WP507, N 35°54. 665', W084° 30.754'	85.2	28.5			95.0		
210	LIFT3, WP508, N35°54.674', W084°30.748'	85.7	28.7			95.5		
211	LIFT3, WP509, N 35°54.682', W084° 30.742'	82.7	28.0			92.2		
212	LIFT3, WP510, N35°59.675', W084° 30.732'	82.0	31.5			91.4		
213	LIFT3, WP511, N 35°54.668', W084° 30.739'	81.2	28.9			90.5		
*214	LIFT3, WP512, N35°54.662', W084°30.746'	81.0	29.3			90.3		
215	LIFT3, WP513, N35°54.656', W084° 30.752'	84.0	30.3			93.7		
216	LIFT3, WP514, N35°54.649', W084° 30.755'	80.9	31.1			90.2		
217	LIFT3, WP515, N 35°54.644', W084' 30.743'	81.1	27.3			91.2		

Remarks:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: of
Field Representative: **Ryan Clark / RUSSELL MEHNERT**	Report No:	Date: 8/31/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
218	LIFT3, WP516, N35°54.651', W084° 30.737'	84.1	26.5	89.7	23.0	93.7	90.0	
219	LIFT3, WP517, N35°54.658', W084° 30.732'	85.8	26.9	"	"	95.6	"	
220	LIFT3, WP518, N35°54.665', W084° 30.726'	87.5	27.1	"	"	97.6	"	

Remarks:

8-31-09

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/1/09	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (1) CAT CS56 Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/1/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would continue hauling fly ash using nine articulated trucks. Mr. Mehnert visually checked the stockpile offsite to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash that was hauled to the test embankment area before it was bladed in.

Civil Projects continued to place fly ash in the northwestern corner of the test embankment area using nine articulated trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northwest to northeast. This area of lift 6 was approximately 310' x 200'. Civil Projects also hauled rock to widen the access road on the northwestern corner of the test embankment area. The rock was bladed in using a dozer.

Civil Projects utilizing nine articulated dump trucks place 216 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 9/1/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/03/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/2/09	Day of the Week: Wednesday	
	Weather: Cloudy/Rainy	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(7) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	3440	Troxler	16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/2/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) and Mr. Andrew, QC manager with Stantec to discuss the test embankment area. Mr. Andrew suggested that the test embankment area be left alone for a period of time due to the precipitation from the previous night.

Civil Projects began placing fly ash at approximately 2:00 pm using seven articulated trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northwest to northeast. This was lift 6 and the area was approximately 140' x 175'. Mr. Clark and Mr. Andrew performed field density tests on the area.

Civil Projects utilizing nine articulated dump trucks place 53 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	5:00p.m.

7:00AM-5:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 9/2/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/03/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015 | Rep No.: | Page No: 1 of 6
Distribution:	Project Name: TVA Kingston – Test Embankment Program
	Location or Address: Kingston, Tennessee
	Date: 9/3/09 | Day of the Week: Thursday
	Weather: Cloudy/Rainy/Sunny | Temperature: 70's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (1) CAT CS56 Smooth Drum	3440	Troxler	16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 6
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/3/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would continue hauling fly ash using nine articulated trucks. Mr. Mehnert visually checked the stockpile offsite to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash that was hauled to the test embankment area before it was bladed in.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using nine articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northwest to northeast. This area of lift 7 was approximately 165' x 255'. Civil Projects also continued placing lift 6 using nine articulating trucks. This area was located in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and bladed it approximately 8" to 10" lift from northwest to northeast. This area of lift 6 was approximately 288' x 255'. Mr. Clark and Mr. Mehnert performed field density tests on lift 6. Mr. Mehnert also performed two drive tubes corresponding with two field density tests.

Civil Projects utilizing nine articulated dump trucks place 179 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 9/3/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/04/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: of
Field Representative: **Ryan Clark / Russell Mehnert**	Report No:	Date: **9/3/09**

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
227	LIFT6, WP525 N 35°54.707', W084°30.805'	83.1	29.1	89.7	23.0	92.7	90.0	
228	LIFT6, WP526, N35°54.703', W084°30.808'	80.8	32.3			90.0	90.0	
229	LIFT6, WP527, N35°54.696', W084°30.813'	88.2	27.2			98.3		
230	LIFT6, WP528. N35°54.690', W084°30.824'	86.2	24.8			96.1		
231	LIFT6, WP529, N35°54.683', W084°30.829'	89.1	25.5			99.4		
232	LIFT6, WP530, N35°54.687', W084°30.838'	81.3	33.0			90.6		
*233	LIFT6, WP531, N35°54.696', W084°30.831'	89.1	27.1			99.3		
234	LIFT6, WP532, N35°54.700', W084°30.825'	83.3	29.8			92.8		
235	LIFT6, WP533, N35°54.707', W084°30.816'	88.1	28.1			98.2		
236	LIFT6, WP534, N35°54.715', W084°30.807'	85.4	28.0			95.2		
*237	LIFT6, WP535, N35°54.722', W084°30.817'	85.2	29.3			95.0		
238	LIFT6, WP536, N35°54.715', W084°30.822'	83.9	29.5			93.5		

Remarks: * TEST #233 CORRESPONDES W/ DT-024 AND TEST #237 CORRESPONDS W/ ~~TEST~~ DT-025

W

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: of
Field Representative: **Ryan Clark / RUSSELL MEHNERT**	Report No:	Date: 9/3/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
239	LIFT6, WP537, N35°54.711, W084°30.829'	85.6	28.4	89.7	23.0	95.4	90.0	
240	LIFT6, WP538, N35°54.714', W084°30.833'	88.3	28.4	↓	↓	98.4	↓	
241	LIFT6, WP539, N35°54.700', W084°30.845'	85.8	27.3	↓	↓	95.7	↓	
242	LIFT6, WP540, N35°54.692', W084°30.851'	81.8	32.4	↓	↓	91.2	↓	
243	LIFT6, WP541, N35°54.701', W084°30.857'	82.0	32.0	↓	↓	91.5	↓	
244	LIFT6, WP542, N35°54.705', W084°30.850'	82.5	32.0	↓	↓	92.0	↓	
245	LIFT6, WP543, N35°54.712', W084°30.843'	83.5	30.9	↓	↓	93.0	↓	
246	LIFT6, WP544, N35°54.718', W084°30.835'	83.3	29.9	↓	↓	92.8	↓	
247	LIFT6, WP545, N35°54.724', W084°30.825'	85.7	29.5	↓	↓	95.6	↓	

Remarks:

[redacted]

Stantec

Density of Soil in Place by the Drive-Cylinder Method
ASTM D 2937

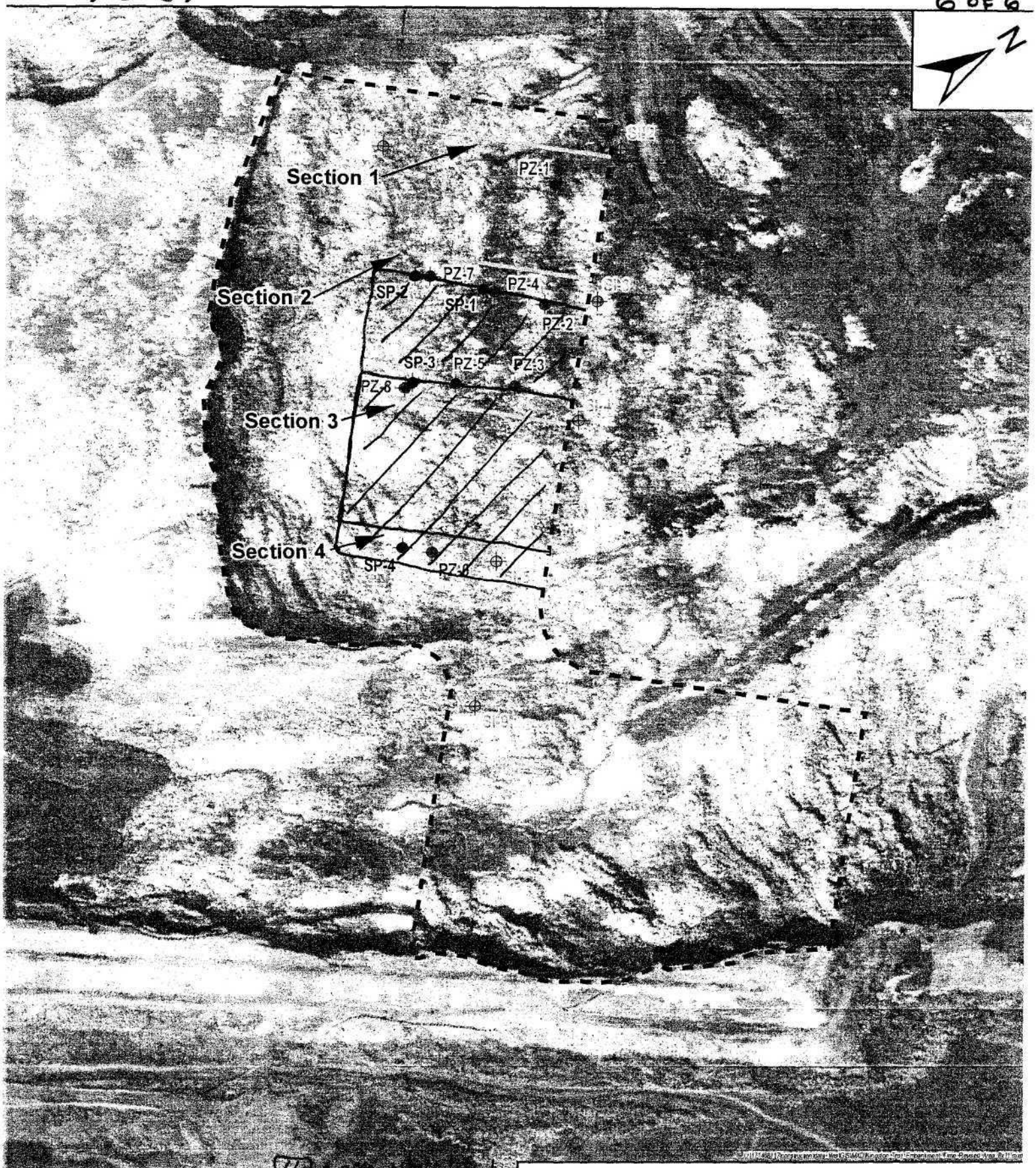
Project Name TVA KINGSTON - TEST EMBANKMENT PROGRAM

Project Number 175669015
Technician RM/DB
Date 9/3/09

Drive Cylinder ID	Ref Tag	Source	Depth	Description	Wet Soil and Cylinder Mass (g)	Moisture Content (%)	Moisture Content Method
DT-024	L	LIFT6, WP531, N35°54.696, W084°30.831'	4"	FLY ASH W/ SOME CLAY	752.3	20.44	
DT-025	S	LIFT6, WP535, N35°54.722, W084°30.817	4"	FLY ASH W/ SOME CLAY	733.0	26.03	

Comments _____

9-3-09



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 9/4/09	Day of the Week: Friday
	Weather: Sunny	Temperature: 70's

Page No: 1 of 78

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (2) CAT CS56 Smooth Drum	3440	Troxler	16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 73
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/4/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would continue hauling fly ash using nine articulated trucks. Mr. Mehnert visually checked the stockpile offsite to make sure it was ready to be hauled for placement. Civil Projects utilizing two dozers and two excavators to mix moisture enriched fly ash and dryer fly ash. Mr. Mehnert took moisture contents samples of ash that was hauled to the test embankment area before it was bladed in.

Mr. Kilby scarified the whole test embankment area due to precipitation from the previous days. The fly ash was left open for approximately four hours to air dry. Civil Projects utilizing two smooth drum compactors re-rolled the entire test embankment area to seal off from future precipitation.

Civil Projects continued placing fly ash in the northeastern corner of the test embankment using nine articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northwest to northeast. This area of lift 6 was approximately 148' x 220'. Civil Projects also placed lift 7 using nine articulating trucks. This area was located in the northwestern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and bladed it approximately 8" to 10" lift from northwest to northeast. This area of lift 7 was approximately 160' x 290'. Mr. Clark and Mr. Mehnert performed field density tests on lift 2 and lift 6. Mr. Mehnert also performed two drive tubes corresponding with two field density tests.

Civil Projects cut three berms across the test embankment area to deflect precipitation runoff.

Civil Projects utilizing nine articulated dump trucks place 142 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 9/4/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/06/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Kingston-KIF Test Embankment Program	Project No: 175569015	Page No: of
Field Representative: Ryan Clark / RUSSELL MEHNERT	Report No:	Date: 9/4/08

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
248	LIFT 6, WP546, N35°54.678', W084°30.822',	90.2	25.3	89.7	23.0	100.5	90.0	
249	LIFT6, WP547, N35°54.684', W084°30.811'	89.7	25.3			100.6		
250	LIFT6, WP548, N35°54.693', W084°30.807'	87.7	27.3			97.8		
251	LIFT6, WP549, N35°54.698', W084°30.797'	86.6	28.0			96.6		
252	LIFT6, WP550, N35°54.705', W084°30.789'	84.9	29.7			94.6		
253	LIFT 7, WP551, N35°54.699', W084°30.780'	85.4	29.3			95.2		
254	LIFT7, WP552, N35°54.691', W084°30.786'	87.3	25.5			97.3		
255	LIFT7, WP553, N35°54.686', W084°30.793'	84.2	32.2			93.9		
#256	LIFT7, WP554, N35°54.678', W084°30.799'	81.0	28.9			90.3		
257	LIFT 7, WP555, N35°54.671', W084°30.806'	83.0	30.2			92.5		
258	LIFT 7, WP556, N35°54.664', W084°30.799'	88.5	25.3			98.6		
259	LIFT 7, WP557, N35°54.672', W084°30.791'	82.3	31.1			91.7		

Remarks: TEST 256 CORRESPONDS TO DT-026

[redacted]

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: of
Field Representative: **Ryan Clark** / RUSSELL MEHNERT	Report No:	Date: 9/4/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
260	LIFT 7, WP558, N35°54.680', W084°30.785'	88.0	24.8	89.7	23.0	98.1	90.0	
261	LIFT 7, WP559, N35°54.683', W084°30.780'	88.5	26.9			98.7		
262	LIFT 7, WP560, N35°54.693', W084°30.773'	86.8	28.0			96.7		
263	LIFT 7, WP561, N35°54.689', W084°30.762'	81.1	30.1			90.4		
264	LIFT 7, WP562, N35°54.683', W084°30.769'	82.2	30.3			91.6		
265	LIFT 7, WP563, N35°54.676', W084°30.773'	82.8	31.6			92.3		
266	LIFT 7, WP564, N35°54.669', W084°30.780'	81.7	31.9			91.1		
267	LIFT 7, WP565, N35°54.662', W084°30.785'	89.3	25.9			99.6		
268	LIFT 2, WP566, N35°54.655', W084°30.791'	85.1	29.2			94.9		
269	LIFT 2, WP567, N35°54.659', W084°30.800'	84.1	30.1			93.7		
270	LIFT 2, WP568, N35°54.664', W084°30.810'	84.2	30.9			93.9		
271	LIFT 2, WP569, N35°54.668', W084°30.822'	88.6	25.5			98.7		

Remarks: TEST RM 271 CORRESPONDS TO DT-027

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: of
Field Representative: **Ryan Clark** / RUSSELL MEHNERT	Report No:	Date: 9/4/08

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
272	Lift 2, WP570, N35° 54.671, W084° 30.828	88.4	26.0	89.7	23.0	98.6	90.0	
273	" WP571, N35° 54.678, W084° 30.842	85.5	27.9	↓	↓	95.4	↓	
274	" WP572, N35° 54.682, W084° 30.851	88.7	27.0			98.9		
275	" WP573, N35° 54.677, W084° 30.857	83.6	30.5			93.3		
276	" WP574, N35° 54.672, W084° 30.851	88.2	26.5			98.3		
277	" WP575, N35° 54.663, W084° 30.844	87.6	26.1			97.7		
278	" WP576, N35° 54.657, W084° 30.827	93.2	24.4			103.9		
279	" WP577, N35° 54.651, W084° 30.820	88.1	27.9			98.2		
280	" WP578, N35° 54.645, W084° 30.806	85.1	27.0	↓	↓	94.8	↓	

Remarks:

[redacted]

Stantec

Density of Soil in Place by the Drive-Cylinder Method
ASTM D 2937

Project Name TVA KINGSTON - TEST EMBANKMENT PROGRAM

Project Number 175669015
Technician RM
Date 9/4/09

AUGER READINGS	Drive Cylinder ID	Ref Tag	Source	Depth	Description	Wet Soil and Cylinder Mass (g)	Moisture Content (%)	Moisture Content Method
28.9%	DT-026	S	LIFT1, WP554, N35°54.678', W084°30.799'	4"	FLY ASH	719.8	24.36	
25.5%	DT-027	L	LIFT2, WP569, N35°54.668, W084°30.822'	4"	FLY ASH w/ COAL & ROCK	738.7	19.41	
38.3%	~~DT-028~~	L	~~LIFT 7, WP579, N35°54.645, W084°30.855"~~		~~FLY ASH~~	~~767.0~~	DB	

Comments

6

9-4-09

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 6
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/8/09	Day of the Week: Tuesday	
	Weather: Cloudy/Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(11) Articulating Dump Trucks (2) CAT CS56 Smooth Drum	3440	Troxler	16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 6
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/8/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would continue hauling fly ash using eleven articulated trucks. Mr. Mehnert visually checked the stockpile offsite to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash that was hauled to the test embankment area before it was bladed in.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using eleven articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northwest to northeast. This area of lift 7 was approximately 295' x 223'. Mr. Clark and Mr. Mehnert performed field density tests on lifts 2 and lift 7. Mr. Mehnert also performed two drive tubes corresponding with two field density tests.

Civil Projects utilizing eleven articulated dump trucks place 216 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 9/8/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/10/09

Stantec

Density of Soil in Place by the Drive-Cylinder Method
ASTM D 2937

Project Name TVA - Kingston - Test Embankment Program

Project Number 175669015
Technician DB
Date 9/8/09

Jukg. wet.	Drive Cylinder ID	Ref Tag	Source	Depth	Description	Wet Soil and Cylinder Mass (g)	Moisture Content (%)	Moisture Content Method
28.3	DT-028	L	Lift 7, WP579, N 35°54.645', W084°30.855"	4"	Fly Ash w/coal & Rock	767.0	25.15	Hot Plate
24.2	DT-029	S	Lift 2, WP593, N 35°54.634', W084°30.784	4"	Fly Ash w/coal & Rock	754.0	20.39	Hot Plate

Comments Hot Plate Method

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Kingston-KIF Test Embankment Program	Project No: 175569015	Page No: 3 of 5
Field Representative: Ryan Clark / RUSSELL MEHNERT	Report No:	Date: 9/8/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
* 281	LIFT 7, WP 579, N 35°54.695', W 084°30.855'	88.3	28.3	89.7	23.0	98.4	90.0	
282	LIFT 7, WP 580, N 35°54.699', W 084°30.849'	81.1	32.0			90.4		
283	LIFT 7, WP 581, N 35°54.705', W 084°30.845'	82.7	31.1			92.9		
284	LIFT 7, WP 582, N 35°54.710', W 084°30.838'	81.7	31.0			91.0		
285	LIFT 7, WP 583, N 35°54.716, W 084° 30.830'	80.8	32.2			90.1		
286	LIFT 7, WP 584, N 35°54.722', W 084°30.824	89.2	28.3			99.4		
287	LIFT 7, WP 585, N 35°54.728'. W 084° 30.815'	87.7	26.4			97.7		
288	" WP 586, N 35° 54.721, W 084° 30.810	88.8	30.1			99.0		
289	" WP 587, N 35°54.716, W 084° 30.817	86.8	27.6			96.8		
290	" WP 588, N 35°54.707, W 084° 30.826	84.1	30.8 RC ~~25.9~~			93.8		
291	" WP 589, N 35°54.702, W 084° 30.831	82.1	30.4			91.6		
292	" WP 590, N 35°54.692, W 084° 30.836	85.6	28.6			95.4		

Remarks: DENSITY TEST 281 CORRESPONDS W/ DT-028

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: 4 of 5
Field Representative: **Ryan Clark**	Report No:	Date: 9/8/09

Test No.	Test Location / Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
293	Lift 7, WP591, N35°54.687, W084°30.843'	88.6	27.7	89.7	23.0	98.8	90.0	
294	LIFT2, WP592, N35°54.638, W084°30.796'	89.9	26.2			100.2		
#295	LIFT2, WP593, N35°54.634', W084°30.784'	85.3	24.2			95.1		
296	LIFT2, WP594, N35°54.630', W084°30.775'	90.3	24.4			100.6		
297	LIFT2, WP595, N35°54.628', W084°30.772'	89.4	25.9			99.7		
298	LIFT2, WP596, N35°54.623', W084°30.748'	88.0	26.1			98.1		
299	LIFT2, WP597, N35°54.624', W084°30.737'	85.8	24.9			95.7		
300	LIFT 2, WP598, N35°54.631', W084°30.743'	83.6	29.3			93.2		
301	LIFT2, WP599, N35°54.634', W084°30.753'	89.1	23.3			99.3		
302	LIFT2, WP600, N35°54.635', W084°30.763'	89.7	24.6			100.0		
303	LIFT2, WP601, N35°54.638', W084°30.776'	86.1	25.6			95.9		
304	LIFT2, WP602, N35°54.648', W084°30.797'	83.3	23.5			92.8		

Remarks: DENSITY TEST 295 CORRESPONDS TO DT-029.

01

9-8-09

~~5 of 5~~ 6 of 6

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175660016 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/9/09	Day of the Week: Wednesday	
	Weather: Cloudy/Sunny/Rainy	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(7) Articulating Dump Trucks (2) CAT CS56 Smooth Drum	3440	Troxler	16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/9/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would continue hauling fly ash using seven articulated trucks. Mr. Mehnert and Mr. Clark visually checked the stockpile offsite to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash that was hauled to the test embankment area before it was bladed in.

Civil Projects continued placing fly ash in the northwestern corner of the test embankment using seven articulating dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northwest to northeast. This area of lift 8 was approximately 134' x 317'. Civil Projects also placed fly ash in the southeastern corner of the test embankment area using seven articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from southeast to southwest. This area of lift 3 was approximately 150' x 341'. This lift was also tied in to the toe of the relic structure with a dozer at the request of Mr. Layton and Mr. Andrew.

Civil Projects utilizing seven articulated dump trucks place 152 loads.

Stantec Field Representative's Activities

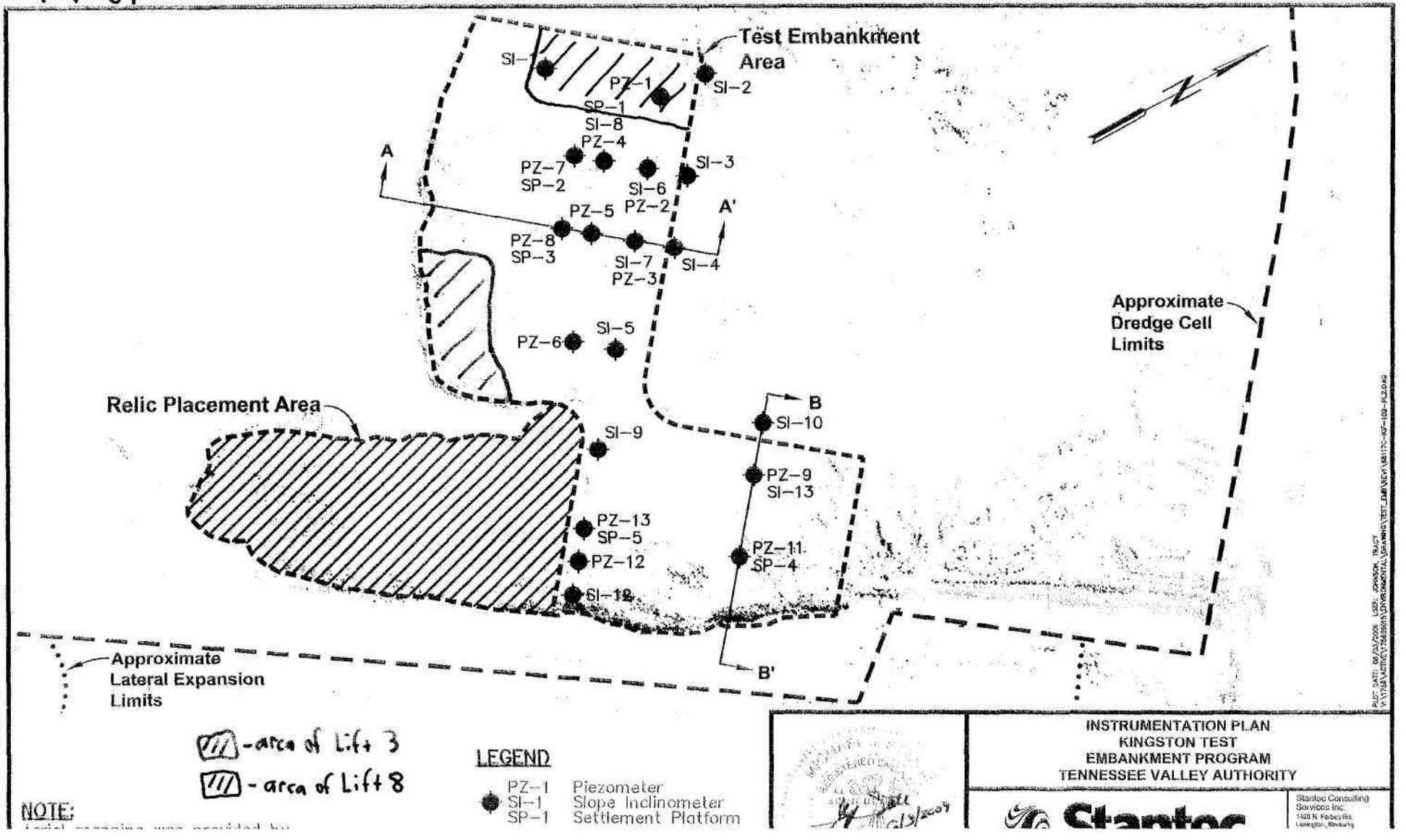
Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 9/9/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/10/09

9-9-09


Test Embankment Area
SI-1
SI-2
PZ-1
SP-1
SI-8
PZ-4
PZ-7
SP-2
SI-6
PZ-2
SI-3
A
A'
PZ-5
PZ-8
SP-3
SI-7
PZ-3
SI-4
PZ-6
SI-5
Approximate Dredge Cell Limits
Relic Placement Area
B
SI-10
SI-9
PZ-9
SI-13
PZ-13
SP-5
PZ-12
PZ-11
SP-4
SI-12
B'
Approximate Lateral Expansion Limits
- area of Lift 3
- area of Lift 8
LEGEND
PZ-1 Piezometer
SI-1 Slope Inclinometer
SP-1 Settlement Platform
NOTE:
INSTRUMENTATION PLAN
KINGSTON TEST
EMBANKMENT PROGRAM
TENNESSEE VALLEY AUTHORITY
Stantec
Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 5
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/10/09	Day of the Week: Thursday	
	Weather: Cloudy/Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet / Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (9) CAT CS56 Smooth Drum	3440	Troxler	16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 5
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/10/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would continue hauling fly ash using nine articulated trucks. Mr. Mehnert visually checked the offsite stockpile to visually assess the condition of the fly ash to be hauled to the test embankment on this date. Mr. Mehnert collected moisture content samples of the fly ash delivered to the test embankment area before it was bladed in.

Civil Projects continued placing fly ash in the southeastern corner of the test embankment area using nine articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from southeast to southwest. The area of lift 3, placed on this date, was approximately 150' x 540'. This lift was also tied in to the toe of the relic structure with a dozer at the request of Mr. Layton, assistant QC Manager with Stantec . Mr. Mehnert and Mr. Clark performed field density tests on lift 7 of the test embankment area. Mr. Mehnert also conducted two drive tube tests to correlate test results with two field nuclear density tests.

Civil Projects utilizing nine articulated dump trucks placed 190 loads of fly ash in the test embankment on this date.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 9/10/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/02/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Kingston – KIF , Test Embankment Program	Project No: 175569015	Page No: 3 of 54 RM
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 9/10/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
#305	LIFT 7, WP603, N35°54.703', W084°30.795'	83.1	27.5	89.7	23.0	92.7	90.0	
306	LIFT 7, WP604, N35°54.695' W084°30.802'	85.5	27.0			95.3		
307	LIFT 7, WP605, N35°54.698' W084°30.807'	84.2	30.1			93.8		
308	LIFT 7, WP606, N35°54.681', W084°30.816'	87.3	26.3			97.4		
309	LIFT 7, WP607, N35°54.677', W084°30.822'	86.2	30.0			96.1		
310	LIFT 7, WP608, N35°54.680', W084°30.831'	84.6	30.9			94.3		
#311	LIFT 7, WP609, N35°54.689', W084°30.828'	82.9	27.8			92.4		
312	LIFT 7, WP610, N35°54.696', W084°30.819'	84.9	30.0			94.7		
313	LIFT 7, WP611, N35°54.703, W084°30.811'	86.1	26.6			96.0		

Remarks: *DENSITY TEST 305 CORRESPONDS TO DT-030. DENSITY TEST 311 CORRESPONDS TO DT-031.

W

Stantec

Density of Soil in Place by the Drive-Cylinder Method
ASTM D 2937

Project Name TVA-Kingston Test Embankment Program

Project Number 175169015
Technician DB
Date 9/10/09

Duke M'/.	Drive Cylinder ID	Ref Tag	Source	Depth	Description	Wet Soil and Cylinder Mass (g)	Moisture Content (%)	Moisture Content Method
27.5	DT-030	B	Lift 7, WP603, N35°54.703, W084°30.795"	4"	Fly Ash	748.85	28.5	Hot Plate
27.8	DT-031	O	Lift 7, WP609, N35°54.689, W084°30.878	4"	Fly Ash	750.0	26.9	Hot Plate

Comments

File: Drive Cylinder Input Sheet.xls Sheet: Field
Preparation Date: 7-2009
Revision Date: N/A

Stantec Consulting Services Inc.

Laboratory Document
Prepared By: JW
Approved By: TLK

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

Cover of Lift 3

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015 | Rep No.: | Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program
	Location or Address: Kingston, Tennessee
	Date: 9/11/09 | Day of the Week: Friday
	Weather: Cloudy/Sunny | Temperature: 70's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(11) Articulating Dump Trucks (2) CAT CS56 Smooth Drum	3440	Troxler	16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/11/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would continue hauling fly ash using eleven articulated trucks. Mr. Mehnert visually checked the stockpile offsite to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash that was hauled to the test embankment area before it was bladed in.

Civil Projects placed fly ash in the northeastern corner of the test embankment area using eleven articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northwest to northeast. This area of lift 7 was approximately 333' x 231'. Civil Projects also continued placing fly ash in the northwestern corner of the test embankment area using eleven articulating trucks. The dump trucks end dumped the fly ash near the area of placement and bladed it approximately 8" to 10" lift from northwest to northeast. This area of lift 8 was approximately 294' x 216'. Mr. Clark performed field density tests on lift 7 of the test embankment area.

Civil Projects utilizing eleven articulated dump trucks place 277 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 9/11/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/13/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

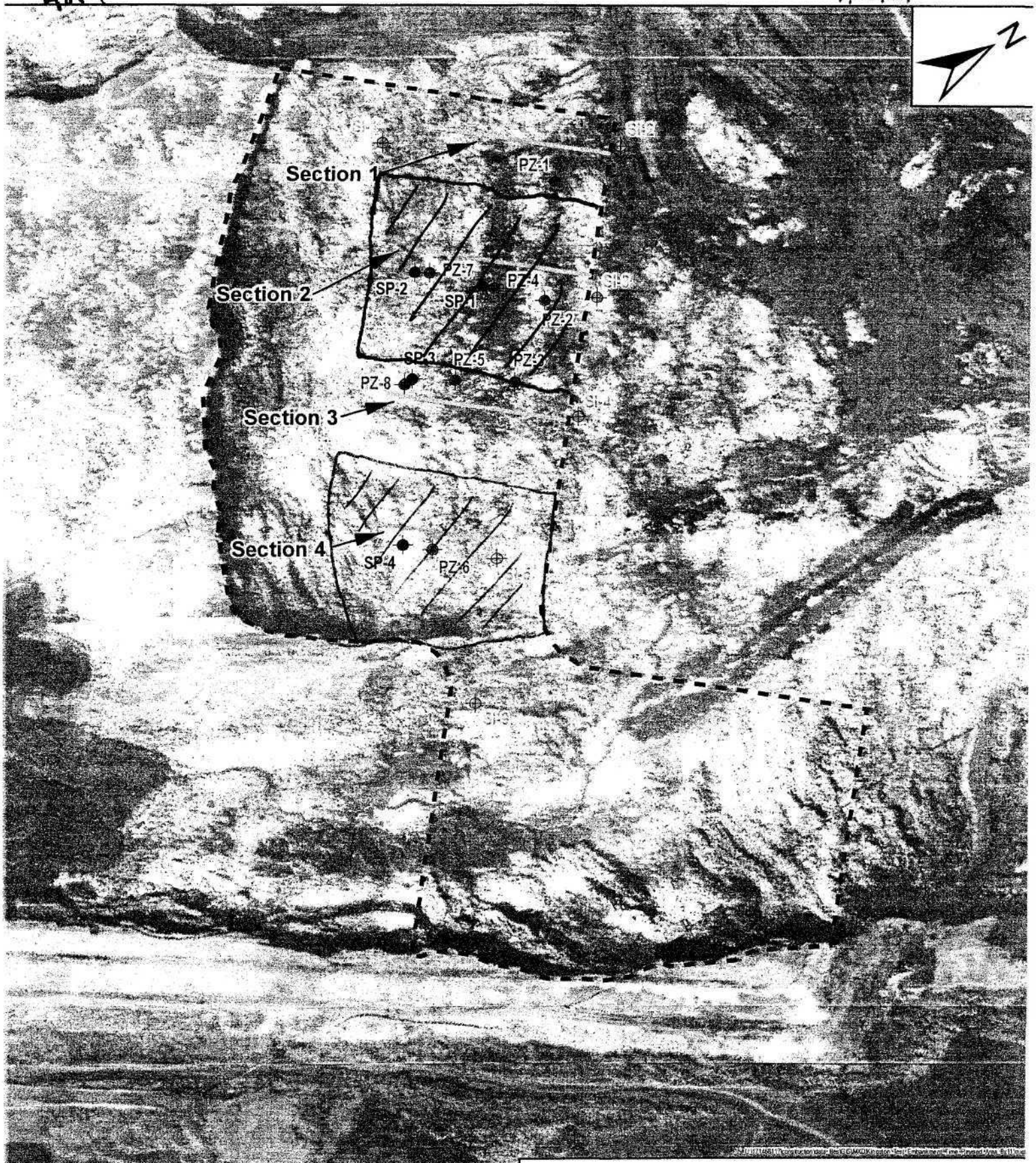
Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: 3 of 4
Field Representative: **Ryan Clark**	Report No:	Date: 9-11-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
314	Lift 7, Wp612, N35°54.613', W084° 30.804'	84.2	29.7	89.7	23.0	93.9	90.0	
315	" Wp613, N35°54.679', W084° 30.800'	80.9	30.2	↓	↓	90.2	↓	
316	" Wp614, N35°54.687', W084° 30.791'	85.1	28.5			94.9		
317	" Wp615, N35°54.696', W084° 30.785'	81.9	29.4			91.3		
318	" Wp616, N35°54.702', W084° 30.778'	84.6	29.0			94.3		
319	" Wp617, N35°54.696', W084° 30.768'	84.2	29.0			93.9		
320	" Wp618, N35°54.689', W084° 30.774'	82.9	28.6			92.4		
321	" Wp619, N35°54.682', W084° 30.779'	85.1	30.4			94.9		
322	" Wp620, N35°54.674', W084° 30.785'	82.2	28.3			91.6		
323	" Wp621, N35°54.661', W084° 30.788'	84.4	31.9	↓	↓	91.9	↓	

Remarks:

4 of 9

9/11/07



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

area of 1.5:1

area of 1.5:1

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MFP	PROJECT NO.	175660015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 9/12/09	Day of the Week: Saturday
	Weather: Sunny	Temperature: 70's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson/Ricky Lynn	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(11) Articulating Dump Trucks (2) CAT CS56 Smooth Drum	3440	Troxler	16
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark	Report No:	Date: 9/12/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark, technician with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark that Civil Projects would continue hauling fly ash using eleven articulated trucks. Mr. Clark visually checked the stockpile offsite to make sure it was ready to be hauled for placement. Mr. Clark took moisture contents samples of ash that was hauled to the test embankment area before it was bladed in.

Civil Projects placed fly ash in the northeastern corner of the test embankment area using eleven articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and bladed it approximately 8" to 10" lift from northwest to northeast. This area of lift 7 was approximately 158' x 230'. Civil Projects also continued placing fly ash in the southern section of the test embankment area using eleven articulating trucks. The dump trucks end dumped the fly ash near the area of placement and bladed it approximately 8" to 10" lift from southeast to southwest. This area of lift 3 was approximately 430' x 50'. This area of lift 3 was tied in to the toe of the relic structure as suggested by Mr. Layton. Mr. Clark performed field density tests on lift 8 of the test embankment area.

Civil Projects utilizing eleven articulated dump trucks place 220 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 9/12/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/13/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

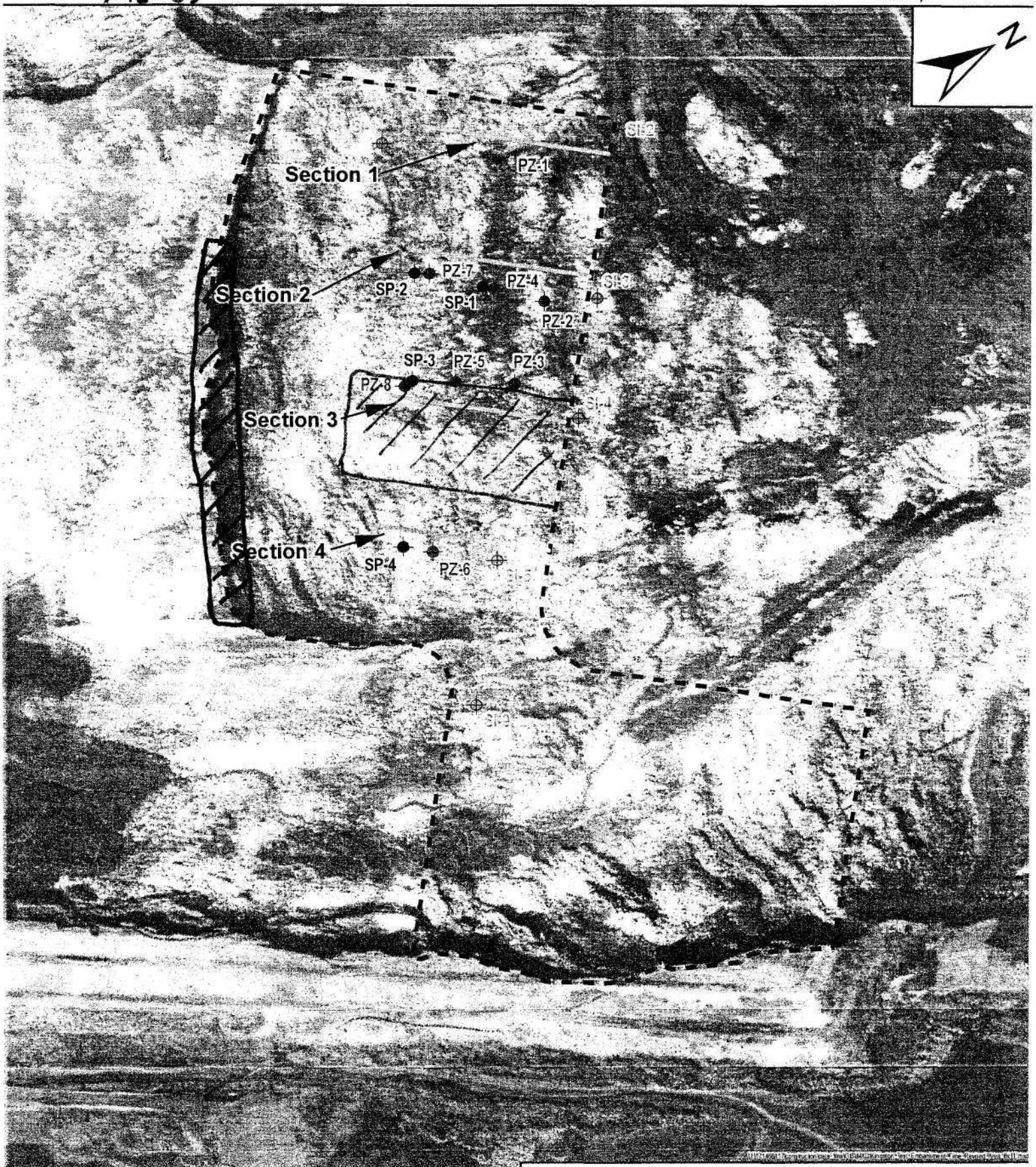
Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: 3 of 4
Field Representative: **Ryan Clark**	Report No:	Date: 9-12-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
324	Lift 8, WP622, N35°54.690', W084° 30.855'	84.3	31.0	89.7	23.0	93.9	90.0	
325	" WP623, N35°54.701', W084° 30.871'	87.2	29.2	↓	↓	97.2	↓	
326	" WP624, N35°54.708', W084° 30.833'	84.0	25.9	↓	↓	93.6	↓	
327	" WP625, N35°54.716', W084° 30.824'	84.1	25.8	↓	↓	93.8	↓	
328	" WP626, N35°54.723', W084° 30.818'	88.9	27.3	↓	↓	99.1	↓	

Remarks:

9-12-09

4 of 4



area of site 7

area where site 3 was tied to top of relic structure

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MFP	PROJECT NO.	175669015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	
Distribution:	

Project No.: 175669015	Rep No.:	Page No: 1 of 10
Project Name: TVA Kingston – Test Embankment Program		
Location or Address: Kingston, Tennessee		
Date: 9/14/09	Day of the Week: Monday	
Weather: Cloudy/Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(2) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,	Type/Model	Manufacturer	Ser. No./ID No.
(11) Articulating Dump Trucks (2) CAT CS56 Smooth Drum	3440	Troxler	26
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 11
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/14/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would continue hauling fly ash using eleven articulated trucks. Mr. Mehnert visually checked the offsite stockpile to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash that was hauled to the test embankment area before it was bladed in.

Civil Projects placed fly ash in the northwestern corner of the test embankment area using eleven articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northwest to northeast. This area of lift 9 was approximately 123' x 265' and 169' x 265'. Due to excessive moisture contents, Civil Projects did not place fly ash on the area of 190' x 265'. This area of lift 8 was scarified to air dry. Near the end of the day, this area was re-sealed using a smooth drum compactor. Civil Projects also continued placing fly ash in the southern section of the test embankment area using eleven articulating trucks. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 8" to 10" lift from southeast to southwest. This area of lift 3 was approximately 330' x 50'. This area of lift 3 was tied in to the toe of the relic structure as suggested by Mr. Layton, assistant QC manger with Stantec. Mr. Clark and Mr. Mehnert performed field nuclear density tests on lifts 3, 7, and 8 of the test embankment area. Mr. Mehnert also performed two drive cylinder tests to correlate test results with two field nuclear density tests. Civil Projects placed 1 ½" rock in the northeastern corner of the test embankment area using two articulated dump trucks. The dump trucks end dumped the rock near the area of placement and the dozer operator bladed it into an approximate 12" lift from north to south. This area was approximately 90' x 200'. Civil Projects also dressed to toe of the test embankment area on the north section utilizing an excavator. The length of the toe was approximately 300'.

Civil Projects utilizing eleven articulated dump trucks place 215 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 9/14/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/15/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 3 of 10
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 9/14/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
329	LIFT8, WP627, N35°54.717', W084°30.812'	83.3	29.4	89.7	23.0	92.9	90.0	
330	LIFT8, WP628, N35°54.703', W084°30.834'	84.5	26.3	~~89.7~~ RM		94.2		
331	LIFT8, WP629, N35°54.703', W084°30.833'	82.7	27.5			92.2		
332	LIFT8, WP630, N35°54.700', W084°30.836'	82.2	27.0			91.7		
333	LIFT8, WP631, N35°54.694', W084°30.845'	84.6	27.5			94.3		
334	LIFT8, WP632, N35°54.687', W084°30.837'	85.6	29.2			95.4		
335	LIFT8, WP633, N35°54.695', W084°30.826'	85.4	27.9			95.2		
336	LIFT8, WP634, N35°54.700', W084°30.823'	82.9	29.2			92.4		
337	LIFT8, WP635, N35°54.704', W084°30.814'	94.1	23.7			104.9		
338	LIFT8, WP636, N35°54.716', W084°, 30.805'	81.3	25.8			90.6		
*339	RETEST OF 337	86.4	26.4			96.4		
340	LIFT8, WP637, N35°54.707', W084°30.798'	83.2	27.9			92.7		

Remarks: *TEST 339 RETEST OF 337 DUE TO COMPACTION (PROBABLY SITTING ON ROCK).

W

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 17566915	Page No: 4 of 10
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 9/14/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
341	LIFT8, WP638, N35°54.702', W084°30.805'	85.9	27.1	89.7	23.0	95.7	90.0	
342	LIFT8, WP639, N35°54.699', W084° 30.812'	82.8	29.0			92.3		
343	LIFT8, WP640, N35°54.687', W084°30.817'	84.5	28.6			94.2		
344	LIFT8, WP641, N35°54.680', W084°30.823'	83.6	30.7			93.2		
345	LIFT8, WP642, N35°54.676', W084°30.813'	81.6	24.3			91.0		
346	LIFT8, WP643, N35°54.682', W084°30.807'	83.5	25.5			93.0		
347	LIFT8, WP644, N35°54.688', W084°30.800'	85.9	27.9			95.7		
348	LIFT8, WP645, N35°54.694', W084° 30.790'	84.9	28.3			94.6		
349	LIFT8, WP646, N35°54.695', W084° 30.783'	86.3	28.7			96.2		
350	LIFT8, WP647, N35°54.695', W084° 30.776'	85.9	27.7			95.7		
*351	LIFT8, WP648, N35°54.685', W084°30.782	82.5	32.4			91.1		
352	LIFT8, WP649, N35°54.681', W084°30.786'	84.9	31.1			94.7		

Remarks: *DENSITY TEST 351 CORRELATES W/ DT-032.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 5 of 10
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 9/14/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
353	LIFT8, WP650, N35°54.675', W084°30.789'	83.1	29.4	89.7	23.0	92.7	90.0	
354	LIFT8, WP651, N35°54.668', W084°30.796'	87.2	28.3			97.3		
355	LIFT8, WP652, N35°54.662', W084°30.787'	80.7	32.3			90.0		
356	LIFT8, WP653, N35°54.654', W084°30.786'	82.2	30.3			91.6		
357	LIFT8, WP654, N35°54.658', W084°30.783'	82.6	27.8			92.1		
358	LIFT8, WP655, N35°54.670', W084°30.775'	87.5	28.3			97.6		
359	LIFT8, WP656, N35°54.678', W084°30.771'	85.2	28.6			95.0		
360	LIFT8, WP657, N35°54.685', W084°30.759'	83.4	30.6			93.0		
361	~~LIFT8~~ LIFT7 rm WP658, N35°54.682', W084°30.750'	84.7	27.7			94.5		
362	LIFT7, WP659, N35°54.673', W084°30.758'	81.7	31.8			91.0		
363	LIFT7, WP660, N35°54.669', W084°30.763'	86.8	28.1			96.7		
364	LIFT7, WP661, N35°54.658, W084°30.770'	85.1	28.1			94.9		

Remarks:

5

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 4 of 10
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 9/14/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
365	LIFT 7, WP662, N35°54.648', W084°30.776'	85.6	28.9	89.7	23.0	95.5	90.0	
366	LIFT 7, WP663, N35°54.650', W084°30.769'	87.6	27.9			97.7		
367	LIFT 7, WP664, N35°54.658', W084°30.760'	85.9	30.6			95.8		
368	LIFT 7, WP665, N35°54.660', W084°30.759'	85.8	25.5			95.6		
369	LIFT 7, WP666, N35°54.668', W084°30.753'	86.8	28.3			96.8		
370	LIFT 7, WP667 N35°54.678', W084°30.748'	90.0	28.6			100.3		
371	LIFT 7, WP668, N35°54.672', W084°30.736'	85.3	27.1			95.1		
372	LIFT 7, WP669, N35°54.663', W084°30.738'	85.4	26.8			95.2		
373	LIFT 7, WP670, N35°54.656', W084°30.745'	81.1	29.9			90.4		
374	LIFT 7, WP671, N35°54.645', W084°30.755'	89.3	26.1			99.5		
375	LIFT 7, WP672, N35°54.639', W084°30.759'	88.1	24.2			98.2		
376	LIFT 7, WP673, N35°54.638', W084°30.744'	87.5	23.5			97.6		

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 7 of 10
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 9/14/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
377	LIFT 7, WP674, N35°54.646', W084°30.737'	82.6	27.8	89.7	23.0	92.1	90.0	
378	LIFT 7, WP675, N35°54.647', W084°30.734'	85.7	24.7	↓	↓	95.5	↓	
379	LIFT 7, WP676, N35°54.655', W084°30.732'	80.8	28.4			90.1		
380	LIFT 7, WP677, N35°54.662', W084°30.714'	81.6	25.8			90.9		
381	LIFT 7, WP678, N35°54.657', W084°30.718'	84.8	28.0			94.6		
382	LIFT 7, WP679, N35°54.649', W084°30.723'	84.3	26.2			94.0		
383	LIFT 7, WP680, N35°54.642', W084°30.729'	85.8	25.4			95.6		
384	LIFT 7, WP681, N35°54.635', W084°30.721'	82.0	30.2			91.4		
385	LIFT 7, WP682, N35°54.643, W084°30.720'	86.9	28.4			96.8		
386	LIFT 7, WP683, N35°54.648', W084°30.708'	84.0	28.3			93.7		
387	LIFT 7, WP684, N35°54.654', W084°30.705'	81.0	29.8			90.2		
388	LIFT 7, WP685, N35°54.651', W084°30.695'	82.4	29.7	↓	↓	91.8	↓	

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 8 of 10
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 9/14/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
389	LIFT3, WP686, N35°54.623', W084°30.719'	89.5	24.9	89.7	23.0	99.8	90.0	
390	LIFT3, WP687, N35°54.627', W084°30.728'	88.0	26.8			98.1		
391	LIFT3, WP688, N35°54.630', W084°30.744'	84.6	29.5			94.3		
392	LIFT3, WP689, N35°54.631', W084°30.749'	81.7	28.5			91.1		
393	LIFT3, WP690, N35°54.634', W084°30.763'	84.9	28.9			94.6		
394	LIFT3, WP691, N35°54.638', W084°30.775'	85.9	28.6			95.8		
395	LIFT3, WP692, N35°54.644', W084°30.790'	86.0	28.9			95.9		
396	LIFT3, WP693, N35°54.650', W084°30.798'	90.2	28.1			100.5		
397	LIFT3, WP694, N35°54.643', W084°30.803'	83.4	31.3			92.9		
398	LIFT3, WP695, N35°54.637', W084°30.794'	86.3	24.4			96.3		
*399	LIFT3, WP696, N35°54.633', W084°30.784'	81.1	25.7			90.4		
400	" , WP697, N35°54.628', W084°30.771'	83.1	29.0			92.6		

Remarks: *DENSITY TEST 399 CORRELATES TO DT-033.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA - Kingston - Test embankment Program	Project No: 175669015	Page No: 9 of 10
Field Representative: Ryan Clark - Russell McKnett	Report No:	Date: 9-14-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
401	Lift 3, WP 698, N35°54.622', W084°30.762'	85.6	25.4	89.7	23.0	95.5	90.0	
402	" WP699, N35°54.623', W084°30.752'	91.2	25.5	⊥	⊥	101.7	⊥	

Remarks:

Stantec

Density of Soil in Place by the Drive-Cylinder Method
ASTM D 2937

Project Name TVA - Kingston Test Embankment Program

Project Number 175669015
Technician DB
Date 9/14/09

Drive Cylinder ID	Ref Tag	Source	Depth	Description	Wet Soil and Cylinder Mass (g)	Moisture Content (%)	Moisture Content Method
DT-032	0	Lift 8, WP1648, N35°54.685, W084°30.782	4"	Fly Ash	765.0	27.7	Hot Plate
DT-033	5	Lift 3, WP1696, N35°54.633, W084°30.784	4"	Fly Ash	720.9	25.2	Hot Plate

Comments

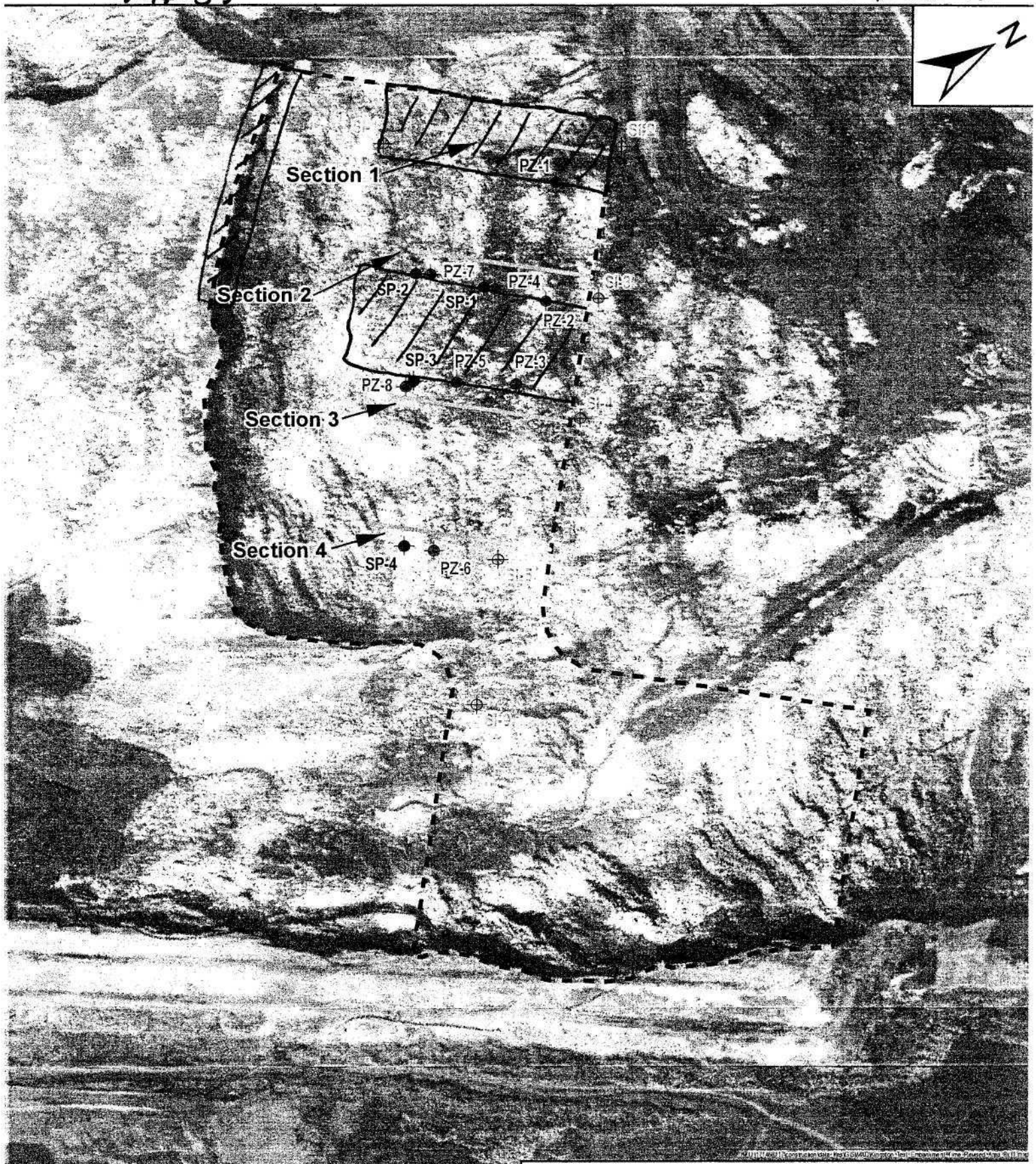
File: Drive Cylinder Input Sheet.xls Sheet: Field
Preparation Date: 7-2009
Revision Date: N/A

Stantec Consulting Services Inc.

Laboratory Document
Prepared By: JW
Approved By: TLK

9-14-09

11 of 16



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

Area of Lift 9

Area of Lift 9

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/15/09	Day of the Week: Tuesday	
	Weather: Cloudy/Rainy	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/15/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would continue hauling fly ash using eleven articulated trucks. Mr. Mehnert visually checked the offsite stockpile to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash that was hauled to the test embankment area before it was bladed in.

Civil Projects placed fly ash in the northeastern corner of the test embankment area using nine articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northwest to northeast. This area of lift 8 was approximately 310' x 190'. Civil Projects also placed fly ash beyond the northeastern limit of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 8" to 10" lift from south to north. This area of lift 1 was approximately 90' x 200'. This area of lift 1 was placed over the area of 1 ½" stone as suggested Mr. Andrew, QC manager with Stantec. Civil Projects also dressed to toe of the test embankment area on the north section utilizing an excavator. The length of the toe was approximately 50'.

Civil Projects utilizing nine articulated dump trucks place 97 loads.

Stantec Field Representative's Activities

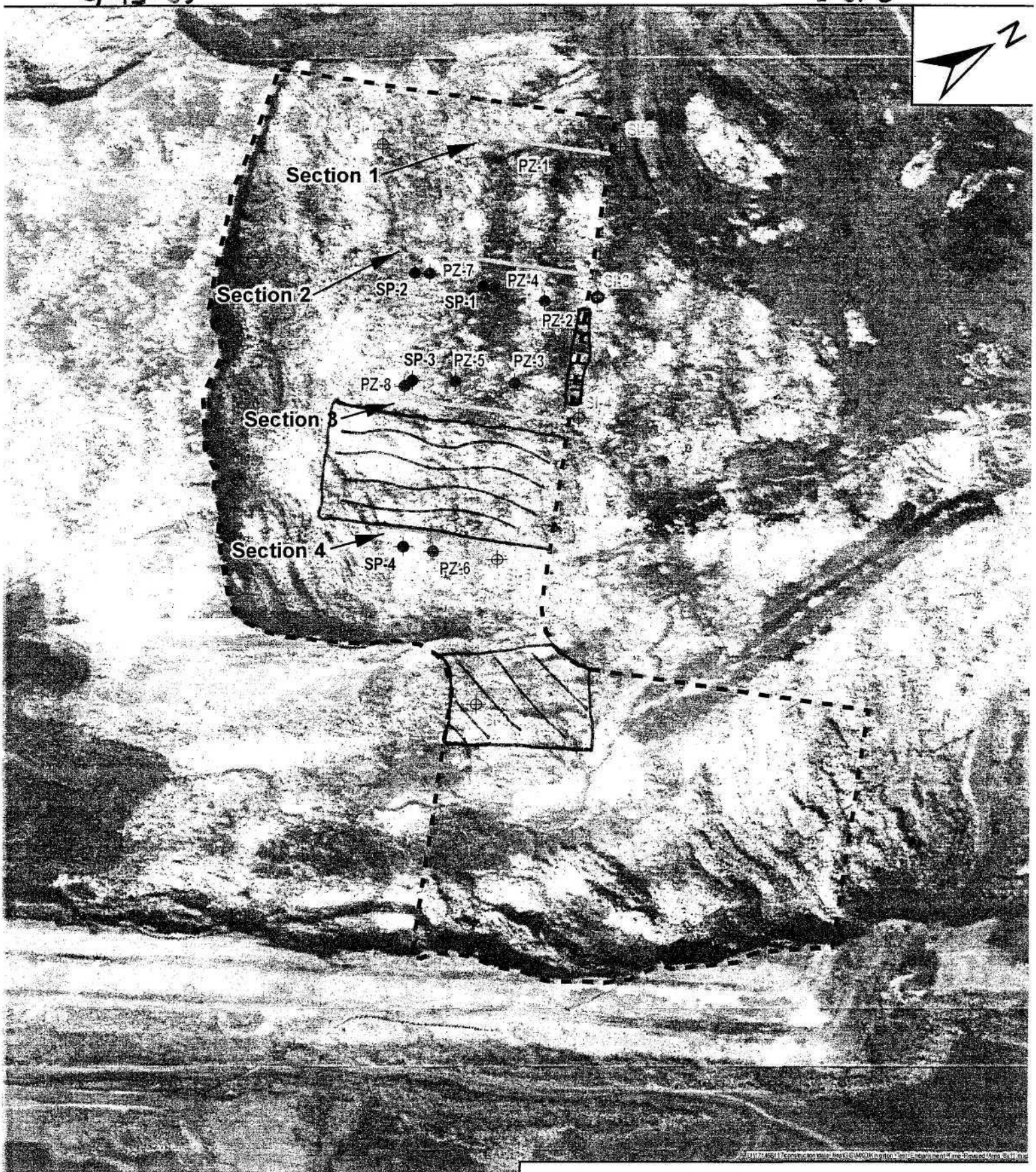
Arrive	7:00 a.m.
Depart	4:30p.m.

7:00AM-4:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 9/15/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/17/09

9-15-09



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

- area of lift 1 over 1½" Stone
- area of lift 8
- area where toe of test embankments dressed

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MFP	PROJECT NO.	175669015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/16/09	Day of the Week: Wednesday	
	Weather: Cloudy/Rainy	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/16/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec, met with Mr. Andrew, QC Manager with Stantec, and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed. The rain gauge on site indicated 1" of rain for 24 hours.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 9/16/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/17/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/17/09	Day of the Week: Thursday	
	Weather: Cloudy/Rainy	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 9/17/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec, met with Mr. Andrew, QC Manager with Stantec, and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed. The rain gauge on site indicated 1.3" of rain for 24 hours.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Clark assisted Ms. Berryman, technician with Stantec, with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 9/17/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/19/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/18/09	Day of the Week: Friday	
	Weather: Cloudy	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/18/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed. The rain gauge on site indicated 0.6" of rain for 24 hours.

Daily instrumentation monitoring was conducted.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 9/18/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/19/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 50	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/19/09	Day of the Week: Saturday	
	Weather: Rain	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 50	Date: 9/19/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed. The rain gauge on site indicated 0.3" of rain for 24 hours.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Clark assisted Ms. Berryman, technician with Stantec, with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 9/19/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 9/21/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/21/09	Day of the Week: Monday	
	Weather: Raining	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet / Jim Kilby	Stantec Field Representative: Russell Mehnert

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: [ ] Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
( ) CAT D6N Bulldozer, ( ) John Deer 850J Bulldozer,			
( ) Articulating Dump Trucks ( ) CAT CS56 Smooth Drum			
Compactor, (1) Cat Amphibious Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No:	Date: 9/21/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed. The rain gauge on site indicated 1.5" of rain for 48 hours.

Around 12:15 pm, Mr. Layton met with a Civil Project's operator to repair several washed out areas, as well as the slope (3 to 1), at the toe of the test embankment with a Cat amphibious excavator. At 1:00 pm, the Civil Project's operator began filling the washed out areas with material from the northeastern limit. Mr. Layton noticed that SI-4 (at the toe of the embankment) was bent to approximately a 30 degree angle (no longer vertical), presumably damaged by the amphibious excavator's activities. Mr. Layton and Mr. Mehnert straightened SI-4 and lowered the probe to approximately 10', at which point it could not be lowered any further. It appears further repairs will be necessary before instrument SI-4 can be monitored again.

Since rain and wet conditions had stopped progress in the test embankment area, Mr. Mehnert assisted Ms. Berryman, technician with Stantec, with instrumentation readings for the remainder of the day.

Stantec Field Representative's Activities

Arrive	6:30 a.m.
Depart	6:00p.m.

6:30AM-6:00PM
Observations of washed out areas being repaired in the test embankment and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 9/21/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/22/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/22/09	Day of the Week: Tuesday	
	Weather: Cloudy/Rainy/Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 9/22/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed. The rain gauge on site indicated 0.9" of rain for 24 hours.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Clark assisted Ms. Berryman, technician with Stantec, with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 9/22/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/23/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/23/09	Day of the Week: Wednesday	
	Weather: Cloudy/Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 9/23/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Clark assisted Mr. Layton with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 9/23/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/25/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/24/09	Day of the Week: Thursday	
	Weather: Cloudy/Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 9/24/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Civil Projects dressed the toe of the test embankment utilizing two Cat dozers. This work was performed at the request of Mr. Andrew and Mr. Layton.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Clark assisted Mr. Layton with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 9/24/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/25/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/25/09	Day of the Week: Friday	
	Weather: Cloudy/Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 9/25/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Ms. Berryman, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Clark assisted Ms. Berryman with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 9/25/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/27/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 55	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/26/09	Day of the Week: Saturday	
	Weather: Heavy Rains	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test. Check for rutting and pumping.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 55	Date: 9/26/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Ms. Berryman, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Clark assisted Ms. Berryman with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 9/26/09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 9/28/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/28/09	Day of the Week: Monday	
	Weather: Cloudy/Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(9) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 9/28/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Ms. Berryman, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed. The rain gauge reading was 2" for 48 hours

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Clark assisted Ms. Berryman with instrumentation readings the rest of the day.

Civil Projects cut approximately 6" of existing fly ash off the whole test embankment area utilizing a dozer. The fly ash was cut off due to saturation. The whole area was then disked to air dry. Civil Projects then smooth rolled the whole area utilizing a smooth drum compactor.

Mr. Clark ran field nuclear density tests to spot check the area before the placing of fly ash.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 9/28/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/29/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/29/09	Day of the Week: Tuesday	
	Weather: Cloudy/Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (1) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/29/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would start hauling fly ash using four articulated trucks. Mr. Mehnert visually checked the offsite stockpile to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash that was hauled to the test embankment area before it was bladed in.

Civil Projects placed fly ash in the northwestern corner of the test embankment area using four articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northwest to northeast. This area of lift 10 was approximately 300' x 210'. This area was then disked and left open (not sealed with smooth drum compactor) to allow the fly ash to air dry. On this date, no field nuclear density tests were performed.

Mr. Clark assisted Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec with repairing SI-4.

Civil Projects utilizing four articulated dump trucks place 74 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:30p.m.

7:00AM-4:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 9/29/09
[ ] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 9/30/09

9-29-09

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 7
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 9/30/09	Day of the Week: Wednesday	
	Weather: Cloudy/Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(4) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (2) John Deere Pull Behind Scrapers			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 67
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 9/30/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would continue hauling fly ash using four articulated trucks and two tractors with two pull behind scrapers each. Mr. Mehnert visually checked the offsite stockpile to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash that was hauled to the test embankment area before it was bladed in.

Civil Projects placed fly ash in the northwestern corner of the test embankment area using four articulated dump trucks and two tractors with two pull behind scrapers each. The dump trucks and scrapers end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northwest to northeast. This area of lift 10 was approximately 300' x 220'. Mr. Clark performed field nuclear density tests on lift 10 and Mr. Mehnert performed two drive tube cylinders correlating with two field nuclear density tests.

Civil Projects utilizing four articulated dump trucks placed 46 loads.

Civil Projects utilizing four pull behind scrapers placed 72 loads.

On this date, Civil Projects placed 118 loads of fly ash.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 9/30/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/01/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: 3 of 6
Field Representative: **Ryan Clark**	Report No:	Date: 9-30-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
403	Lift 10, W, 700, N 35° 54.611', W084° 30.829'	84.5	30.0	89.1	23.0	94.3	90.0	
404	" W, 701, N 35° 54.677', W084° 30.818'	85.4	28.3			95.2		
* 405	" Wp 702, N 35° 54.683', W084° 30.810'	81.3	26.5			90.6		
406	" Wp 703, N 35° 54.691', W084° 30.803'	90.0	25.8			100.3		
407	" Wp 704, N 35° 54.699', W084° 30.794'	87.3	25.2			97.3		
408	" Wp 705, N 35° 54.707', W084° 30.797'	82.4	29.3			91.8		
409	" Wp 706, N 35° 54.702', W084° 30.806'	83.5	30.0			93 0		
410	" Wp 707, N 35° 54.693', W084° 30.813'	89.1	24.6			99.3		
411	" Wp 708, N 35° 54.687', W084° 30.821'	83.3	24.9			92.9		
412	" Wp 709, N 35° 54.679', W084° 30.830'	85.7	26.2			95.5		
413	" Wp 710, N 35° 54.681', W084° 30.842'	84.4	28.4			94.3		
414	" Wp 711, N 35° 54.687', W084° 30.834'	85.5	25.5			99.8		

Remarks: *DENSITY TEST 405 CORRESPONDS TO DT-034.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: 4 of 6
Field Representative: **Ryan Clark**	Report No:	Date: 9-30-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
415	L: Lt 10, Wp 712, N35° 54. 693', W084° 30. 825'	85.2	24.2	89.7	23.0	95.0	90.0	
416	" Wp 713, N35° 54. 701', W084° 30. 819'	81.5	27.1			90.9		
417	" Wp 714, N35° 54. 707', W084° 30. 810'	90.1	25.5			100.5		
418	" Wp 715, N35° 54 715', W084° 30. 804'	90.1	24.9			100.4		
419	" Wp 716, N35° 54. 720', W084° 30. 814'	93.2	25.7			103.9		
420	" Wp 717, N35° 54. 712', W084° 30. 821'	87.4	28.5			97.4		
421	" Wp 718, N35° 54. 707', W084° 30. 829'	86.8	24.7			16.8		
422	" Wp 719, N35° 54. 700', W084° 30. 839'	92.3	24.6			103.0		
423	" Wp 720, N35° 54. 692', W084° 30. 851'	84.3	29.8			94.0		
424	" Wp 721, N35° 54. 695', W084° 30. 858'	89.9	27.3			100.3		
425	" Wp 722, N35° 54. 703', W084° 30. 852'	86.9	28.3			96.9		
* 426	" Wp 723, N35° 54. 710', W084° 30. 845'	87.3	29.0			97.4		

Remarks: *DENSITY TEST 426 CORRESPONDS TO DT-035.

[redacted]

4

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: 5 of 6
Field Representative: **Ryan Clark**	Report No:	Date: ~~9-30-09~~ 9-30-09

Test No.	Test Location / Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
427	Lift 10, Wp724, N35° 54.715', W084° 30.837'	90.1	26.3	85.7	23.0	100.4	98.0	
428	" , Wp725, N35° 54.722', W084° 30.831'	91.8	28.3	"	"	102.3	"	
429	" , Wp726, N35° 54.728', W084° 30.825'	92.5	28.6	"	"	103.1	"	

Remarks:

Stantec

Density of Soil in Place by the Drive-Cylinder Method
ASTM D 2937

Project Name TVA KINGSTON - TEST EMBANKMENT PROGRAM

Project Number 175669015
Technician RM/RC/DB
Date 9/30/09

Drive Cylinder ID	Ref Tag	Source (LIFT 10,)	Depth	Description	Wet Soil and Cylinder Mass (g)	Moisture Content (%)	Moisture Content Method
DT-034	L	N 35°54.683', W084°30.810'	4"	FLY ASH	725.8	24.82	
DT-035	O	N 35°54.710', W084°30.845'	4"	FLY ASH	768.2	~~23.84~~ 25.89	RM

RANGE-
% = 26.5
% = 29.0

Comments

9-30-09

7 of 67

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

area of 1.4+10 placement

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MFP	PROJECT NO.	175669015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 87
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/01/09	Day of the Week: Thursday	
	Weather: Cloudy/Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,	Type/Model	Manufacturer	Ser. No./ID No.
(7) Articulating Dump Trucks (2) CAT CS56 Smooth Drum	3440	Troxler	26
Compactor, (2) John Deere 9520 Scraper Specials with 2			
Pans Each			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 17
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 10/01/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would continue hauling fly ash using seven articulated trucks and two tractors with two pull behind scrapers each. Mr. Mehnert visually checked the offsite stockpile to make sure it was ready to be hauled for placement. Mr. Mehnert took moisture contents samples of ash that was hauled to the test embankment area before it was bladed in.

Civil Projects placed fly ash in the northeastern area of the test embankment area using seven articulated dump trucks and two tractors with two pull behind scrapers each. The dump trucks and scrapers end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northwest to northeast. This area of lift 10 was approximately 191' x 324'. Civil Projects also placed fly ash in the northwestern corner of the test embankment area using seven articulated dump trucks and two tractors with two pull behind scrapers each. The dump trucks and scrapers end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to northwest. This area of lift 11 was approximately 221' x 206'. Mr. Clark and Mr. Mehnert performed field nuclear density tests on lifts 10 and 11. Mr. Mehnert performed two drive tube cylinders correlating with two field nuclear density tests.

Civil Projects filled in low places in the southeastern area of the test embankment utilizing seven articulated dump trucks and two tractors with two pull behind scrapers each. The dump trucks and scrapers end dumped the fly ash near the area of placement and the dozer operator bladed it into an approximate 8" to 10" lift from southwest to southeast. This area of lift 4 was approximately 132' x 412'.

Civil Projects utilizing seven articulated dump trucks placed 100 loads @ 25 c.y. per load.

Civil Projects utilizing tractor pulled scrapers placed 34 loads @ 36 c.y. per loads.

On this date, Civil Projects placed 3,742 c.y.'s of fly ash.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 10/01/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/03/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: 3 of 6
Field Representative: **Ryan Clark / RUSSELL MEHNERT**	Report No:	Date: 10/1/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
*430	LIFT10, WP727, N35°54.700', W084° 30.777'	88.7	29.1	89.7	23.0	98.9	90.0	
431	LIFT10, WP728, N35°54.691', W084° 30.788'	84.3	29.3			94.0		
432	LIFT10, WP729, N35°54.684', W084°30.798'	84.9	30.2			94.7		
433	LIFT10, WP730, N35°54.677', W084°30.804'	88.4	26.5			98.6		
434	LIFT10, WP731, N35°54.672', W084°30.796'	85.7	28.7			95.6		
435	LIFT10, WP732, N35°54.676', W084° 30.788'	85.7	29.1			95.6		
436	LIFT10, WP733, N35°54.686', W084° 30.780'	86.4	28.8			96.4		
437	LIFT10, WP734, N35°54.692', W084° 30.773'	89.7	26.5			100.0		
438	LIFT10, WP735, N35°54.688', W084° 30.765'	90.6	25.6			101.0		
439	LIFT10, WP736, N35°54.681', W084° 30.774'	85.8	28.5			95.6		
440	LIFT10, WP737, N35°54.672', W084° 30.780'	89.8	26.1			100.1		
*441	LIFT10, WP738, N35°54.664', W084° 30.787'	87.2	28.8			97.2		

Remarks: TEST 430 CORRELATES W/ DT-036. TEST 441 CORRELATES W/ DT-037.

[redacted]

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: 4 of 6
Field Representative: **Ryan Clark / RUSSELL MEHNERT**	Report No:	Date: 10/1/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
~~442~~	Lift 10, Wp 739, N35°54.654', W084°30.792'	85.4	29.6	89.7	23.0	95.3	90.0	
~~443~~	" Wp740, N35°54.657', W084°30.804'	88.1	26.9			98.2		
~~444~~	" Wp 741, N35°54.662', W084°30.813'	85.2	28.5			95.5		
~~445~~	" Wp 742, N35°54.668', W084°30.824'	90.8	25.5			101.2		
~~446~~	Lift 11, Wp 743, N35°54.689', W084°30.819'	84.4	28.5			94.1		
~~447~~	" Wp744, N35°54.694', W084°30.811'	82.3	30.5			91.8		
~~448~~	" Wp745, N35°54.701', W084°30.802'	80.2	30.7			90.0		
~~449~~	" Wp746, N35°54.708', W084°30.795'	82.7	30.1			92.2		
~~450~~	" Wp747, N35°54.714', W084°30.805'	83.8	29.9			93.4		
~~451~~	" Wp 748, N35°54.708', W084°30.813'	81.1	31.5			90.5		
452	" WP749, N35°54.701', W084°30.820'	87.0	26.6			96.9		
453	" WP750, N35°54.691', W084°30.828'	90.0	26.5			100.3		

Remarks:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: 5 of 6
Field Representative: **Ryan Clark / RUSSELL MEHNERT**	Report No:	Date: 10/1/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
454	LIFT 11, WP 751, N35°54.700', W084°30.834'	85.3	29.1	89.7	23.0	95.1	90.0	
455	LIFT 11, WP 752, N35°54.704', W084°30.832'	81.1	30.9	"	"	90.5	"	
456	LIFT 11, WP 753, N35°54.715', W084°30.821'	81.8	28.2	"	"	91.2	"	
457	LIFT 11, WP 754, N35°54.719', W084°30.813'	80.7	32.1	"	"	90.0	"	

Remarks:

[redacted]

Stantec

Density of Soil in Place by the Drive-Cylinder Method
ASTM D 2937

Project Name TVA Kingston - Test Embankment Program

Project Number 175669015
Technician DB
Date 10-1-09

like 1C

Drive Cylinder ID	Ref Tag	Source	Depth	Description	Wet Soil and Cylinder Mass (g)	Moisture Content (%)	Moisture Content Method
21.1% DT-036	O	Lift 10, N35°54.700', W084°30.777'	4"	Fly Ash	787.5	23.25	Hot Plate
8.8% DT-037	L	Lift 10, N35°54664', W084°30.787'	4"	Fly Ash	7606.0	25.44	Hot Plate

Comments

10-01-09

6 of 6

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

area of lift 10

area of lift 11

area of lift 4

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/02/09	Day of the Week: Friday	
	Weather: Cloudy/Rainy	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,	Type/Model	Manufacturer	Ser. No./ID No.
(7) Articulating Dump Trucks (2) CAT CS56 Smooth Drum	3440	Troxler	26
Compactor, (2) John Deere 9520 Scraper Specials with 2			
Pans Each			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 10/02/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark and Mr. Mehnert that Civil Projects would continue hauling fly ash using seven articulated trucks and two tractors with two pull behind scrapers each. Mr. Mehnert visually checked the offsite stockpile to make sure it was ready to be hauled for placement.

Civil Projects placed fly ash in the northeastern area of the test embankment area using seven articulated dump trucks and two tractors with two pull behind scrapers each. The dump trucks and scrapers end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northwest to northeast. This area of lift 10 was approximately 50' x 250'. Civil Projects also placed fly ash in the northwestern corner of the test embankment area using seven articulated dump trucks and two tractors with two pull behind scrapers each. The dump trucks and scrapers end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to northwest. This area of lift 11 was approximately 70' x 50'. On this date, no field nuclear density tests were performed.

Civil Projects shut down trucks hauling ash to the test embankment at approximately 11:00 AM due to rain.

Civil Projects utilizing seven articulated dump trucks placed 16 loads.

Civil Projects utilizing four pull behind scrapers placed 22 loads.

On this date, Civil Projects placed 38 loads of fly ash.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	1:00p.m.

7:00AM-1:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 10/02/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10-03-09

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

/// = area of lift 10

/// = area of lift 11

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	175669015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/03/09	Day of the Week: Saturday	
	Weather: Cloudy/Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(7) Articulating Dump Trucks (2) CAT CS56 Smooth Drum			
Compactor, (3) John Deere 9520 Scraper Specials with 2			
Pans Each			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 10/03/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Clark that Civil Projects would continue hauling fly ash using seven articulated trucks and three tractors with two pull behind scrapers each. Mr. Clark visually checked the offsite stockpile to make sure it was ready to be hauled for placement. The rain gauge showed .15" of precipitation for 24 hours.

Civil Projects placed fly ash in the northeastern area of the test embankment area using seven articulated dump trucks and three tractors with two pull behind scrapers each. The dump trucks and scrapers end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northwest to northeast. This area of lift 10 was approximately 150' x 250'. Civil Projects also placed fly ash in the northwestern corner of the test embankment area using seven articulated dump trucks and three tractors with two pull behind scrapers each. The dump trucks and scrapers end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to northwest. This area of lift 11 was approximately 100' x 50'. On this date, no field nuclear density tests were performed.

Civil Projects utilizing seven articulated dump trucks placed 19 loads.

Civil Projects utilizing four pull behind scrapers placed 170 loads.

On this date, Civil Projects placed 189 loads of fly ash.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	5:00p.m.

7:00AM-5:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 10/03/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/04/09

10-3-09

3 of 3

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

= area of lift 11

= area of lift 10

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	175669015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/5/09	Day of the Week: Monday	
	Weather: Raining/Cloudy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(0) CAT D6N Bulldozer, (0) John Deer 850J Bulldozer,			
(0) Articulating Dump Trucks (0) CAT CS56 Smooth Drum			
Compactor, (0) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No:	Date: 10/5/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, met with Mr. Jim Kilby, Civil Projects foreman, to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Mehnert assisted Ms. Berryman, technician with Stantec, with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Instrumentation readings

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/5/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/07/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/6/09	Day of the Week: Tuesday	
	Weather: Cloudy/Raining	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(0) CAT D6N Bulldozer, (0) John Deer 850J Bulldozer,			
(0) Articulating Dump Trucks (0) CAT CS56 Smooth Drum			
Compactor, (0) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No:	Date: 10/6/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, met with Mr. Kilby, Civil Projects foreman, to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Mr. Andrew, QC Manager with Stantec, and Mr. Layton, Assistant QC Manager with Stantec, met with Mr. Kilby to discuss erosion control within the test embankment. The plan was to place three sections of 8oz non-woven geo-textile fabric from southwest to northeast over the toe of the embankment to divert precipitation runoff. The erosion control plan was not approved by TVA, therefore Civil Projects did not begin the erosion control plan.

In the western corner of the test embankment, Civil Projects utilized a CAT smooth drum roller to seal an area of approximately 70' x 50' where heavy equipment traffic had caused rutting.

Since wet conditions had stopped progress in the test embankment area, Mr. Mehnert assisted Ms. Berryman, technician with Stantec, with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:30p.m.

7:00AM-4:30PM
Instrumentation readings

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/6/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/07/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/7/09	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(0) CAT D6N Bulldozer, (1) John Deer 850J Bulldozer,			
(0) Articulating Dump Trucks (0) CAT CS56 Smooth Drum			
Compactor, (0) Cat 322C Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No:	Date: 10/7/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, met with Mr. Jim Kilby, Civil Projects foreman, to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Around 2:00PM, Mr. Andrew, Stantec QC manager, and Mr. Layton, Stantec Assistant QC manager, met with Mr. Kilby to discuss the wash out areas at the toe of the test embankment. Civil Projects dressed the slope wash out areas of the test embankment toe from the northern corner to SI-4 using a bulldozer.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Mehnert assisted Ms. Berryman, technician with Stantec, with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	5:30p.m.

7:00AM-5:30PM
Instrumentation readings and test embankment toe repair observations.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/7/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/7/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: Page No: 1 of 6
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 10/8/09	Day of the Week: Thursday
	Weather: Cloudy/Sunny	Temperature: 70's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) CAT 322C Excavator, (1) JD 850J Bulldozer	Type/Model	Manufacturer	Ser. No./ID No.
(4) Articulating Dump Trucks (2) CAT CS56 Smooth Drum	Density Gauge/3440	Troxler	26918/26
Compactor, (2) John Deere 9520 Scraper Specials with 2			
Pans Each, (3) Laborers, (1) CAT D6N Bulldozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 6
Stantec Field Representative: Russell Mehnert	Report No:	Date: 10/8/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, met with Mr. Kilby, foreman with Civil Projects (CP) to discuss the test embankment area. Mr. Kilby informed Mr. Mehnert that Civil Projects would be repairing the toe of the embankment and starting on the erosion control plan.

Mr. Mehnert took random nuclear field density tests on lift 11, which was previously tested, to verify moisture and density. Also, Mr. Mehnert performed nuclear field density testing on previously placed material (lift 10) within the test embankment and ran two drive cylinder tests.

Civil Projects, utilizing a bulldozer and a CAT excavator, repaired the toe of the test embankment from SI-4 to the north eastern limit.

Ms. Berryman, technician with Stantec, collected two moisture content samples from the relic placement area stockpiles.

Civil Projects began the implementation of the erosion control plan by undercutting two 4000 cubic feet sections, for which the 8oz non-woven geo-textile fabric could be placed. Then, Civil Projects, utilizing a bulldozer and 3 laborers, installed 2 sections of geo-textile fabric, approximately 300' x 15'. Two sections of the geo-textile fabric were placed approximately 100' apart and are shown on the attached site sketch. The sections ran from southwest to northeast and extended approximately 50' down the toe of the test embankment. Fly ash was bladed on top of the geo-textile fabric, on both sides, approximately 2', to hold the fabric in place. Utilizing two bulldozers, Civil Projects contoured the area between the western limit and the first section of geo-textile fabric to divert precipitation runoff. Afterwards, the contoured area was sealed off using a smooth drum compactor. In addition, a bulldozer was used to cut four berms per section of geo-textile fabric, in order to further promote drainage. The berms are shown on the attached site sketch.

Civil Projects, utilizing two John Deer 9520 Scraper Specials, with two pans each, delivered 40 loads of fly ash.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:00 p.m.

7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/8/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/10/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 3 of 6
Field Representative: RUSSELL MEHNERT	Report No:	Date: 10/8/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
#458	LIFT 10, WP755, N 35°54.689', W084°30.777'	85.8	28.6	89.7	23.0	95.7	90.0	
459	LIFT 10, WP756, N 35°54.684', W084°30.783'	85.4	27.6			95.2		
460	LIFT 10, WP757, N35°54.687', W084°30.791'	84.9	27.4			94.7		
461	LIFT 10, WP758, N35°54.673', W084°30.797'	85.0	26.8			94.8		
462	LIFT 10, WP759, N35°54.668', W084°30.790'	84.6	28.1			94.3		
463	LIFT 10, WP760, N35°54.673', W084°30.783'	90.0	24.3			100.3		
464	LIFT 10, WP761, N35°54.679', W084°30.778'	87.1	27.7			97.1		
465	LIFT 10, WP762, N35°54.686', W084°30.772'	87.9	26.6			98.0		
466	LIFT 10, WP763, N35°54.682', W084°30.765'	81.7	31.1			91.0		
467	LIFT 10, WP 764, N35°54.676', W084°30.769'	81.3	29.9			90.6		
468	LIFT 10, WP765, N35°54.669', W084°30.775'	82.8	29.2			92.3		
469	LIFT 10, WP766, N35°54.664', W084°30.780'	82.0	30.0			91.4		

Remarks: FIELD DENSITY TEST 458 CORRESPONDS TO DT-038.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 4 of 6
Field Representative: RUSSELL MEHNERT	Report No:	Date: 10/8/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
470	LIFT 10, WP 767, N35°54.659', W084°30.772'	82.0	31.8	89.7	23.0	91.4	90.0	
471	LIFT 10, WP 768, N35°54.665', W084°30.765'	82.3	29.6			91.8		
472	LIFT 10, WP 769, N35°54.671', W084°30.760'	81.5	30.2			90.9		
473	LIFT 10, WP 770, N35°54.677', W084°30.752'	80.7	31.6			90.0		
474	LIFT 10, WP 771, N35°54.674', W084°30.774'	84.2	28.4			93.9		
475	LIFT 10, WP 772, N35°54.668', W084°30.749'	82.4	31.5			91.8		
476	LIFT 10, WP 773, N35°54.661', W084°30.755'	81.9	29.1			91.3		
477	LIFT 10, WP 774, N35°54.654', W084°30.758'	81.1	31.4			90.4		
478	LIFT 10, WP 775, N35°54.649', W084°30.763'	86.4	30.6			96.3		
479	LIFT 10, WP 776, N35°54.647', W084°30.753'	81.0	32.2			90.3		
480	LIFT 10, WP 777, N35°54.651', W084°30.751'	82.8	28.7			92.3		
481	LIFT 10, WP 778, N35°54.658', W084°30.744'	84.6	29.2			94.3		

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 5 of 6
Field Representative: RUSSELL MENNERT	Report No:	Date: 10/8/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
482	LIFT 10, WP779, N35°54.664', W084°30.737'	88.0	29.2	89.7	23.0	98.1	90.0	
483	LIFT 10, WP 780, N35°54.670', W084°30.731'	88.0	29.7			98.1		
484	LIFT 10, WP 781, N35°54.666', W084°30.723'	~~82.7~~ 82.5 RM	~~30.7~~ 31.1 RM			~~92.2~~ 92.0 RM		
~~485~~	RM							

Remarks: FIELD DENSITY TEST 484 CORRESPONDS TO DT-039.

UT

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 175660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 6
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/9/09	Day of the Week: Friday	
	Weather: Cloudy/Sunny/Raining	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT 322C Excavator, (1) JD 850J Bulldozer			
(1) Articulating Dump Truck, (1) CAT CS56 Smooth Drum			
Compactor, (2) John Deere 9520 Scraper Specials with 2			
Pans Each, (3) Laborers, (1) CAT D6N Bulldozer, (1) A.Ex.			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Russell Mehnert	Report No:	Date: 10/9/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, met with Mr. Kilby, foreman with Civil Projects, to discuss the test embankment area. Mr. Kilby informed Mr. Mehnert that Civil Projects would be finishing the erosion control plan.

Civil Projects, utilizing an amphibious CAT excavator, repaired the toe of the test embankment and the area around SI-4.

Mr. Mehnert, technician with Stantec, collected two moisture content samples from the fly ash that was delivered to the test embankment by two John Deer Scraper Specials, equipped with 2 pans each.

Civil Projects continued the construction of the erosion control plan by undercutting another 4000 cubic feet section, for which the 8oz non-woven geo-textile fabric could be placed. Then, Civil Projects, utilizing a bulldozer and 3 laborers, installed the last section of geo-textile fabric, approximately 300' x 15'. The last section of the geo-textile fabric was placed approximately 200' from the second section and is shown on the attached site sketch. The section ran from southwest to northeast and extended approximately 50' down the toe of the test embankment. Fly ash was bladed on top of the geo-textile fabric, on both sides, approximately 2', to hold the fabric in place and then sealed using a smooth drum compactor. Utilizing two bulldozers, Civil Projects contoured the area between the first and second, and the second and third geo-textile fabric drainage channels. Afterwards, the contoured area between the 1st and 2nd channel was sealed off using a smooth drum compactor. One articulated dump truck delivered 3" to 6" rip rap for the check dams that were going to be installed in each channel. Two check dams per drainage channel were installed utilizing a CAT 322C excavator. The check dams were 3" to 6" rip rap, placed approximately 100' apart and 2' wide. A smooth drum compactor sealed the contoured areas between the first and second drainage channels. In addition, a bulldozer was used to cut four berms per section of geo-textile fabric (drainage channel), in order to further promote drainage. The berms are approximately 100' apart and are shown on the attached site sketch. The fly ash that was delivered was used in between the three drainage channels and contoured to each channel. Lift 3, lift 5, lift 11 and lift 12 were placed within the test embankment and were approximately 415' x 415'.

Civil Projects, utilizing two John Deer 9520 Scraper Specials, with two pans each, delivered 83 loads of fly ash.

Total of 2,988 c.y.'s of ash placed.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30 p.m.

7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/9/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/11/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 67	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/10/09	Day of the Week: Saturday	
	Weather: Cloudy/Sunny/Raining	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert / Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT 322C Excavator, (1) JD 850J Bulldozer			
(1) Articulating Dump Truck, (1) CAT CS56 Smooth Drum			
Compactor, (2) John Deere 9520 Scraper Specials with 2			
Pans Each, (3) Laborers, (1) CAT D6N Bulldozer, (1) A.Ex.			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 67	Date: 10/10/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec, met with Mr. Kilby, foreman with Civil Projects, to discuss the test embankment area. Mr. Kilby informed Mr. Clark that Civil Projects would be finishing the erosion control plan.

Civil Projects, utilizing an amphibious CAT excavator, repaired the toe of the test embankment and the area around SI-4.

On this date, Mr. Clark and Ms. Berryman, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Clark assisted Ms. Berryman with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30 p.m.

7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 10/10/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 10/10/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 68	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/12/09	Day of the Week: Monday	
	Weather: Rain	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert / Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT 322C Excavator, (1) JD 850J Bulldozer			
(1) Articulating Dump Truck, (1) CAT CS56 Smooth Drum			
Compactor, (2) John Deere 9520 Scraper Specials with 2			
Pans Each, (3) Laborers, (1) CAT D6N Bulldozer, (1) A.Ex.			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test. Rutting and pumping.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 68	Date: 10/12/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Ms. Berryman, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Mehnert assisted Ms. Berryman with instrumentation readings the rest of the day.

0.3 inches of rain were accumulated in the on-site rain gauge.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30 p.m.

7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/12/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 10/13/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 69	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/13/09	Day of the Week: Tuesday	
	Weather: Rain	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert / Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT 322C Excavator, (1) JD 850J Bulldozer			
(1) Articulating Dump Truck, (1) CAT CS56 Smooth Drum			
Compactor, (2) John Deere 9520 Scraper Specials with 2			
Pans Each, (3) Laborers, (1) CAT D6N Bulldozer, (1) A.Ex.			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test. Rutting and pumping.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 69	Date: 10/13/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Ms. Berryman, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Mehnert assisted Ms. Berryman with instrumentation readings the rest of the day.

0.2 inches of rain were accumulated in the on-site rain gauge.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30 p.m.

7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/13/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 10/13/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 70	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/14/09	Day of the Week: Wednesday	
	Weather: Rain	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert / Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT 322C Excavator, (1) JD 850J Bulldozer			
(1) Articulating Dump Truck, (1) CAT CS56 Smooth Drum			
Compactor, (2) John Deere 9520 Scraper Specials with 2			
Pans Each, (3) Laborers, (1) CAT D6N Bulldozer, (1) A.Ex.			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test. Rutting and pumping.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 70	Date: 10/14/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr Mehnert and Ms. Berryman, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Mehnert assisted Ms. Berryman with instrumentation readings the rest of the day.

0.25 inches of rain were accumulated in the on-site rain gauge.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30 p.m.

7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/14/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 10/15/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 71	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/15/09	Day of the Week: Thursday	
	Weather: Heavy Rain	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test. Rutting and pumping.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 71	Date: 10/15/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Ms. Berryman, technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Layton assisted Ms. Berryman with instrumentation readings the rest of the day.

0.85 inches of rain were accumulated in the on-site rain gauge.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30 p.m.

7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/15/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 10/16/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 72	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/16/09	Day of the Week: Friday	
	Weather: Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test. Rutting and pumping.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 72	Date: 10/16/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Ms. Berryman, technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Layton assisted Ms. Berryman with instrumentation readings the rest of the day.

0.1 inches of rain were accumulated overnight in the on-site rain gauge.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30 p.m.

7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/16/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 10/16/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 73	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/17/09	Day of the Week: Saturday	
	Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test. Rutting and pumping.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 73	Date: 10/17/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Ms. Berryman, technician with Stantec, met with Mr. Jim Andrew, QC Manager with Stantec to discuss the test embankment area. Due to the wet conditions of the site, no fly ash was brought to the test embankment area and no tests were performed.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Andrew assisted Ms. Berryman with instrumentation readings the rest of the day.

Mr. Andrew met with Mr. Jim Kilby the CP Foreman for the test embankment, to discuss preparations required to repair storm damage on the embankment and also future placement activities as soon as conditions allow accessing the pad.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30 p.m.

7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/17/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 10/19/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 5
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/19/09	Day of the Week: Monday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) CAT 325C Excavator, (1) JD 850J Bulldozer	Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deer 7600 tractor w/ disk, (1) CAT CS56 Smooth	Density Gauge/3440	Troxler	19084/16
Drum Compactor, (1) CAT D6N Bulldozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 5
Stantec Field Representative: Russell Mehnert	Report No:	Date: 10/19/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, met with Mr. Kilby, foreman with Civil Projects, to discuss the test embankment area. Also, Mr. Andrew, QC manager with Stantec, met with Mr. Kilby to discuss dressing the western limit slope (3 to 1), the toe of the test embankment and the washout area underneath drainage channel 2 (DC2), due to precipitation runoff.

Civil Projects utilized an excavator to dress the western limit slope close to the projected 3 to 1 design. The excavator also repaired the area that was washed out underneath DC2. At the same time, Civil Projects utilized a JD 7600 tractor equipped with a disk and a CAT D6N bulldozer to scarify the lifts in between DC1 and DC2, DC2 and DC3 and DC3 to the eastern limit. The entire area that was scarified was resealed using a CAT smooth drum compactor. This area was approximately 260' x 950'.

Mr. Mehnert performed field nuclear density testing on material that was previously placed. This area was in between the western limit and the 1st drainage channel and was approximately 300' x 135'. Nuclear density test results are on the attached data sheets.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30 p.m.

7:00AM-6:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/19/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/20/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON-TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 3 of 5
Field Representative: RUSSELL MEHNERT	Report No:	Date: 10/19/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
1	ELE 778.64', WP 783, N35°54.692', W084°30.845'	93.0	27.7	89.7 ~~87.9~~	23.0	103.7	90.0	
2	ELE 778.50', WP 784, N35°54.697', W084°30.851'	99.1	25.6			110.5		
3	ELE 777.37', WP 785, N35°54.706', W084°30.847'	94.7	27.4			105.5		
4	ELE 777.48', WP 786, N35°54.700', W084°30.841'	96.3	27.3			107.3		
5	ELE 777.24', WP 787, N35°54.695', W084°30.835'	96.9	27.4			108.1		
6	ELE 776.02', WP 788, N35°54.699', W084°30.821'	93.1	26.7			103.8		
7	ELE 775.94', WP 789, N35°54.706', W084°30.834'	92.3	27.9			102.9		
8	ELE 775.78', WP 790, N35°54.711', W084°30.838'	98.9	25.7			110.2		
9	ELE 774.75', WP 791, N35°54.715', W084°30.831'	91.1	29.2			101.6		
10	ELE 774.84', WP 792, N35°54.714', W084°30.846'	98.1	26.0			110.0		
11	ELE 773.97', WP 793, N35°54.703', W084°30.817'	92.0	29.3			102.6		
12	ELE 772.99', WP 794, N35°54.710', W084°30.810'	93.2	28.6			103.9		

Remarks:

W

Stantec

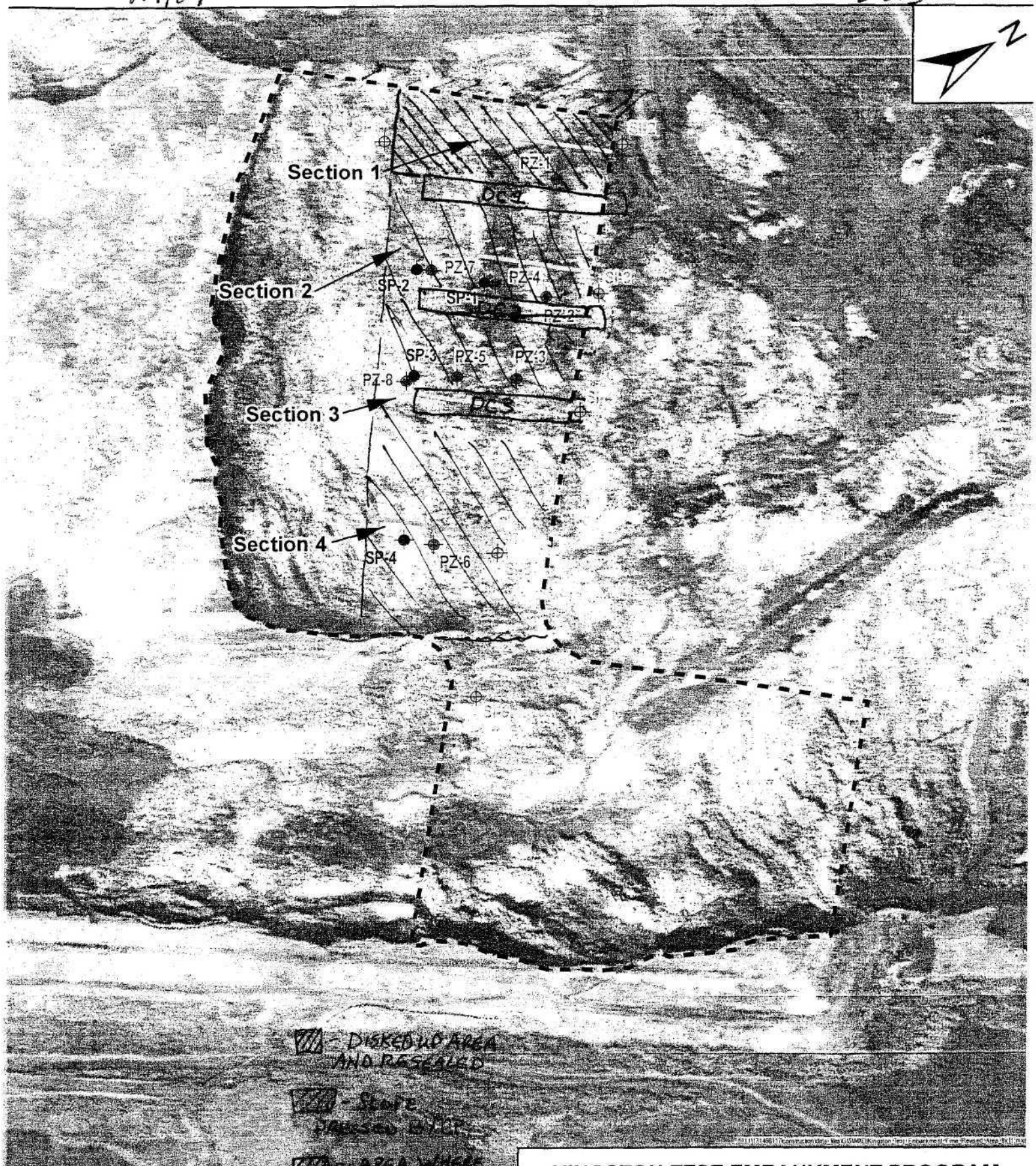
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVAKINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 4 of 5
Field Representative: RUSSELL MEHNERT	Report No:	Date: 10/19/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
13	ELEV 772.52', WP 795, N35°54.716', W084°30.816'	93.2	28.6	89.7	23.0	103.9	90.0	
14	ELEV 772.78', WP 796, N35°54.719', W084°30.814'	85.9	31.3	↓	↓	95.7	↓	

Remarks:



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 176660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/20/09	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) JD 850J Bulldozer, (1) John Deer 7600 Tractor w/ Disk	Type/Model	Manufacturer	Ser. No./ID No.
(1) CAT CS56 Smooth Drum Compactor	VW Data Recorder	Slope Indicator	32890/52613500
	Digital MEMS		75081/DR1013/
	Inclinometer System	RST	DP0463

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring within the test embankment and A ECOM instrumentation monitoring.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No:	Date: 10/20/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, took slope inclinometer readings within the test embankment. Slope inclinometers that were read are as follows; SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9. Mr. Andrew, QC manager with Stantec, assisted Mr. Mehnert with piezometer readings. Piezometer that were read are as follows; PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13. The collected data was sent to the Stantec office in Nashville, Tennessee, via e-mail, for analysis.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Instrumentation readings

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/20/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/21/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/20/09	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) JD 850J Bulldozer, (1) John Deer 7600 Tractor w/ Disk			
(1) CAT CS56 Smooth Drum Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No:	Date: 10/20/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, met with Mr. Kilby, foreman with Civil Projects, to discuss the test embankment area. Also, Mr. Andrew, QC manager with Stantec, and Mr. Layton, assistant QC manager w/ Stantec, met with Mr. Norfleet, head foreman with Civil Projects, and Mr. Kilby to discuss the test embankment area.

Civil Projects utilized a JD 850J bulldozer to spread out the fly ash that was removed from the western limit slope which was located between the western limit and the 1st drainage channel. Then, Civil Projects utilized a JD 7600 tractor equipped with a disk and a JD 850J bulldozer to scarify the entire test embankment. After the JD 7600 tractor scarified the test embankment, the JD 850J bulldozer bladed the test embankment to fill in low areas and cut out high areas. The area that had been scarified and bladed, between the western limit and the 3rd drainage channel, was resealed using a CAT smooth drum compactor. The area beyond drainage channel 3, within the test embankment, was not resealed. No field nuclear density testing was performed on the test embankment.

Mr. Mehnert, Mr. Andrew and Mr. Layton met with Don Thompson and Mr. Kilpatrick, Jacobs, to discuss stockpiled material in the ball field that could be used in the test embankment. Mr. Kilpatrick took Mr. Mehnert into the ball field to show him three stockpiles that could be used for the test embankment. Mr. Mehnert collected six moisture content samples from two of the stockpiles.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/20/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/21/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 10
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/21/09	Day of the Week: Wednesday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) CAT CS56 Smooth Drum Compactor, (1) John Deer	Type/Model	Manufacturer	Ser. No./ID No.
850J Bulldozer	Density Gauge/3440	Troxler	19084/16

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 9 10
Stantec Field Representative: Russell Mehnert	Report No:	Date: 10/21/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, met with Mr. Kilby, foreman with Civil Projects, to discuss the test embankment area.

Civil Projects utilized a JD 850J bulldozer to blade out the fly ash that was previously disked, which was in between the 3rd drainage channel and the eastern limit. Then, Civil Projects utilized a CAT smooth drum compactor to reseal the area. This area within the test embankment was approximately 455' x 410'. After the area was resealed, Ms. Berryman, technician with Stantec, assisted Mr. Mehnert in field nuclear density testing. The entire test embankment was checked for moisture and compaction and the results are on the attached data sheets.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:00 p.m.

7:00AM-7:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/21/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/22/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 3 of 9
Field Representative: RUSSELL MEHNERT / DARLENE BERRYMAN	Report No:	Date: 10/21/09

Test No.	Test Location / Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
1	ELE 780.001', WP 797, N35°54.686', W084°30.866'	89.3	27.1	89.7	23.0	99.5	90.0	
2	ELE 779.609', WP 798, N35°54.692', W084°30.859'	85.3	29.6			95.1		
3	ELE 779.118', WP 799, N35°54.694', W084°30.853'	87.7	26.2			97.8		
4	ELE 777.854' WP 800, N35°54.702', W084° 30.846'	86.4	26.9			96.4		
5	ELE 776.557' WP 801, N35°54.708', W084° 30.844'	82.4	30.0			91.8		
6	ELE 775.493' WP 802, N35°54.713', W084° 30.835'	91.3	24.7			101.8		
7	ELE 774.08' WP 803, N35°54.719', W084° 30.829'	86.1	28.9			96.0		
8	ELE 772.552' WP 804, N35°54.722', W084° 30.823'	88.3	24.7			98.4		
9	ELE 772.123' WP 805, N35°54.720', W084° 30.816'	83.2	29.1			92.7		
10	ELE 774.357' WP 806, N35°54.713', W084° 30.824'	84.2	29.1			93.9		
11	ELE 775.057' WP 807, N35°54.707', W084° 30.829'	85.9	27.8			95.8		
12	ELE 777.533' WP 808, N35°54.697', W084° 30.837'	88.6	26.4			98.8		

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA Kingston - Test Embankment Program	Project No: 175669015	Page No: 4 of 9
Field Representative: Russell Mehnert / Darlene Berryman	Report No:	Date: 10/2/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
13	ELE 778.816', WP 809, N35°54.692', W084°30.842'	88.9	25.9	89.7	23.0	99.1	90.0	
14	ELE 779.452', WP 810, N35°54.684', W084°30.858'	92.6	26.0			103.2		
15	ELE 781.29', WP 811, N35°54.674', W084°30.865'	91.6	22.8			102.1		
16	ELE 781.876', WP 812, N35°54.669', W084°30.855'	92.2	20.4			102.8		
17	ELE 779.716', WP 813, N35°54.675', W084°30.846'	87.9	25.1			98.0		
18	ELE 778.253', WP 814, N35°54.683', W084°30.836'	86.7	25.5			96.6		
19	ELE 776.874', WP 815, N35°54.690', W084°30.822'	84.7	25.4			94.4		
20	ELE 774.905', WP 816, N35°54.696', W084°30.815'	83.8	28.0			93.5		
21	ELE 773.751', WP 817, N35°54.703', W084°30.806'	88.1	26.0			98.2		
22	ELE 772.327', WP 818, N35°54.706', W084°30.798'	84.9	27.0			94.6		
23	ELE 773.278', WP 819, N35°54.699', W084°30.789'	93.0	25.3			103.6		
24	ELE 775.145', WP 820, N35°54.692', W084°30.800'	87.9	26.1			98.0		

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA Kingston - Test Embankment Program	Project No: 175669015	Page No: 5 of 9
Field Representative: Russell Mehnert / Darlene Berryman	Report No:	Date: 10/21/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
25	ELE 776.879', WP821, N35°54.685', W084°30.808'	90.9	22.9	89.7	23.0	101.4	90.0	
26	ELE 778.121', WP822, N35°54.679', W084°30.814'	90.0	25.2			100.3		
27	ELE 779.45', WP823, N35°54.670', W084°30.826'	89.4	25.4			99.7		
28	ELE 780.394', WP824, N35°54.659', W084°30.837'	89.6	24.2			99.9		
29	ELE 780.531', WP825, N35°54.652', W084°30.828'	90.7	23.6			101.2		
30	ELE 779.427', WP826, N35°54.660', W084°30.820'	~~90.7~~ 88.0	25.9			98.1		
31	ELE 778.075', WP827, N35°54.669', W084°30.809'	89.5	26.0			99.8		
32	ELE 777.036', WP828, N35°54.674', W084°30.802'	89.8	22.9			100.1		
33	ELE 775.495', WP829, N35°54.683', W084°30.793'	90.0	22.9			100.4		
34	ELE 773.488', WP830, N35°54.693', W084°30.782'	88.4	23.3			98.5		
35	ELE 774.416', WP831, N35°54.687', W084°30.770'	89.2	26.3			99.4		
36	ELE 776.237', WP832, N35°54.681', W084°30.775'	87.1	24.9	—	—	97.0	—	

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA- Kingston – Test Embankment Program	Project No: 175669015	Page No: 6 of 9
Field Representative: Russell Mehnert / Darlene Berryman	Report No:	Date: 10/21/09

Test No.	Test Location / Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
37	ELE 777.454', WP833, N35°54.672', W084°30.786'	88.4	24.7	89.7	23.0	98.6	90.0	
38	ELE 778.27', WP834, N35°54.6666', W084°30.793'	88.7	24.7			98.8		
39	ELE 779.383', WP835, N35°54.6659', W084°30.800'	87.5	27.2			97.6		
40	ELE 780.359', WP836, N35°54.650', W084°30.810'	87.6	23.2			97.7		
41	ELE 782.226', WP837, N35°54.642', W084°30.818'	89.1	21.9			99.3		
42	ELE 783.004', WP838, N35°54.638', W084°30.811'	87.1	22.5			97.1		
43	ELE 781.192', WP839, N35°54.644', W084°30.799'	82.8	27.3			92.4		
44	ELE 779.987', WP840, N35°54.651', W084°30.789'	86.2	26.1			96.1		
45	ELE 779.183', WP841, N35°54.6600', W084°30.780'	87.7	28.3			97.8		
46	ELE 778.237', WP842, N35°54.667', W084°30.774'	89.7	24.9			100.0		
47	ELE 777.022', WP843, N35°54.675', W084°30.763'	88.4	26.9			98.6		
48	ELE 775.505', WP844, N35°54.682', W084°30.758'	86.3	27.7			96.2		

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA Kingston – Test Embankment Project	Project No: 175669015	Page No: 7 of 9
Field Representative: Russell Mehnert / Darlene Berryman	Report No:	Date: 10/21/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
49	E/E 776.282', WP 845, N35°54.676', W084°30.746'	85.8	26.9	89.7	23.0	95.6	90.0	
50	E/E 777.558', WP 846, N35°54.665', W084°30.754'	82.2	26.7			91.6		
51	E/E 778.992', WP 847, N35°54.661', W084°30.759'	85.0	26.2			94.8		
52	E/E 780.204', WP 848, N35°54.649', W084°30.769'	83.8	27.1			93.4		
53	E/E 780.787', WP 849, N35°54.640', W084°30.776'	92.4	24.7			103.0		
54	E/E 782.358', WP 850, N35°54.630', W084°30.783'	89.2	24.0			99.4		
55	E/E 783.183', WP 851, N35°54.623', W084°30.773'	88.5	23.7			98.7		
56	E/E 781.843', WP 852, N35°54.631', W084°30.764'	84.8	28.1			94.5		
57	E/E ~~780.715'~~ 780.756', WP 853, N35°54.640', W084°30.757'	83.9	28.2			93.6		
58	E/E 780.195', WP 854, N35°54.650', W084°30.748'	83.4	25.8			93.0		
59	E/E 778.787', WP 855, N35°54.658', W084°30.741'	83.6	27.1			93.2		
60	E/E 777.572', WP 856, N35°54.666', W084°30.734'	84.9	28.3			94.6		

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA Kingston - Test Embankment Project	Project No: 1756069015	Page No: 8 of 9
Field Representative: Russell Mehnert / Darlene Berryman	Report No:	Date: 10/21/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
61	E/E 778.299', WP 857, N35°54.662', W084°30.721'	83.2	27.2	89.7	23.0	92.8	90.0	
62	E/E 779.059', WP 858, N35°54.655', W084°30.729'	80.9	28.7			90.2		
63	E/E 780.327', WP 859, N35°54.645', W084°30.737'	85.7	27.4			95.6		
64	E/E 780.807', WP860, N35°54.637', W084°30.742'	84.1	24.9			93.8		
65	E/E 782.003', WP861, N35°54.628', W084°30.752'	82.9	27.3			92.4		
66	E/E 783.907', WP862, N35°54.617', W084°30.755'	88.1	25.9			98.3		
67	E/E 782.001', WP863, N35°54.623' W084°30.741'	92.5	23.8			103.1		
68	E/E 780.948', WP864, N35°54.629', W084°30.733'	91.0	21.0			101.4		
69	E/E 780.595, WP865, N35°54.637', W084°30.726'	83.6	25.3			93.2		
70	E/E 779.162', WP866, N35°54.646', W084°30.718'	86.4	24.2			96.3		
71	E/E 778.205', WP867, N35°54.656', W084°30.711'	82.2	24.4			91.6		
72	E/E 778.472', WP868, N35°54.651', W084°30.698'	84.9	25.2	—	—	94.6	—	

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

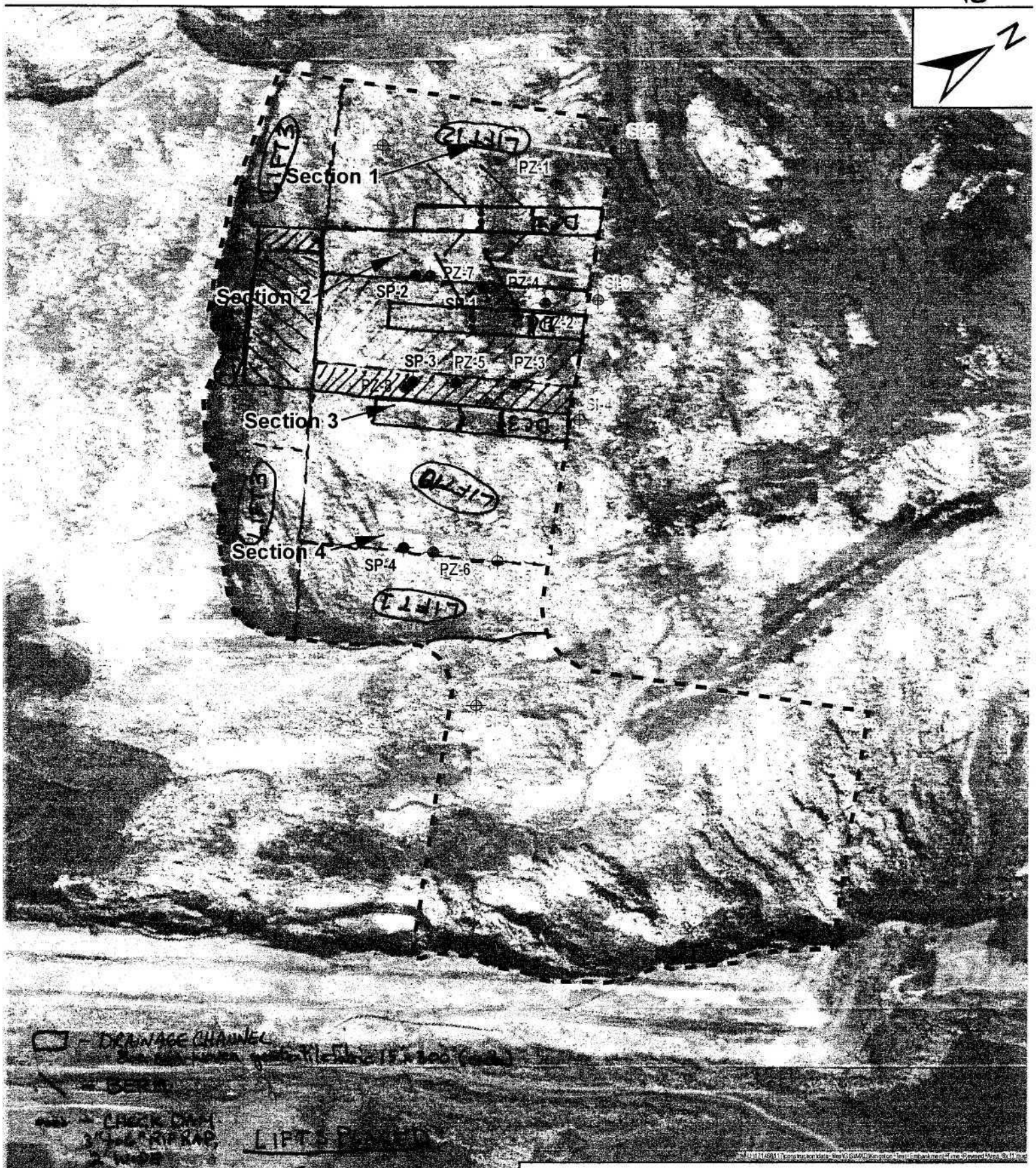
Project Name: TVA Kingston - Test Embankment Project	Project No: 175606901S	Page No: 9 of 9
Field Representative: Russell Mehnert & Darlene Berryman	Report No:	Date: 10/21/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
73	ELE 779.652', WP869, N35°54.1042', W084°30.704'	~~84.8~~ 85.8	~~25.2~~ 24.2	89.7	23.0	~~94.6~~ 95.6	90.0	
74	ELE 780.716', WP870, N35°54.633', W084°30.713'	84.9	24.5			94.7		
75	ELE 780.908', WP871, N35°54.623', W084°30.720'	94.9	19.2			105.8		
76	ELE 779.647', WP872, N35°54.625', W084°30.701'	87.0	23.0			97.0		
77	ELE 778.256', WP873, N35°54.631', W084°30.692'	85.4	25.6			95.2		
78	ELE 776.806', WP874, N35°54.641', W084°30.687'	88.3	26.8			98.4		
79	ELE 774.817', WP875, N35°54.650', W084°30.682'	89.0	26.4			99.2		
80	ELE 773.952', WP876, N35°54.645', W084°30.670'	90.5	26.1			100.9		
81	ELE 775.91', WP878, N35°54.637', W084°30.677'	94.1	25.5			104.9		
82	ELE 777.67', WP879, N35°54.627', W084°30.686'	88.0	24.7			98.1		
83	ELE 778.689', WP880, N35°54.619', W084°30.692'	90.7	25.2			101.1		
~~84~~	~~ELE , WP881, N35°54. , W084°30.~~							

DB

Remarks:

D



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services. Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/22/09	Day of the Week: Thursday	
	Weather: Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☐ Previously Reported
By:
On:

Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No:	Date: 10/22/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Also, Mr. Mehnert met with Mr. Kilby, foreman with Civil Projects, to discuss the test embankment. Due to the priority of TVA projects, no fly ash was allotted for use in the test embankment area. Therefore, progress in the test embankment had ceased. Mr. Mehnert assisted Ms. Berryman, technician with Stantec, with instrumentation readings throughout the rest of the day.

Mr. Layton informed Mr. Mehnert of an e-mail from Julie Pfeffer, of Jacobs, that stated any material in the ball field that is suitable for use in the test embankment could be sampled.

Mr. Mehnert contacted Mr. Kilpatrick, of Jacobs, to discuss material from the ball field that would be suitable for use in the test embankment. Mr. Kilpatrick informed Mr. Mehnert that he would escort him into the ball field to sample from the material being removed from the rim ditch of the sluice channel. Earlier in the morning, Mr. Mehnert visually observed the material in question, being removed by excavators. The material that Mr. Kilpatrick was referring to appeared to have excessively high moisture content and would have to be air-dried for at least several days before use in the test embankment. Mr. Kilpatrick also stated that the stockpiles of fly ash in the ball field were being air-dried for a couple of days, to acceptable moisture content, in order to be removed from the site by train. Apparently, Jacobs personnel have conflicting issues when it comes to the removal of fly ash other then by train.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/22/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/23/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/23/09	Day of the Week: Friday	
	Weather: Cloudy/Rainy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No:	Date: 10/23/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area and future stockpiles of fly ash in the ball field. Also, Mr. Mehnert met with Mr. Kilby, foreman with Civil Projects, to discuss the test embankment. Since no stockpiles of fly ash were allotted to the test embankment program, progress to the test embankment ceased.

Mr. Mehnert and Mr. Layton met with Mr. Kilpatrick, of Jacobs, at the ball field, to discuss possible stockpiles of fly ash that could be used in the test embankment. Mr. Kilpatrick escorted Mr. Mehnert and Mr. Layton onto the ball field to find suitable material for use in the test embankment. Mr. Mehnert collected two moisture content samples from two different stockpiles within the ball field. Mr. Layton informed Mr. Kilpatrick which stockpiles Stantec would be interested in for the test embankment.

Since fly ash for the test embankment and rain/wet conditions had stopped progress in the test embankment area, Mr. Mehnert assisted Ms. Berryman, technician with Stantec, with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	2:00p.m.

7:00AM-3:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/23/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/24/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 79	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/24/09	Day of the Week: Saturday	
	Weather: Cloudy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 79	Date: 10/24/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Ms. Berryman, technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area and future stockpiles of fly ash in the ball field. Also, Ms. Berryman with Mr. Kilby, foreman with Civil Projects, met to discuss the test embankment. Since no stockpiles of fly ash were allotted to the test embankment program, progress to the test embankment ceased.

Mr. Mehnert and Mr. Layton met with Mr. Thompson and Mr. Kilpatrick, of Jacobs, at the ball field, to discuss possible stockpiles of fly ash that could be used in the test embankment. Mr. Kilpatrick escorted Mr. Layton onto the ball field to find suitable material for use in the test embankment. Mr. Layton informed Mr. Kilpatrick which stockpiles Stantec would be interested in for the test embankment.

Since fly ash for the test embankment and rain/wet conditions had stopped progress in the test embankment area, Mr. Layton assisted Ms. Berryman, technician with Stantec, with instrumentation readings the rest of the day.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	2:00p.m.

7:00AM-3:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/24/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 10/26/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/26/09	Day of the Week: Monday	
	Weather: Mostly Cloudy	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Bulldozer, (1) John Deere 9520			
Scraper Special with two pans, (1) Smooth Drum Compactor	Density Guage/3440	Troxler	19084/16

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 10/26/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, Foreman with Civil Projects to discuss the test embankment area. Mr. Kilby in formed Mr. Mehnert and Mr. Clark that material from Dike D would be placed in the test embankment area. Mr. Mehnert collected three fly ash samples for moisture content.

Civil Projects placed fly ash in the northeastern area of the test embankment area using one tractor with two pull behind scrapers each. The scrapers end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to northwest. This area was approximately 310' x 175'. Civil Projects sealed a section of the area placed on this date, in the southern end, utilizing a smooth drum compactor. The area that was sealed was approximately 100' x 175'. On this date, no field nuclear density tests were performed.

On this date, Civil Projects utilizing two pull behind scrapers placed 100 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 10/26/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/27/09

10/26/09

Material Placed Between DC 2 & DC 3 (310' x 175')

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	175669016	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/27/09	Day of the Week: Tuesday	
	Weather: Mostly Cloudy/Rainy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) John Deere 850J Bulldozer, (2) John Deere 9520			
Scraper Special with two pans, (1) Smooth Drum Compactor	Density Guage/3440	Troxler	19084/16

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 10/27/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, Foreman with Civil Projects to discuss the test embankment area. Mr. Kilby in formed Mr. Mehnert and Mr. Clark that material from Dike D would be placed in the test embankment area. Mr. Mehnert and Mr. Clark visually checked the stockpiles on Dike D.

Civil Projects placed fly ash in the northeastern area of the test embankment area using two tractors with two pull behind scrapers each. The scrapers end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to northwest. This area was approximately 80' x 175' and 250' x 200'. The areas that were placed on this date were not sealed due to excessive moisture. On this date, no field nuclear density tests were performed. At approximately 2:30 pm, Mr. Clark, Mr. Mehnert, Mr. Kilby and Mr. Andrew, QC manager with Stantec had a meeting at the stockpiles on Dike D to discuss the test embankment area. Due to rain and unsafe conditions within the test embankment, Mr. Andrew informed Mr. Kilby to cease all operations within the test embankment area.

On this date, Civil Projects utilizing four pull behind scrapers placed 130 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 10/27/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/28/09

1 ▨ - AREA OF PLACEMENT FOR TODAY - 275'x80'

2 ▨ - AREA OF PLACEMENT FOR TODAY - 250' x 200'

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175660016 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	
Distribution:	

Project No.: 175669015	Rep No.:	Page No: 1 of 3
Project Name: TVA Kingston – Test Embankment Program		
Location or Address: Kingston, Tennessee		
Date: 10/28/09	Day of the Week: Wednesday	
Weather: Partly Cloudy/Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) John Deere 850J Bulldozer, (2) John Deere 9520			
Scraper Special with two pans, (1) Smooth Drum Compactor	Density Guage/3440	Troxler	19084/16

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 10/28/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, Foreman with Civil Projects, to discuss the test embankment area. Mr. Kilby in formed Mr. Mehnert and Mr. Clark that material from Dike D would be placed in the test embankment area. Mr. Mehnert obtained moisture content samples from the southern stockpile on Dike D.

Before placing fly ash on this date, Civil Projects clipped off approximately three inches of wet material utilizing two dozers. This material was bladed over the toe of the test embankment area. One section was in the northwestern area and the other section was in the northeastern area. These areas were left open to air dry.

Civil Projects placed fly ash in the northeastern area of the test embankment area using two tractors with two pull behind scrapers each. The scrapers end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to northwest. This area was approximately 260' x 150'. The area that was placed on this date was not sealed due to excessive moisture. On this date, no field nuclear density tests were performed.

On this date, Civil Projects utilizing four pull behind scrapers placed 90 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 10/28/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/29/09

Area placed on this date approximately 240' x 150'

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175669016 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/29/09	Day of the Week: Thursday	
	Weather: Mostly Cloudy/Rainy	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(3) John Deere 850J Bulldozer, (2) John Deere 9520	Type/Model	Manufacturer	Ser. No./ID No.
Scraper Special with two pans, (1) Smooth Drum Compactor	Density Guage/3440	Troxler	19084/16
(2) Articulated Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No [X] Yes

Did you observe anything unexpected? [X] No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 14
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 10/29/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Kilby, Foreman with Civil Projects, to discuss the test embankment area. Mr. Kilby in formed Mr. Mehnert and Mr. Clark that material from the relic area would be placed on this date.

Before placing fly ash on this date, Civil Projects clipped approximately six inches of wet material between drainage channel one and three utilizing two dozers. This material was left open to air dry. Near the end of the shift, Civil Projects utilized a smooth drum compactor to seal the material between drainage channel one and two.

Civil Projects moved saturated material from the relic placement area on Dike D to the northeastern section of the test embankment area for wet storage utilizing two articulated dump trucks. This material will be used within the test embankment area at a later date when the material reaches workable moisture content.

Civil Projects placed fly ash in the northwestern area of the test embankment area using two tractors with two pull behind scrapers each. The scrapers end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northwest to northeast. This area was approximately 220' x 130'. The area that was placed on this date was sealed with the smooth drum compactor. Mr. Clark performed field nuclear density tests on the material that was placed on this date.

On this date, Civil Projects utilizing four pull behind scrapers placed 328 loads.

On this date, Civil Projects utilizing two articulated dump trucks moved 45 loads of saturated material to the test embankment for wet storage.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 10/29/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/31/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: 3 of 4
Field Representative: **Ryan Clark**	Report No:	Date: 10-29-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
1	Wp 880, N35°54.684', W084°30.855', ELE 779.565'	89.1	26.6	89.7	23.0	99.3	90.0	
2	Wp 881, N35°54.695', W084°30.851', ELE 778.606'	86.3	28.7			96.2		
3	Wp 882, N35°54.704', W084°30.843', ELE 777.132'	86.3	28.5			96.2		
4	Wp 883, N35°54.709', W084°30.836', ELE 775.982'	86.3	28.1			96.3		
5	Wp 884, N35°54.713', W084°30.827', ELE 775.311'	89.0	28.9			99.3		
6	Wp 885, N35°54.720', W084°30.821', ELE 774.111'	86.1	32.8			96.0		
7	Wp 886, N35°54.716', W084°30.809', ELE 773.755'	81.2	26.9			90.5		
8	Wp 887, N35°54.711', W084°30.815', ELE 775.036'	81.1	31.3			90.2		
9	Wp 888, N35°54.704', W084°30.824', ELE 776.108'	86.5	28.5			96.4		
10	Wp 889 N35°54.698', W084°30.831', ELE 777.565'	92.0	31.2			102.5		
11	Wp 890 N35°54.690, W084°30.843', ELE 778.668'	92.1	26.0			102.6		

Remarks:

= wet storage area

= area when material was placed ± 240' x 120'

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	175669015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 5
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/30/09	Day of the Week: Friday	
	Weather: Partly Cloudy	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(2) John Deere 850J Bulldozer, (2) John Deere 9520	Type/Model	Manufacturer	Ser. No./ID No.
Scraper Special with two pans, (1) Smooth Drum Compactor	Density Guage/3440	Troxler	16
	Density Guage/3440	Troxler	26

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 5
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 10/30/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Forrester, Assistant Foreman with Civil Projects, to discuss the test embankment area. Mr. Forrester in formed Mr. Mehnert and Mr. Clark that material from the relic area would be placed on this date.

Civil Projects placed fly ash in the northwestern area of the test embankment area using two tractors with two pull behind scrapers each. The scrapers end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northwest to northeast. This area was approximately 215' x 135'. The area that was placed on this date was sealed with the smooth drum compactor. Mr. Clark performed field nuclear density tests on the material that was placed on this date. Mr. Clark and Mr. Mehnert also performed two drive cylinders correlating with two field nuclear density tests.

Near the end of the shift, Civil Projects sealed the entire test embankment area utilizing a smooth drum compactor for the anticipated precipitation.

On this date, Civil Projects utilizing four pull behind scrapers placed 352 loads.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 10/30/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 10/31/09

Stantec

Density of Soil in Place by the Drive-Cylinder Method
ASTM D 2937

Project Name TVA Kingston - Test Embankment Program

Project Number 175769015
Technician DB
Date 10/30/09

C-Nuke
10.7%.
12.5%.

Drive Cylinder ID	Ref Tag	Source	Depth	Description	Wet Soil and Cylinder Mass (g)	Moisture Content (%)	Moisture Content Method
DT-040	L	WP887, N35°54.711', W084°30.815'	4"	Fly Ash	733.0	35.5	Hot Plate
DT-041	B	WP885, N35°54.720', W084°30.821'	4"	Fly Ash	723.0	35.5	Hot Plate

Comments

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: of
Field Representative: **Ryan Clark** / RUSSELL MEHNERT	Report No:	Date: 10/30/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
*1	Wp 887, N35°54.711', W084°30.815', ELE 775.036'	80.8	30.7	89.7	23.0	90.0	90.0	
*2	Wp 885, N35°.54.720', W084°30.821', ELE 774.111'	81.1	32.5	〃	〃	90.4	〃	
~~1~~	~~WP 891, N35°54.704, W084°30.841'~~ RM							

Remarks: 1* re-test of test 8 from previous day for drive cylinder comparison
2* " " " 6 " " " " " " " "

10-30-09

5 of 5

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/31/09	Day of the Week: Saturday	
	Weather: Cloudy/Rainy	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 10/31/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to rainy weather and alarm conditions that exceed test guidelines, no fly ash would be placed in the test embankment area on this date.

Since rain/wet conditions had stopped progress in the test embankment area, Mr. Clark assisted Mr. Layton with instrumentation readings the rest of the day.

The rain gauge on site indicated 1.4" of rain for 24 hours.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 10/31/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11/2/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/2/09	Day of the Week: Monday	
	Weather: Partly Cloudy/Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 11/2/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Mehnert, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Mr. Mehnert that due to rise in pore pressure within the test embankment, no fly ash would be placed in the test embankment area on this date. Mr. Clark obtained moisture content samples from the relic structure.

On this date, Mr. Mehnert and Mr. Clark assisted Ms. Berryman, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/2/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11/03/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/3/09	Day of the Week: Tuesday	
	Weather: Partly Cloudy/Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 11/3/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Mehnert, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Mr. Mehnert that due to rise in pore pressure within the test embankment, no fly ash would be placed in the test embankment area on this date.

On this date, Mr. Mehnert and Mr. Clark assisted Ms. Berryman, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/3/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11/4/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 11/4/09	Day of the Week: Wednesday
	Weather: Partly Cloudy/Sunny	Temperature: 70's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (1) Cat 325C Excavator, (1) Cat CS-563E Smooth Drum Compactor	3440	Troxler	26
(11) Articulated Dump Trucks (1) Brown Bear 500 (1) John Deere Tractor with pull behind disk			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 11/4/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Mehnert, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Mr. Mehnert that material from Dike D and the Ball Field would be placed within the test embankment on this date. Moisture samples were obtained from stockpiles on Dike D and from the Ball Field.

Civil Projects placed fly ash in the northwestern area of the test embankment area using eleven articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to southwest. This area was approximately 215' x 333'.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using eleven articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to southwest. This area was approximately 100' x 215'.

In the northwestern corner of the test embankment, Civil Projects utilized a John Deere tractor with a pull behind disk to scarify an area of approximately 126' x 311'. This area was left open to air dry for a couple of hours, then sealed with a smooth drum compactor.

Jacobs utilized a Brown Bear 500 to wind row a section in the northeastern area of the test embankment. This area was approximately 283' x 215'.

Due to excessive moisture, no field nuclear density tests were performed on this date.

On this date, Civil Projects placed 135 loads of fly ash from Dike D utilizing six articulated dump trucks.

On this date, Civil Projects placed 39 loads of fly ash from the Ball Field utilizing five articulated dump trucks.

Stantec Field Representative's Activities

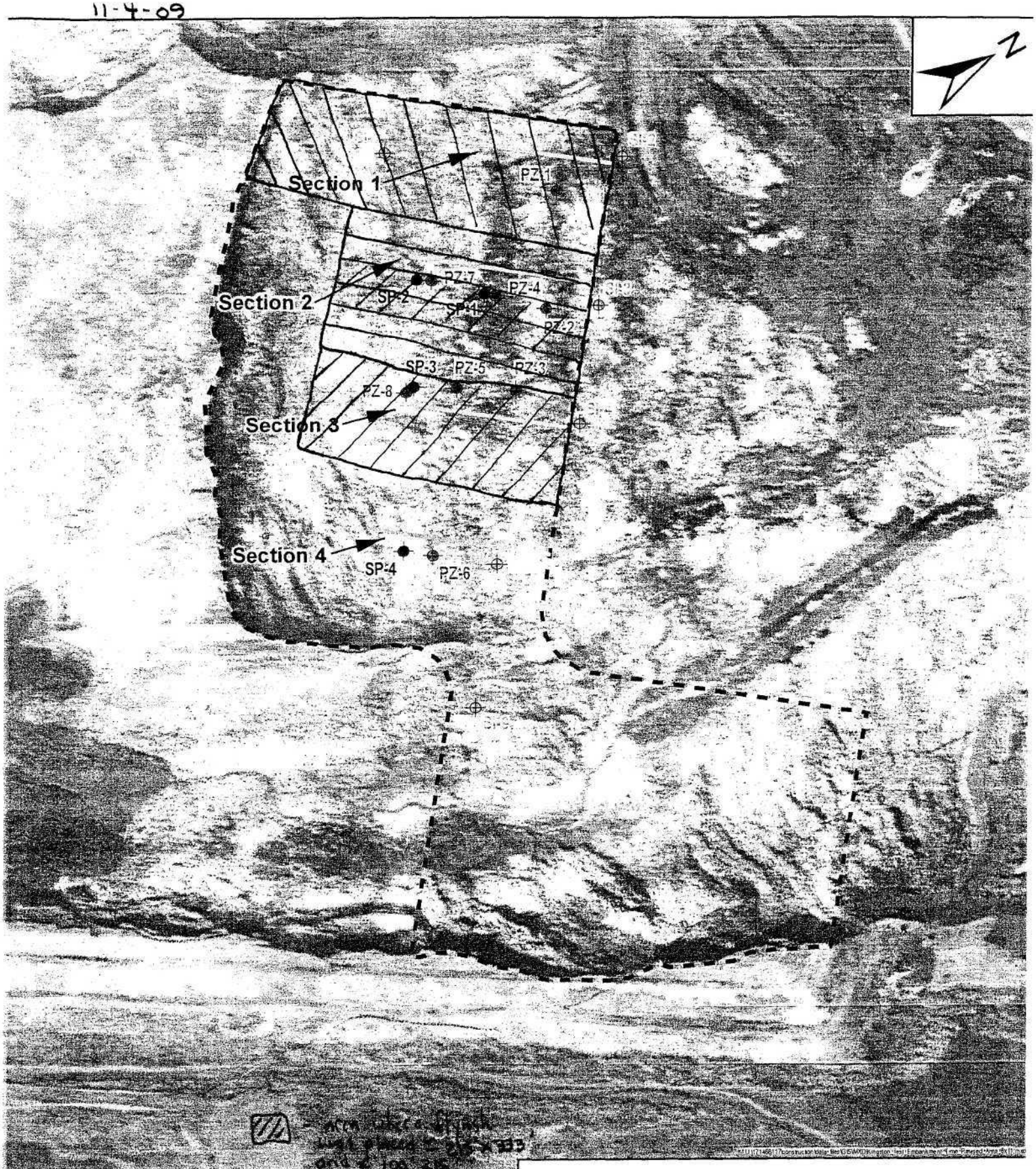
Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/4/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11/6/09

11-4-09



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	175660015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/5/09	Day of the Week: Thursday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (1) Cat 325C Excavator, (1) Cat CS-563E Smooth Drum Compactor	3440	Troxler	26
(6) Articulated Dump Trucks (1) Brown Bear 500 (1) John Deere Tractor with pull behind disk (2) John Deere Scraper Specials with two pans each			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 11/5/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Mehnert, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Mr. Mehnert that material from the relic area and the Ball Field would be placed within the test embankment on this date. Mr. Mehnert obtained moisture content samples from fly ash placed in the test embankment area from the relic area and the Ball Field.

Civil Projects placed fly ash in the northwestern area of the test embankment area using six articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to southwest. This area was approximately 215' x 333'.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using two scraper specials with two pans each. The tractors dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to southwest. This area was approximately 117' x 293'.

In the northeastern corner of the test embankment, Civil Projects utilized a John Deere tractor with a pull behind disk to scarify an area of approximately 293' x 179'. This area was left open to air dry.

Jacobs utilized a Brown Bear 500 to wind row a section in the northeastern area of the test embankment. This area was approximately 283' x 215'.

Due to excessive moisture, no field nuclear density tests were performed on this date.

On this date, Civil Projects placed 112 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 75 loads of fly ash from the Ball Field utilizing six articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/5/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11/12/09

11-5-09

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	175669015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/6/09	Day of the Week: Friday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (1) Cat 325C Excavator (1) Cat CS-563E Smooth Drum Compactor			
(6) Articulated Dump Trucks, (1) John Deere Tractor with pull behind disk, (3) John Deere Scraper Specials with two pans each			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 11/6/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Mehnert, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Mr. Mehnert that material from the relic area and the Ball Field would be placed within the test embankment on this date. Mr. Mehnert obtained moisture content samples from fly ash placed in the test embankment area from the relic area and the Ball Field.

Civil Projects placed fly ash in the northwestern area of the test embankment area using three scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to southwest. This area was approximately 215' x 333'. This material was hauled to the test embankment area from the relic structure. Civil Projects mixed this fly ash with the material that was placed on the previous day utilizing a dozer and tractor with pull behind disk. This area was left open to air dry.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using six articulated dump trucks. The dump trucks dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to southwest. This area was approximately 117' x 293'. This material was hauled to the test embankment area from the ball field. Civil Projects mixed this material with the fly ash that was placed on the previous day utilizing a dozer and tractor with pull behind disk. This area was left open to air dry.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using six articulated dump trucks. The dump trucks dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to southwest. This area was approximately 179' x 293'. This area was left open to air dry.

Civil Projects utilized an excavator and a bulldozer to mix material previously stockpiled on the northeastern area of the test embankment.

Due to excessive moisture, no field nuclear density tests were performed on this date.

On this date, Civil Projects placed 67 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

On this date, Civil Projects placed 86 loads of fly ash from the Ball Field utilizing six articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The *presence and activities of our field* representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/6/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11/09/09

11-6-03

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

area where material was placed on this date

area that was disked

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MRP	PROJECT NO.	175660015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 91	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/7/09	Day of the Week: Saturday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (1) Cat 325C Excavator (1) Cat CS-563E Smooth Drum Compactor (6) Articulated Dump Trucks, (1) John Deere Tractor with pull behind disk, (3) John Deere Scraper Specials with two pans each			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ X ☐ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly. Check for drying of ash and possible testing.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No: 91	Date: 11/7/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Mehnert, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Mr. Mehnert that material from the relic area and the Ball Field would be placed within the test embankment on this date. Mr. Mehnert obtained moisture content samples from fly ash placed in the test embankment area from the relic area and the Ball Field.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using six articulated dump trucks. The dump trucks dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to southwest. This area was approximately 200' X 150'. This material was hauled to the test embankment area from the ball field and the Valley Area. Civil Projects mixed this material with the fly ash that was placed on the previous day utilizing a dozer and tractor with pull behind disk. This area was left open to air dry.

Civil Projects also placed fly ash in the northcentral area of the test embankment area using articulated dump trucks. The dump trucks dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to southwest. This area was approximately 100' x 185'. This area was left open to air dry.

Civil Projects utilized an excavator and a bulldozer to mix material previously stockpiled on the northeastern area of the test embankment.

Due to excessive moisture, no field nuclear density tests were performed on this date.

On this date, Civil Projects placed 58 loads of fly ash from the Valley Area utilizing three articulated dump trucks

On this date, Civil Projects placed 79 loads of fly ash from the Ball Field utilizing five articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 11/7/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 11/09/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 11/9/09	Day of the Week: Monday
	Weather: Cloudy	Temperature: 60's

Page No: 1 of 5

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (1) John Deere 750J Dozer, (2) Smooth Drum Compactor	3440	Troxler	26
(10) Articulated Dump Trucks, (1) John Deere Tractor with pull behind disk, (3) John Deere Scraper Specials with two pans each			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 5
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 11/9/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Mehnert, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec, to discuss the test embankment area. Mr. Andrew informed Mr. Clark and Mr. Mehnert that material from the relic area and the Ball Field would be placed within the test embankment on this date. Mr. Mehnert obtained moisture content samples from fly ash placed in the test embankment area from the Ball Field.

Mr. Clark and Mr. Mehnert performed field nuclear density tests on an area in the northeastern section of the test embankment area that was placed on a previous date. This area was approximately 250' x 260'. Civil Projects then placed fly ash on this area utilizing ten articulated dump trucks and three scraper specials with two pans each. The dump trucks and tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to southeast. The area was then sealed utilizing two smooth drum compactors.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using ten articulated dump trucks. The dump trucks dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to southwest. This area was approximately 250' x 60'. This material was hauled to the test embankment area from the ball field. The area was then sealed utilizing two smooth drum compactors.

Civil Projects also placed fly ash in the southeastern area of the test embankment area using three scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from southeast to southwest. This area was approximately 600' x 70'. The area was then sealed utilizing two smooth drum compactors.

On this date, Civil Projects placed 129 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

On this date, Civil Projects placed 123 loads of fly ash from the Ball Field utilizing ten articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/9/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 111/12/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: **Kingston-KIF Test Embankment Program**	Project No: **175569015**	Page No: 3 of 5
Field Representative: **Ryan Clark**	Report No:	Date: 11-3-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
1	WP310, N35°54.704', W088°30.865'	87.9	28.0	89.7	23.0	97.7	90.0	
2	WP311, N35°54.697', W088°30.797'	82.7	27.8			92.1		
3	WP312, N35°54.691', W088°30.787'	87.7	30.8			97.7		
4	WP313, N35°54.685', W088°30.776'	86.6	27.7			96.6		
5	WP314, N35°54.676, W088°30.780'	83.2	26.6			93.7		
6	WP315, N35°54.680', W088°30.791'	81.0	29.0			93.6		
7	WP316, N35°54.687', W088°30.800'	88.1	27.6			98.2		
8	WP317, N35°54.692', W088°30.807'	81.7	29.8			90.7		
9	WP318, N35°54.697', W088°30.816'	80.7	29.2			90.0		
10	WP319, N35°54.691', W088°30.824'	80.8	29.9			90.1		
11	WP320, N35°54.685', W088°30.815'	86.5	27.0			96.4		
12	WP321, N35°54.677', W088°30.807'	89.0	26.1			99.3		

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Kingston - KIF Test Embankment Program	Project No: 175563015	Page No: 4 of 5
Field Representative: Ryan Clark / Russell Mehnert	Report No:	Date: 11-3-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
13	WP922, N35°54.671', W084°30.795'	86.7	28.1	89.7	23.0	96.6	90.0	
14	WP923, N35°54.665', W084°30.790'	88.7	26.5			98.9		
15	WP924, N35°54.656', W084°30.796'	91.3	26.9			101.8		
16	WP925, N35°54.661', W084°30.806'	87.3	27.4			97.3		
17	WP926, N35°54.667', W084°30.816'	90.4	26.7			100.8		
18	WP927, N35°54.674', W084°30.824'	86.2	28.2			96.0		
19	WP928, N35°54.679', W084°30.830'	87.1	29.1			97.1		
20	WP929, N35°54.668', W084°30.835'	86.3	29.6			96.2		
21	WP930, N35°54.662', W084°30.827'	90.5	27.8			100.9		
22	WP931, N35°54.657', W084°30.818'	86.1	29.7			96.0		
23	WP932, N35°54.650', W084°30.808'	84.9	29.5			94.6		

Remarks:

= area where material was placed on this date
South ± 600' x 70'
Northeast ± 250' x 200'
and ± 250 x 100'

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175669015 | DATE

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/10/09	Day of the Week: Tuesday	
	Weather: Cloudy/Rainy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (1) Smooth			
Drum Compactor, (6) Articulated Trucks, (3) John Deere			
Scraper Specials with two pans each			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 11/10/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Mehnert, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec, to discuss the test embankment area. Mr. Andrew informed Mr. Clark and Mr. Mehnert that material from the relic area and the Ball Field would be placed within the test embankment on this date. Mr. Clark visually checked the fly ash that was hauled to the test embankment area.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using six articulated dump trucks. The dump trucks dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from northeast to southwest. This area was approximately 200' x 120'. This material was hauled to the test embankment area from the ball field. The area was then sealed utilizing a smooth drum compactor.

Civil Projects also placed fly ash in the southeastern area of the test embankment area using three scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 10" lift from southeast to southwest. This area was approximately 150' x 70'. This material was hauled to the test embankment area from the relic structure. The area was then sealed utilizing a smooth drum compactor.

On this date, due to excessive rain, Civil Projects shut down test embankment construction at approximately 10:30 AM.

On this date, Civil Projects placed 42 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

On this date, Civil Projects placed 30 loads of fly ash from the Ball Field utilizing six articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/10/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11/12/09

= area where material was placed on this date = 120' x 200' and = 70' x 150'

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 175660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/11/09	Day of the Week: Wednesday	
	Weather: Partly Cloudy/Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 11/11/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Mehnert, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec, and Mr. Kilby, Foreman with Civil Projects, to discuss the test embankment area. Due to precipitation from the previous day and unsafe conditions of the test embankment area, no work was performed on this date.

Mr. Mehnert and Mr. Clark assisted Ms. Berryman, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/11/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11/12/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/12/09	Day of the Week: Thursday	
	Weather: Partly Cloudy/Sunny	Temperature: 62°	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) John Deere 750J Dozer,			
(1) Cat D6N Dozer, (2) Cat 325C Excavators			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 11/12/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Mehnert, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec, and Mr. Kilby, Foreman with Civil Projects, to discuss the test embankment area.

Civil Projects utilized two excavators to remove and reset settlement plate 3 (SP-3). While the material around the plate was being removed by one of the excavators, Mr. Mehnert and Mr. Clark obtained 4 moisture content samples at random depths. The material that was removed around the excavator was replaced and re-compacted utilizing one of the excavator. As the settlement plate was removed and reset, 3 bulldozers scarified 2' into the entire test embankment due to 1.2" of precipitation Tuesday.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/12/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11/13/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 6
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/13/09	Day of the Week: Friday	
	Weather: Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
	Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (1) John Deere 750J Bulldozer, (1) Cat CS-563E Smooth Drum	Density Guage/3440	Troxler	19084/16
Compactor (6) Articulated Dump Trucks, (1) John Deere Tractor with pull behind disk (2) John Deere Scraper Specials with two pans each			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 1 of 6
Stantec Field Representative: Darlene Berryman/Russell Mehnert	Report No:	Date: 11/11/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Ms. Berryman and Mr. Mehnert, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec, to discuss the test embankment area. Mr. Andrew informed Ms. Berryman and Mr. Mehnert that material from the relic area and the Ball Field would be placed within the test embankment on this date.

On this date, Mr. Andrew and Mr. Layton, Assistant QC Manager with Stantec, extended settlement plate 3 (SP-3) and slope inclinometer 5 (SI-5).

On this date, Mr. Mehnert, assisted by Ms. Berryman and Mr. Andrew, performed nuclear field density testing to the east of settlement plate 3 (SP-3). This area was approximately 427' x 324'. On the attached data sheets are the results from the nuclear field density tests.

Before Civil Projects started hauling material from the Ball Field, Mr. Mehnert and Mr. Andrew visually checked stockpiles in the Ball Field.

Civil Projects placed fly ash in the southeastern to southwestern area of the test embankment area using two John Deere Scraper Specials equipped with 2 pull behind pans. The Scraper Specials loaded fly ash from the relic structure and emptied their pans near the placement area where a bulldozer operator bladed it into an approximate 8" to 12" lift from southeast to southwest. This area was approximately 1100' x 70'.

Civil Projects used a John Deere 750J Bulldozer to scarify down approximately 2' into the test embankment. This area was from the western limit to settlement plate 4 (SP-4).

Civil Projects also placed fly ash in the northeastern area of the test embankment area using six articulated dump trucks. The articulated dump trucks end dumped the fly ash near the placement area and the dozer operator bladed it into an approximate 8" to 12" lift from northwest to southeast. This area was approximately 210' x 210'.

On this date, Civil Projects placed 90 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 51 loads of fly ash from the Ball Field utilizing six articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert/Darlene Berryman	**Date** 11/13/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11/17/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA KINGSTON - TESTEMP. PROGRAM Location or Address: _____ Project No.: 175669015 Report No. _____ Date: 11/13/09

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	ELE 785.030, N 35°54.650', W084°30.712', WP933	84.2	27.2	17.1-23.1	91.5	21.1	92.1	90.0	
2	ELE 786.047, N 35°54.643', W084° 30.717', WP934	88.0	28.4				96.1		
3	ELE 786.982, N 35°54.639', W084°30.724', WP935	88.1	27.1				96.3		
4	ELE 787.233, N 35°54.635', W084° 30.726', WP937	88.7	27.0				97.0		
5	ELE 787.909, N 35°54.639', W084° 30.733', WP938	88.4	26.4				96.6		
6	ELE 787.603, N35°54.643', W084° 30.729', WP939	89.5	25.5				97.8		
7	ELE 786.647, N 35°54.646', W084° 30.726', WP940	90.1	25.9				98.5		
8	ELE 786.031, N 35° 54.654', W084° 30.719', WP941	88.5	24.4				96.7		
9	ELE 785.751, N 35°54.658', W084°30.722', WP942	88.3	25.9				96.5		
10	ELE 786.569, N 35°54.661', W084° 30.734', WP943	85.6	27.3				93.5		
11	ELE 787.168, N 35° 54.648', W084° 30.738', WP944	86.8	27.6				94.9		
12	ELE 787.737, N 35°54.645', W084°30.742', WP945	88.8	27.3				97.1		
13	ELE 788.057, N 35°54.636', W084° 30.748', WP946	84.9	31.0				92.8		
14	ELE 788.674, N 35°54.638', W084° 30.751', WP947	89.0	27.2				97.2		
15	ELE 789.309, N 35°54.624', W084° 30.755', WP948	86.3	28.5				94.3		
16	ELE 789.350, N 35°54.628', W084° 30.764', WP949	87.7	27.2				95.9		
17	ELE 788.677, N 35°54.631', W084° 30.760', WP950	85.2	28.6				93.1		
18	ELE 788.623, N 35°54.639', W084° 30.754', WP951	88.7	28.3	↓	↓	↓	96.9	↓	

Comments: _____

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA KINGSTON - TEST EMB. PROGRAM Location or Address: _____ Project No.: 175669015 Report No. _____ Date: 11/13/09

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
19	ELE 788.419, N35°54.644', W084°30.747', WP952	87.1	27.9	17.1-23.1	91.5	21.1	95.1	90.0	
20	ELE 788.029, N35°54.649', W084°30.740', WP953	85.3	27.7				93.2		
21	ELE 787.214, N35°54.653', W084°30.738', WP954	88.8	26.3				97.1		
22	ELE 786.219, N35°54.660', W084°30.732', WP955	88.7	26.7				96.9		
23	ELE 786.474, N35°54.666', W084°30.742', WP956	83.9	32.1				91.7		
24	ELE 787.597, N35°54.660', W084°30.747', WP957	82.8	30.5				90.5		
25	ELE 788.445, N35°54.653', W084°30.753', WP958	85.9	28.2				93.8		
26	ELE 789.098, N35°54.650', W084°30.757' WP959	83.2	29.3				90.9		
27	ELE 789.574, N35°54.643', W084°30.764', WP960	88.4	28.3				96.6		
28	ELE 789.832, N35°54.638', W084°30.768', WP961	84.4	28.9				92.2		
29	ELE 789.951, N35°54.632', W084°30.775', WP962	83.5	30.3				91.3		
30	ELE 789.854, N35°54.639', W084°30.782', WP963	83.8	29.1				91.6		
31	ELE 789.466, N35°54.647', W084°30.778', WP964	86.3	28.3				94.3		
32	ELE 788.734, N35°54.649', W084°30.774', WP965	85.9	30.6				93.8		
33	ELE 788.057, N35°54.656', W084°30.768', WP966	83.7	30.0				91.5		
34	ELE 787.268, N35°54.660', W084°30.759', WP967	86.0	28.8				94.0		
35	ELE 786.308, N35°54.665', W084°30.755', WP968	87.0	28.2				95.1		
36	ELE 785.746, N35°54.671', W084°30.764', WP969	90.0	22.9	✓	✓	✓	98.4	✓	

Comments: _____

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

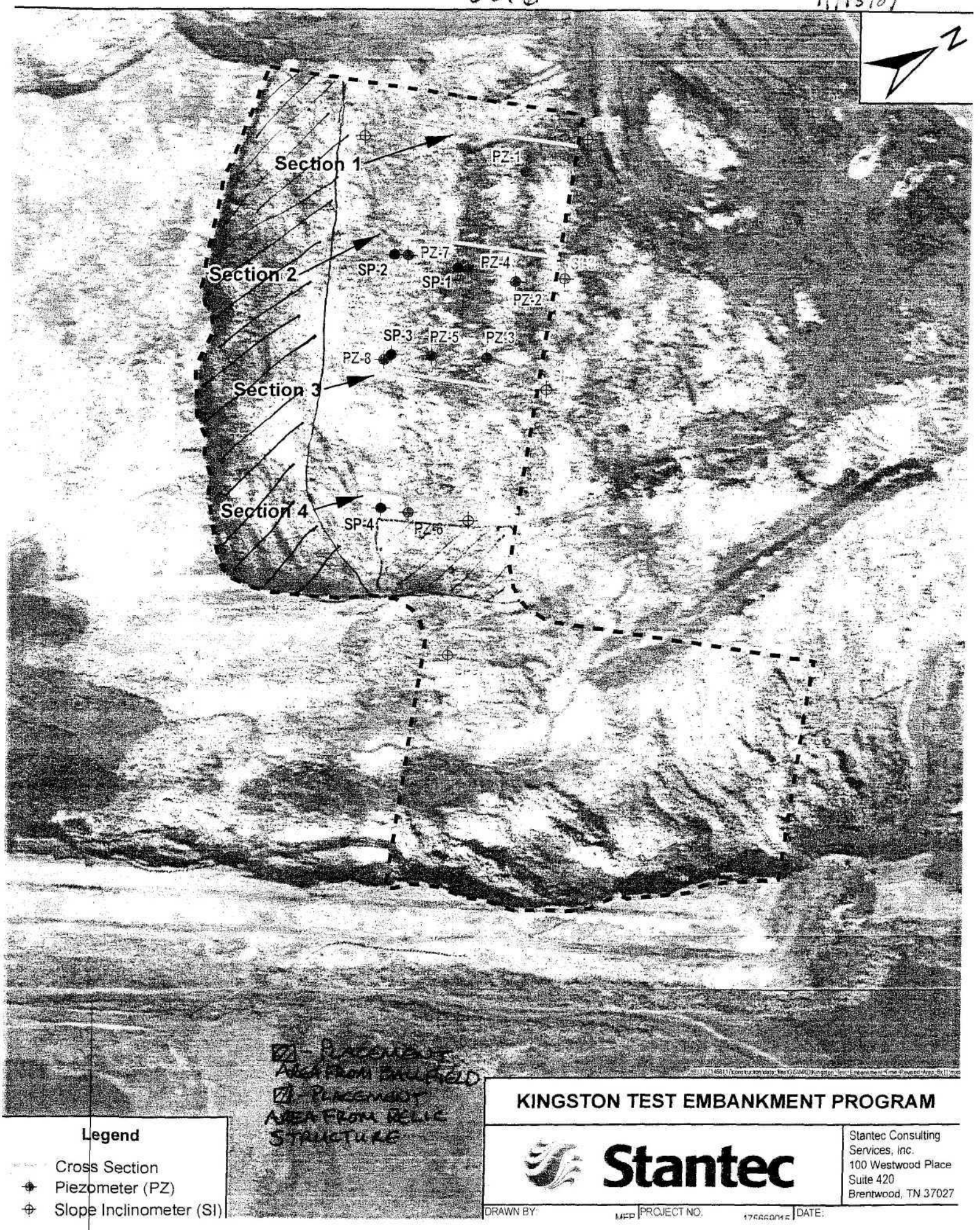
Name of Project: KIF Test Embankment Location or Address: _____ Project No.: 175669015 Report No. _____ Date: 11/13/09

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
37	Elev. 786.92', N 35° 54.665' W 084° 30.769' W.P. 970	89.4	25.9	17.1-23.1	91.5	21.1	97.7	90.0	
38	Elev. 787.96', N 35° 54.656' W 084° 30.773' W.P. 971	87.1	24.7				95.2		
39	Elev. 787.813, N 35° 54.661' W 084° 30.780' W.P. 972	87.6	27.2				95.7		
40	Elev. 786.967, N 35° 54.668' W 084° 30.774' W.P. 973	83.7	31.4				91.5		
41	Elev. 785.994, N 35° 54.678' W 084° 30.767' W.P. 974	86.1	28.1				94.2		

Comments:

11/13/07



KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	175669015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 97	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/14/09	Day of the Week: Saturday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (1) John Deere 750J Bulldozer, (1) Cat CS-563E Smooth Drum Compactor, (2) John Deere Tractor with pull behind disk (2) John Deere Scraper Specials with two pans each			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 1 of 2
Stantec Field Representative: Darlene Berryman/Russell Mehnert	Report No: 97	Date: 11/14/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Ms. Berryman and Mr. Mehnert, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec, to discuss the test embankment area. Mr. Andrew informed Ms. Berryman and Mr. Mehnert that material from the relic area would be placed within the test embankment on this date.

Civil Projects placed fly ash in the southeastern to southwestern area of the test embankment area using two John Deere Scraper Specials equipped with 2 pull behind pans. The Scraper Specials loaded fly ash from the relic structure and emptied their pans near the placement area where a bulldozer operator bladed it into an approximate 8" to 12" lift from southeast to southwest. This area was approximately 180' x 75'.

Civil Projects used a John Deere 750J Bulldozer to repeat the process of the previous day and scarify down approximately 2' into the test embankment. This area was from the western limit to settlement plate 4 (SP-4).

On this date, Civil Projects placed 121 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	5:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert/Darlene Berryman	**Date** 11/14/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 11/16/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/16/09	Day of the Week: Monday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: Relic Area

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (1) Smooth			
Drum Compactor, (3) John Deere Scraper Specials with	3440	Troxler	16
two pans each, (1) John Deere 750J Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 11/16/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, met with Mr. Andrew, QC Manager with Stantec, to discuss the test embankment area. Mr. Andrew informed Mr. Mehnert that material from the relic area would be placed within the test embankment on this date. Mr. Mehnert obtained two moisture content samples from the relic material that was placed in the test embankment area. Mr. Mehnert and Mr. Clark obtained four moisture content samples from the two stockpiles on Dike D.

Civil Projects placed fly ash in the northeastern area of the test embankment area using three scraper specials with two pans each. The tractors dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southwest to northeast. This area was approximately 295' x 226'. This material was hauled to the test embankment area from the relic area. The area was then sealed utilizing a smooth drum compactor.

Civil Projects also placed fly ash in the northeastern section between PZ-8 and SP-2 of the test embankment area using three scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northeast to northwest. This area was approximately 190' x 175'. This material was hauled to the test embankment area from the relic structure. The area was then sealed utilizing a smooth drum compactor.

Throughout the day, other areas that were previously mixed with the dozers were clipped and disked utilizing a tractor with pull behind plow.

Mr. Clark and Mr. Mehnert performed field nuclear density tests on an area in the northeastern section. This area was approximately 263' x 161'.

On this date, Civil Projects placed 131 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/16/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 11/17/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA KINGSTON - TEST EMB. PROGRAM Location or Address: _____ Project No.: 175669015 Report No. _____ Date: 11/16/09

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	Wp 975, N35° ~~54~~ 54.633', W084°30.742'	83.6	25.5	17.1 - 23.1	91.5	21.1	91.4	90.0	
2	Wp 976, N35° 54.639', W084° 30.737'	88.7	25.6				97.0		
3	Wp 977, N35° 54.644', W084° 30.732'	86.6	26.3				94.6		
4	Wp 978, N35° 54.652', W084° 30 728'	86.9	27.4				95.0		
5	Wp 979, N35° 54.658', W084° 30.723'	87.1	26.7				95.1		
6	Wp 980, N35° 54.654', W084° 30 712'	87.7	25.4				95.8		
7	Wp 981, N35° 54.646', W084° 30.716'	84.4	26.6				92.3		
8	Wp 982, N35° 54.640', W084° 30.721'	83.2	26.3				90.9		
9	Wp 983, N35° 54.638', W084° 30.731'	87.3	25.1				95.4		
10	Wp 984, N35° 54.627', W084° 30.733'	85.4	27.8				93.3		
11	Wp 985, N35° 54.635', W084° 30.727'	84.0	29.7				91.8		
12	Wp 986, N35° 54.639', W084° 30.720'	82.7	27.1				90.4		
13	Wp 987, N35° 54.641', W084° 30.711'	83.7	26.2				91.5		
14	Wp 988, N35° 54.649', W084° 30.704'	83.5	29.8				91.2		
15	Wp 989, N35° 54.646', W084° 30.696'	84.1	25.3				91.9		
16	Wp 990, N35° 54.636', W084° 30.702'	82.9	23.4				90.6		
17	Wp 991, N35° 54.629', W084° 30.705'	82.4	21.3				90.0		

Comments: _____

11-16-09

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MFP	PROJECT NO.	175669015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 5
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/17/09	Day of the Week: Tuesday	
	Weather: Partly Cloudy/Rainy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (1) Smooth Drum Compactor, (3) John Deere Scraper Specials with two pans each, (1) John Deere 750J Dozer, (1) 325C Cat Excavator	3440	Troxler	16

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 5
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 11/17/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Clark, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec, to discuss the test embankment area. Mr. Andrew informed Mr. Mehnert and Mr. Clark that material from the relic area would be placed within the test embankment on this date.

Civil Projects placed fly ash in the northwestern area of the test embankment area using three scraper specials with two pans each. The tractors dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to southeast. This area was approximately 170' x 285'. This material was hauled to the test embankment area from the relic area. The area was then sealed utilizing a smooth drum compactor.

Civil Projects placed fly ash in the northeastern area of the test embankment area using three scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northeast to northwest. This area was approximately 163' x 167'. This material was hauled to the test embankment area from the relic structure. Due to excessive moisture content, this area was not sealed with the smooth drum compactor.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using three scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northeast to northwest. This area was approximately 80' x 210'. This material was hauled to the test embankment area from the relic structure. The area was then sealed utilizing a smooth drum compactor.

Civil Projects also repaired the drainage ditch on the toe of the test embankment area utilizing an excavator.

Mr. Clark and Mr. Mehnert performed field nuclear density tests on an area in the northwestern section. This area was approximately 170' x 285'.

On this date, Civil Projects placed 120 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/17/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 11/18/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name:	Project No:	Page No: of
Field Representative:	Report No:	Date:

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
1	Wp 994, N35° 54. 695', W084° 30. 802'	87.6	27.2			95.3		
2	Wp 995, N35° 54. 690', W084° 30. 810'	87.7	27.5			95.9		
3	Wp 996, N35° 54. 684', W084° 30. 816'	85.8	25.8			93.7		
4	Wp 997, N35° 54. 676', W084° 30. 823'	86.7	26.0			94.7		
5	Wp 998, N35° 54. 671', W084° 30. 829'	86.7	28.1			94.8		
6	Wp 999, N35° 54. 667', W084° 30. 834'	88.4	29.2			96.6		
7	Wp 001, N35° 54. 661', W084° 30. 840'	82.7	31.2			90.4		
8	Wp 002, N35° 54. 656', W084° 30. 845'	86.2	27.9			94.2		
9	Wp 003, N35° 54. 673', W084° 30. 837'	86.2	27.6			94.3		
10	Wp 004, N35° 54. 678', W084° 30. 833'	87.2	29.1			95.3		
11	Wp 005, N35° 54. 686', W084° 30. 824'	87.3	29.1			95.4		
12	Wp 006, N35° 54. 691', W084° 30. 820'	88.0	28.6			96.1		

Remarks: ~~ALL ELEV ARE APPROXIMATES DUE TO TVA SURVEYOR NOT SHOOTING PROBE TO TESTS LOCATIONS. ELEV COME FROM CROSS SECTION ELEVATIONS~~ RM

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859)·422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name:	Project No:	Page No: of
Field Representative:	Report No:	Date:

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
13	Wp 007, N35°54.697', W084°30.816'	88.2	27.7			96.4		
14	Wp 008, N35°54.703' W084°30.808'	84.9	27.5			92.8		
15	Wp 009 N35°54.707' W084°30.815'	84.0	29.8			91.8		
16	Wp 010, N35°54.703' W084°30.823'	84.3	26.0			92.1		
17	Wp 011, N35°54.696' W084°30.829'	84.8	25.8			92.7		
18	Wp 012, N35°54.691' W084°30.836'	86.3	27.7			94.4		
19	Wp 013, N35°54.685' W084°30.842'	86.5	26.5			94.5		
20	Wp 014 N35°54.679' W084°30.849'	86.1	29.0			94.1		
21	Wp 015, N35°54.676' W084°30.855'	85.7	29.0			93.7		

Remarks:

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

area where material was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	175660015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/18/09	Day of the Week: Wednesday	
	Weather: Cloudy/Rainy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (1) Cat			
D7R Dozer, (3) John Deere Scraper Specials with			
two pans each, (1) John Deere 750J Dozer,			
(1) Komatsu 220 Long Stick Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 11/18/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark that material from the relic area would be placed within the test embankment on this date.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using three scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northeast to northwest. This area was approximately 182' x 235'. This material was hauled to the test embankment area from the relic structure.

Civil Projects utilized a Komatsu 220 long stick excavator to cut material from the first tier of the test embankment area in the northwestern section. The material removed was stockpiled in the northwestern area of the test embankment area. This material will be placed in the test embankment area following passing field nuclear density tests. Civil Projects also utilized two dozers to fill some of the low areas with the material that was cut by the excavator.

On this date, Civil Projects placed 125 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/18/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11-19-09

= area that was cut and filled

= material that was placed on this date

= area where material was stockpiled

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 176669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 11
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/19/09	Day of the Week: Thursday	
	Weather: Partly Cloudy/Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (1) Cat			
D7R Dozer, (3) John Deere Scraper Specials with	3440	Troxler	26
two pans each, (2) John Deere 750J Dozers,			
(1) Komatsu 220 Long Stick Excavator, (5) Articulated Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 11
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 11/19/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Mehnert, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Mr. Mehnert that material from the relic area and the ball field would be placed within the test embankment on this date.

Civil Projects placed fly ash in the southeastern area of the test embankment area using five articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southeast to southwest. This area was then sealed with a smooth drum compactor. This area was approximately 210' x 60'. This material was hauled to the test embankment area from the ball field. Mr. Mehnert and Mr. Clark performed field nuclear density tests on this area prior to placement.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using three scraper specials with two pans each and five articulated dump trucks. The tractors and dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northeast to northwest. This area was then sealed with a smooth drum compactor. This area was approximately 160' x 190'. This material was hauled to the test embankment area from the relic structure and from the ball field. Mr. Mehnert and Mr. Clark performed field nuclear density tests on this area.

Civil Projects continued to utilize a Komatsu 220 long stick excavator from the previous day to cut material from the first tier of the test embankment area in the northwestern section. The material removed was stockpiled in the northwestern area of the test embankment area. This material was placed in the test embankment area following field nuclear density tests. Civil Projects also utilized two dozers to fill some of the low areas with the material that was cut by the excavator.

Civil Projects placed stockpiled fly ash in the northwestern section of the test embankment area utilizing two dozers. The dozer operators bladed it into an approximate 8" to 12" lifts from northeast to northwest. This area was approximately 325' x 160'. This area was then sealed utilizing a smooth drum compactor. Mr. Mehnert and Mr. Clark performed field nuclear density tests on this area.

On this date, Civil Projects placed 60 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

On this date, Civil Projects placed 46 loads of fly ash from the ball field utilizing five articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 11/19/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 11/20/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON- TEST EMBANKMENT PROGRAM	Project No: 175669615	Page No: 3 of 11
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 11/19/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
1	N 35° 54.671', W084° 30.845', WP016	76.4	34.9	82.8	24.9	92.2	90.0	
2	N 35° 54.676', W084° 30.838', WP017	76.0	34.0			91.8		
3	N35°54.681', W084°30.830', WP018	77.8	34.3			93.9		
4	N35°54.688', W084°30.821', WP019	75.3	34.7			91.0		
5	N35°54.692', W084°30.815', WP020	81.4	31.3			98.4		
6	N35° 54.699', W084°30.810', WP021	76.4	35.6			92.2		
7	N35°54.706', W084°30.802', WP022	75.3	33.8			90.9		
8	N35°54.698', W084°30.802', WP023	78.1	31.0			94.3		
9	N35°54.693', W084°30.806', WP024	78.4	33.4			94.7		
10	N 35° 54.687', W084°30.813', WP025	77.9	33.1			94.0		
11	N 35° 54.681', W084°30.819', WP026	78.3	32.0			94.5		
12	N 35° 54.674', W084 30.825', WP027	79.2	33.3			95.6		

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 4 of 11
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 11/19/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
13	N35°54.669', W084°30.831', WP028	77.0	35.1	82.8	24.9	93.0	90.0	
14	N35°54.665', W084°30.840', WP029	75.6	35.5			91.3		
15	N35°54.700', W084°30.817', WP030	80.5	30.9			97.2		
16	N35°54.706', W084°30.808', WP031	75.7	34.5			91.4		
17	N35°54.713', W084°30.820', WP032	76.7	33.8			92.6		
18	N35°54.709', W084°30.825', WP033	76.7	35.1			92.6		
19	N35°54.705', W084°30.831', WP034	78.6	31.3			95.0		
20	N35°54.695', W084°30.841', WP035	77.5	28.7			93.6		
21	N35°54.688', W084°30.845', WP036	82.2	29.6			99.2		
22	N35°54.678', W084°30.846', WP037	74.8	35.5			90.3		
23	N35°54.684', W084°30.841', WP038	76.1	34.9			91.9		
24	N35°54.648', W084°30.722', WP039	75.7	34.8			91.5		

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVAKINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 5 of 11
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 11/19/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
25	N35°54.643', W084°~~54~~ 30.730', WP040	75.4	30.4	82.8	24.9	91.0	90.0	
26	N35°54.635', W084° 30.737', WP041	77.7	33.0			93.9		
27	N35°54.629', W084° 30.742', WP042	78.7	32.6			95.0		
28	N35°54.625', W084° 30.744', WP043	79.0	32.3			95.5		
29	N35°54.614', W084° 30.751', WP044	75.0	30.0			90.6		
30	N35°54.618', W084° 30.742', WP045	79.3	28.7			95.8		
31	N35°54.621', W084° 30.740', WP046	78.5	31.7			94.8		
32	N35°54.626', W084° 30.729', WP047	77.7	34.3			93.9		
33	N35°54.633', W084° 30.724', WP048	76.5	35.0			92.4		
34	N35°54.640', W084° 30.715', WP049	74.5	36.1			90.0		
35	N35°54.643', W084° 30.707', WP050	74.9	36.0			90.5		
36	N35°54.641', W084° 30.710', WP051	78.8	30.8			95.2		

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 6 of 11
Field Representative: RYAN CLARK/RUSSELL MEHNERT	Report No:	Date: 11/19/07

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
37	N35°54.632', W084° 30.713', WP052	76.4	33.2	82.8	24.9	92.3	90.0	
38	N35°54.630', W084°30.716', WP053	79.2	32.1			95.7		
39	N35°54.675', W084° 30.854', WP054	79.4	31.1			95.9		
40	N35°54.682', W084°30.846', WP055	81.6	30.0			98.5		
41	N35°54.692', W084° 30.841', WP056	80.7	25.6			97.5		
42	N35°54.695', W084° 30.835', WP057	81.9	30.5			98.9		
43	N35° 54.694', W084°30.834', WP058	83.0	26.5			100.3		
44	N35°54.699', W084°30.826', WP059	79.5	27.6			96.1		
45	N35°54.712', W084°30.820', WP060	79.9	27.0			96.5		
46	N35°54.668', W084°30.843', WP061	80.2	27.8			96.8		
47	N35°54.674', W084° 30.837', WP062	82.8	28.5			100.0		
48	N35°54.678', W084°30.838', WP063	81.5	28.3			98.4		

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON - TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 7 of 11
Field Representative: RYAN CLARK / RUSSELL MENNERT	Report No:	Date: 11/19/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
49	N35°54.683', W084°30.831', WP064	81.4	30.9	82.8	24.9	98.3	90.0	
50	N35°54.696', W084°30.819', WP065	77.6	27.9			93.7		
51	N35°54.695', W084°30.818', WP066	79.3	24.3			95.8		
52	N35°54.711', W084°30.801', WP067	76.7	24.3			92.7		
53	N35°54.700', W084°30.802', WP068	76.3	26.2			92.1		
54	N35°54.693', W084°30.807', WP069	79.8	24.9			96.4		
55	N35°54.687', W084°30.810', WP070	77.9	23.9			94.0		
56	N35°54.679', W084°30.818', WP071	75.1	26.4			90.7		
57	N35°54.675', W084°30.821', WP072	78.4	27.3			94.7		
58	N35°54.663', W084°30.835', WP073	79.8	27.4			96.4		
59	N35°54.656', W084°30.841', WP074	81.5	25.0			98.4		
60	N35°54.615', W084°30.761', WP075	77.2	27.4			93.3		

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA KINGSTON-TEST EMBANKMENT PROGRAM	Project No: 175669015	Page No: 9 of 11
Field Representative: RYAN CLARK / RUSSELL MEHNERT	Report No:	Date: 11/19/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
73	N35°54.646', W084°30.720', WP088	~~84.9~~ ~~85.4~~ 92.8 RM	26.0	91.5	21.1	92.8	90.0	
74	N35°54.642', W084°30.725', WP089	~~94.RM~~ 86.3	26.0	〃	〃	~~94~~.3	〃	
75	N35°54.636', W084°30.733', WP090	83.3	29.7	〃	〃	91.0	〃	
76	N35°54.629', W084°30.738', WP091	76.5	34.2	82.8	24.9	92.4	90.0	
77	N35°54.630', W084°30.725', WP092	84.3	29.2	91.5	21.1	92.2	90.0	
78	N35°54.634', W084°30.723', WP093	78.2	27.1	82.8	24.9	94.5	90.0	
79	N35°54.643', W084°30.718', WP094	74.8	29.8	~~94~~ RM	〃	90.4	〃	
80	N35°54.638', W084°30.711', WP095	83.8	25.4	91.5	21.1	91.6	90.0	
81	N35°54.632', W084°30.714', WP096	85.5	25.8	〃	〃	93.4	〃	
82	N35°54.673', W084°30.854', WP097	82.5	28.7	82.8	24.9	99.6	〃	
83	N35°54.681', W084°30.847', WP098	81.6	28.7	〃	〃	98.6	〃	
84	N35°54.687', W084°30.840', WP099	75.1	28.4	〃	〃	90.7	〃	

Remarks:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA - Kingston - Test Embankment Program	Project No: 175669015	Page No: 10 of 11
Field Representative: Ryan Clark / Russell Mehnert	Report No:	Date: 11-19-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
85	N35°54.693', W084°30.832', WP100	78.6	25.7	82.8	24.9	94.9	90.0	
86	N35°54.699', W084°30.825', WP101	74.5	24.6			90.0		
87	N35°54.706', W084°30.818', WP102	79.0	25.4			95.4		
88	N35°54.696', W084°30.821', WP103	82.7	26.6			99.9		
89	N35°54.691', W084°30.829', WP104	80.1	25.2			96.7		

Remarks:

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

= area where material was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 176669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 11/20/09	Day of the Week: Friday
	Weather: Sunny	Temperature: 50's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Chris Meyers/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (2) John	Type/Model	Manufacturer	Ser. No./ID No.
Deere Scraper Specials with two pans each, (2) John Deere	3440	Troxler	26
750J Dozers, (1) Komatsu 220 Long Stick Excavator,			
(5) Articulated Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark/Chris Meyers/ Russell Mehnert	Report No:	Date: 11/20/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, Mr. Meyers and Mr. Mehnert, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark, Mr. Meyers and Mr. Mehnert that material from the ball field would be placed within the test embankment on this date.

Civil Projects placed fly ash in the southeastern area of the test embankment area using five articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southeast to southwest. This area was then sealed with a smooth drum compactor. This area was approximately 425' x 70'. This material was hauled to the test embankment area from the ball field.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using five articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northeast to northwest. This area was then sealed with a smooth drum compactor. This area was approximately 160' x 190'. This material was hauled to the test embankment area from the ball field.

Civil Projects continued to utilize a Komatsu 220 long stick excavator from the previous day to cut material from the first tier of the test embankment area in the northwestern section and northeastern section. The material removed was stockpiled in the northwestern and northeastern areas of the test embankment area. This material will be placed in the test embankment area following field nuclear density tests. Civil Projects also utilized two dozers to fill some of the low areas with the material that was cut by the excavator.

Civil Projects placed fly ash, which was cut from the northeastern section of the test embankment area, in the northwestern section of the test embankment area utilizing two scraper specials with two pans each. The tractors dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 8" to 10" lifts from northeast to northwest. This area was approximately 325' x 160'. This area was then sealed utilizing a smooth drum compactor. Mr. Meyers and Mr. Clark performed field nuclear density tests on this area.

On this date, Civil Projects placed 81 loads of on-site material utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 105 loads of fly ash from the ball field utilizing five articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Chris Meyers/Russell Mehnert	**Date** 11/20/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 11/21/09

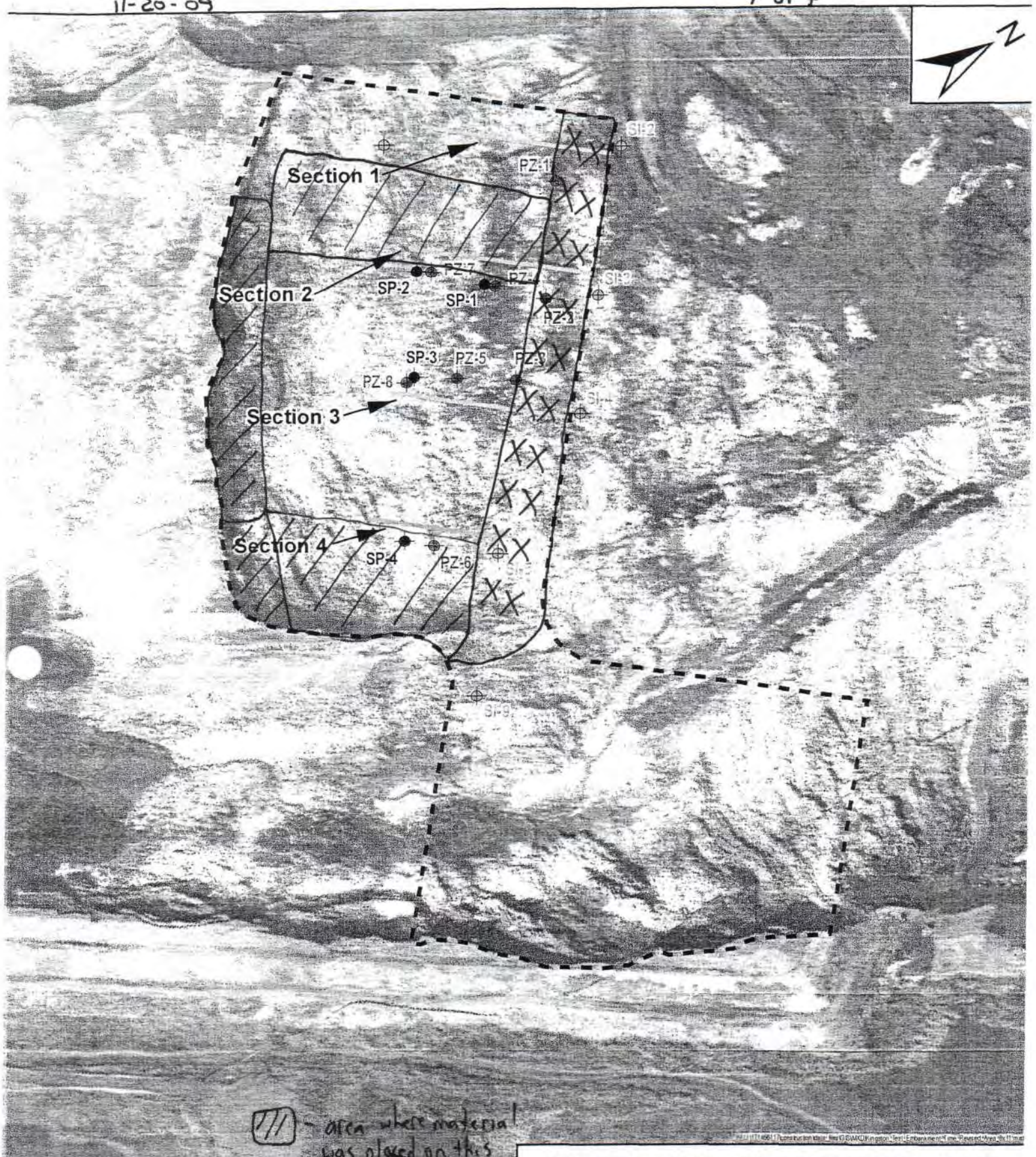
Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

ProjectName: Kingston - TVA - Test Embankment Program	Project No: 175669015	Page No: 3 of 4
Field Representative: Ryan Clark / Chris Meyers	Report No:	Date: 11/20/09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
1	WP105, N35° 54.705', W084° 30.806'	87.2	27.6	91.5	21.1	95.3	90.0	
2	WP106, N35° 54.695', W084° 30.821'	84.8	29.1			92.6		
3	WP107, N35° 54.687', W084° 30.825'	83.6	29.6			91.4		
4	WP108, N35° 54.684', W084° 30.830'	84.8	28.0			92.7		
5	WP109, N35° 54.678', W084° 30.841'	84.6	28.7			92.5		
6	WP110, N35° 54.674', W084° 30.845'	86.2	26.5			94.2		
7	WP111, N35° 54.664', W084° 30.840'	82.7	23.1			90.4		
8	WP112, N35° 54.670', W084° 30.382'	84.9	23.1			92.8		
9	WP113, N35° 54.676', W084° 30.821'	83.1	24.8			90.9		
10	WP114, N35° 54.682', W084° 30.818'	85.1	24.5			93.0		
11	WP115, N35° 54.686', W084° 30.811'	86.7	25.1			94.7		
12	WP116, N35° 54.695', W084° 30.803'	83.7	28.7			91.5		

Remarks:



/// - area where material was placed on this date

XX - area where material was cut and filled

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 11/21/09	Day of the Week: Saturday
	Weather: Sunny	Temperature: 60's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Chris Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (2) John Deere 750J Dozers (1) Komatsu 220 Long Stick Excavator			
(1) John Deere Tractor with Pull Behind Disk			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Chris Meyers/ Russell Mehnert	Report No:	Date: 11/21/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Meyers, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Mr. Meyers that no material would be placed in the test embankment on this date.

Civil Projects continued to utilize a Komatsu 220 long stick excavator from the previous day to cut material from the first tier of the test embankment area in the northwestern section and northeastern section. The material removed was stockpiled in the northwestern and northeastern areas of the test embankment area. This material will be placed in the test embankment area following field nuclear density tests. Civil Projects also utilized two dozers to fill some of the low areas with the material that was cut by the excavator.

Civil Projects utilized four dozers to clip wet material off the whole test embankment area. Civil Projects then utilized a smooth drum compactor to seal the entire test pad for anticipated precipitation. No field nuclear density tests were performed on this date.

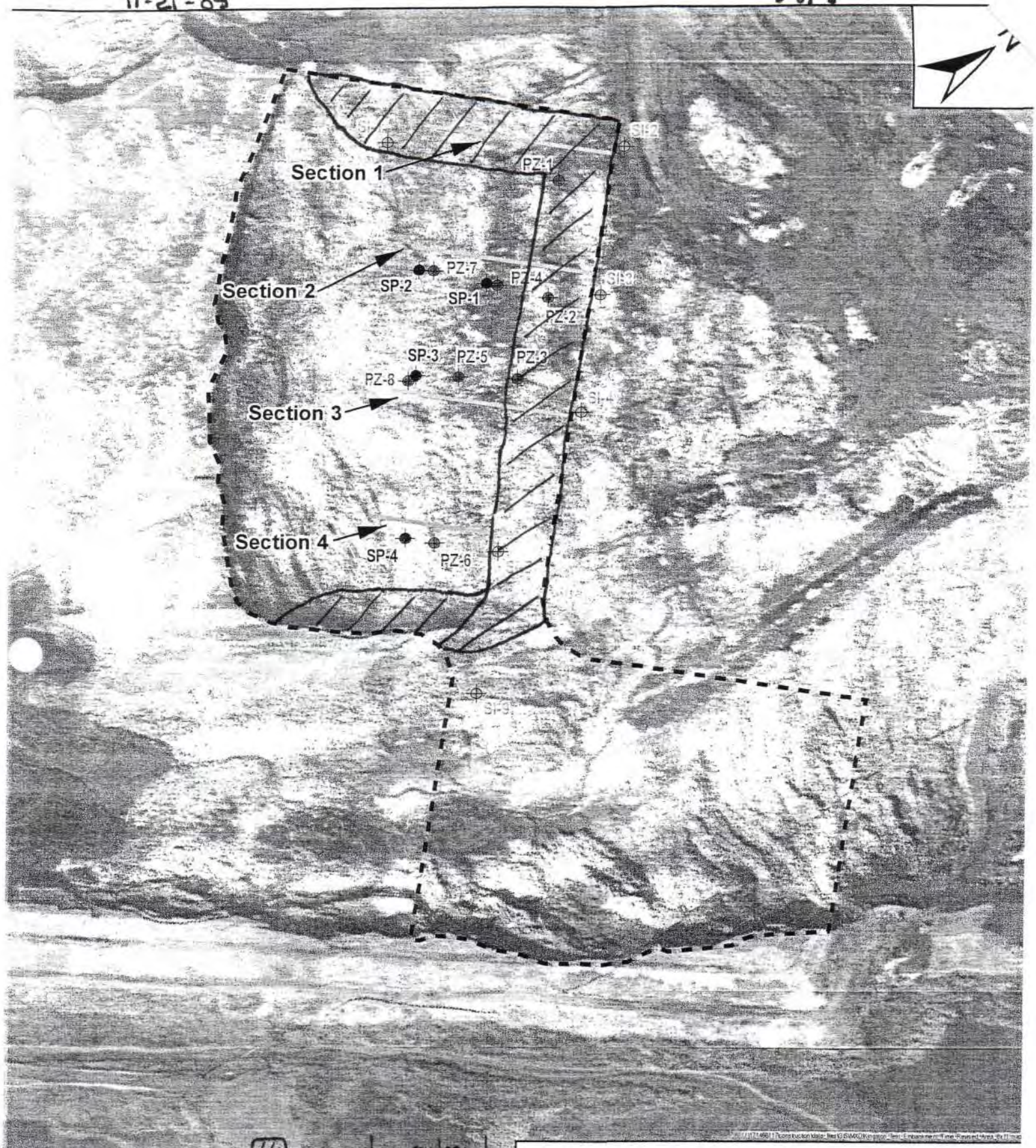
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Chris Meyers	**Date** 11/21/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr.	**Date** 11/24/09



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

- area where material was cut by excavator

- area that was clipped and sealed for rain.

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 176669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/23/09	Day of the Week: Monday	
	Weather: Partly Cloudy/Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Chris Meyers/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use: (1) Cat D7 Dozer, (1) Cat D6N Dozer, (1) John Deere 750J Dozers	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Chris Meyers/ Russell Mehnert	Report No:	Date: 11/23/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, Mr. Mehnert and Mr. Meyers, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark, Mr. Mehnert and Mr. Meyers that no material would be placed in the test embankment on this date.

Civil Projects utilized three dozers to cut material from the first tier of the test embankment area in the northwestern section and northeastern section. The material removed was stockpiled in the northwestern and northeastern areas of the test embankment area. This material will be placed in the test embankment area following field nuclear density tests. Civil Projects also utilized three dozers to fill some of the low areas with the material that was cut from the test embankment area.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Chris Meyers/Russell Mehnert	**Date** 11/23/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 11/24/09

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

= area where material was cut and filled

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 176660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/24/09	Day of the Week: Tuesday	
	Weather: Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Chris Meyers/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (2) John Deere Scraper Specials with two pans each, (1) John Deere 750J Dozer, (4) Articulated Dump Trucks, (1) Smooth Drum Compactor, (1) Cat D7 Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Chris Meyers/ Russell Mehnert	Report No:	Date: 11/24/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, Mr. Meyers and Mr. Mehnert, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec, to discuss the test embankment area. Mr. Andrew informed Mr. Clark, Mr. Meyers and Mr. Mehnert that material from the ball field and the relic area would be placed within the test embankment on this date.

Civil Projects placed fly ash in the northwestern area of the test embankment area using four articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to southeast. This area was then sealed with a smooth drum compactor. This area was approximately 150' x 155'. This material was hauled to the test embankment area from the ball field.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using two scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to northeast. This area was then sealed with a smooth drum compactor. This area was approximately 200' x 50'. This material was hauled to the test embankment area from the relic area.

On this date, no field nuclear density tests were performed due to wet material.

Civil Projects utilized three dozers to cut material from the first tier of the test embankment area in the northwestern section and northeastern section. This cut material was bladed into the low areas in the northeast section of the test embankment area.

On this date, Civil Projects placed 60 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 43 loads of fly ash from the ball field utilizing five articulated trucks.

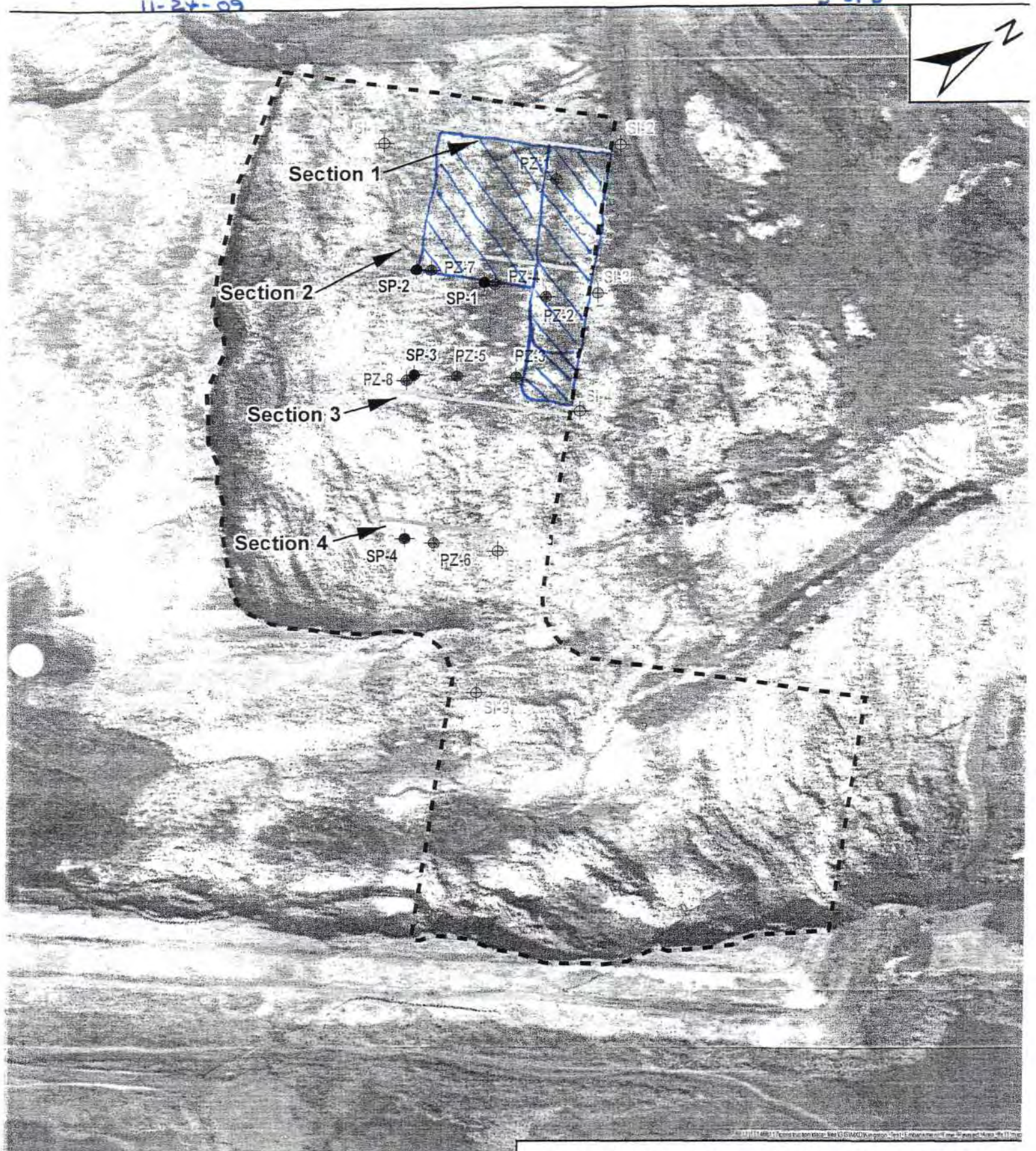
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Chris Meyers/Russell Mehnert	**Date** 11/24/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 11/24/09



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

(111) = area where material was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 175660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 11/25/09	Day of the Week: Wednesday
	Weather: Partly Cloudy/Sunny	Temperature: 50's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Chris Meyers/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (2) John Deere Scraper Specials with two pans each, (1) John Deere 750J Dozer, (4) Articulated Dump Trucks, (1) Smooth Drum Compactor, (1) Cat D7 Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark/Chris Meyers/ Russell Mehnert	Report No:	Date: 11/25/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, Mr. Meyers and Mr. Mehnert, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark, Mr. Meyers and Mr. Mehnert that material from the ball field and the relic area would be placed within the test embankment on this date.

Civil Projects placed fly ash in the northwestern area of the test embankment area using four articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to southeast. This area was then sealed with a smooth drum compactor. This area was approximately 150' x 200'. This material was hauled to the test embankment area from the ball field.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using two scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to northeast. This area was then sealed with a smooth drum compactor. This area was approximately 170' x 50'. This material was hauled to the test embankment area from the relic area. Mr. Clark and Mr. Meyers performed field nuclear density tests on this area.

Civil Projects utilized three dozers to cut material from the first tier of the test embankment area in the northwestern section and northeastern section. This cut material was bladed into the low areas in the northeast section of the test embankment area.

On this date, Civil Projects placed 30 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 30 loads of fly ash from the ball field utilizing five articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Chris Meyers/Russell Mehnert	**Date** 11/25/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 11-30-09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

ProjectName: Kingston - TVA - Test embankment Program	Project No: 125629015	Page No: 3 of 4
Field Representative: Ron Clark / Chris Meyers	Report No:	Date: 11-25-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
1	WP117, N35°54.685', W084°30.775'	84.7	33.0	91.5	21.1	92.5	90.0	
2	WP118, N35°54.680', W084°30.786'	87.8	29.5	1	1	96.0	1	

Remarks:

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 107	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/30/09	Day of the Week: Monday	
	Weather: Rainy/Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Chris Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly. Rutting and pumping.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Chris Meyers	Report No: 107	Date: 11/30/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Meyers, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton and Mr. Andrew informed Mr. Clark and Mr. Meyers that no material would be placed in the Test Embankment Area on this date due to rainfall.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:00p.m.

7:00AM-4:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 11/30/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G. A. Skip Layton, Jr. Assistant QC Manager	**Date** 12/1/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 108	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/01/09	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Chris Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer,			
(2) John Deere Scraper Specials with two pans each,			
(6) Articulated Dump Trucks, (1) Smooth Drum Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Chris Meyers	Report No: 108	Date: 12/01/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Meyers, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton and Mr. Andrew informed Mr. Clark and Mr. Meyers that material from the relic area and the ball field would be placed within the test embankment on this date.

Civil Projects utilized two dozers to clip approximately six inches of wet material off a section of the test embankment in the central area. The material was wind rowed on the test embankment along two rows of instruments and will be placed on a later date. The area clipped by the dozers was approximately 220' x 300'. See attached map

Civil Projects placed fly ash in the southwestern area of the test embankment area using six articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to southeast. This area was then sealed with a smooth drum compactor. This area was approximately 100' x 150'. This material was hauled to the test embankment area from the ball field. See attached map

Civil Projects also placed fly ash in the southwestern area of the test embankment area using six articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to southeast This area was approximately 75' x 150'. This material was hauled to the test embankment area from the ball field. See attached map

Civil Projects also placed fly ash in the central area of the test embankment area using two scraper specials with two pans each and six articulated dump trucks. The tractors and dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to southeast. This area was then sealed with a smooth drum compactor. This area was approximately 220' x 200'. This material was hauled to the test embankment area from the relic structure and from the ball field. See attach map

On this date, no field nuclear tests were performed.

On this date, Civil Projects placed 70 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 46 loads of fly ash from the ball field utilizing six articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Chris Meyers	**Date** 12/01/09
[ ] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/02/09

12-1-09

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

area of placement on this date

area that was clipped on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO: 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 109	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/02/09	Day of the Week: Wednesday	
	Weather: Rainy/Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Chris Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Chris Meyers	Report No: 109	Date: 12/02/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Meyers, technicians with Stantec, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton and Mr. Andrew informed Mr. Clark and Mr. Meyers that no material would be placed in the Test Embankment Area on this date due to .9" of rainfall.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Chris Meyers	**Date** 12/02/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/04/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 12/03/09	Day of the Week: Thursday
	Weather: Cloudy	Temperature: 40's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Chris Meyers/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (2) John Deere Scraper Specials with two pans each, (1) John Deere 750J Dozer, (5) Articulated Dump Trucks,			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Chris Meyers/Darlene Berryman	Report No:	Date: 12/03/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Meyers and Ms. Berryman, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Meyers and Ms. Berryman that material from the relic area and the ball field would be placed within the test embankment on this date.

Civil Projects utilized two dozers to clip approximately six inches of wet material off a section of the test embankment in the Southeast Limit Area. The area clipped by the dozers was approximately 240' x 276'. See attached map

Civil Projects placed fly ash in the southeast limit area of the test embankment area using five articulated dump trucks and two scraper specials with two pans each. The tractors and dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to southeast. The area that the fly ash was placed was approximately 240' by 276'. Part of this area was then sealed with a smooth drum compactor. This area was approximately 134' by 276'. This material was hauled to the test embankment area from the ball field and relic area. See attached map

On this date, no field nuclear tests were performed.

On this date, Civil Projects placed 92 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 39 loads of fly ash from the ball field utilizing six articulated trucks.

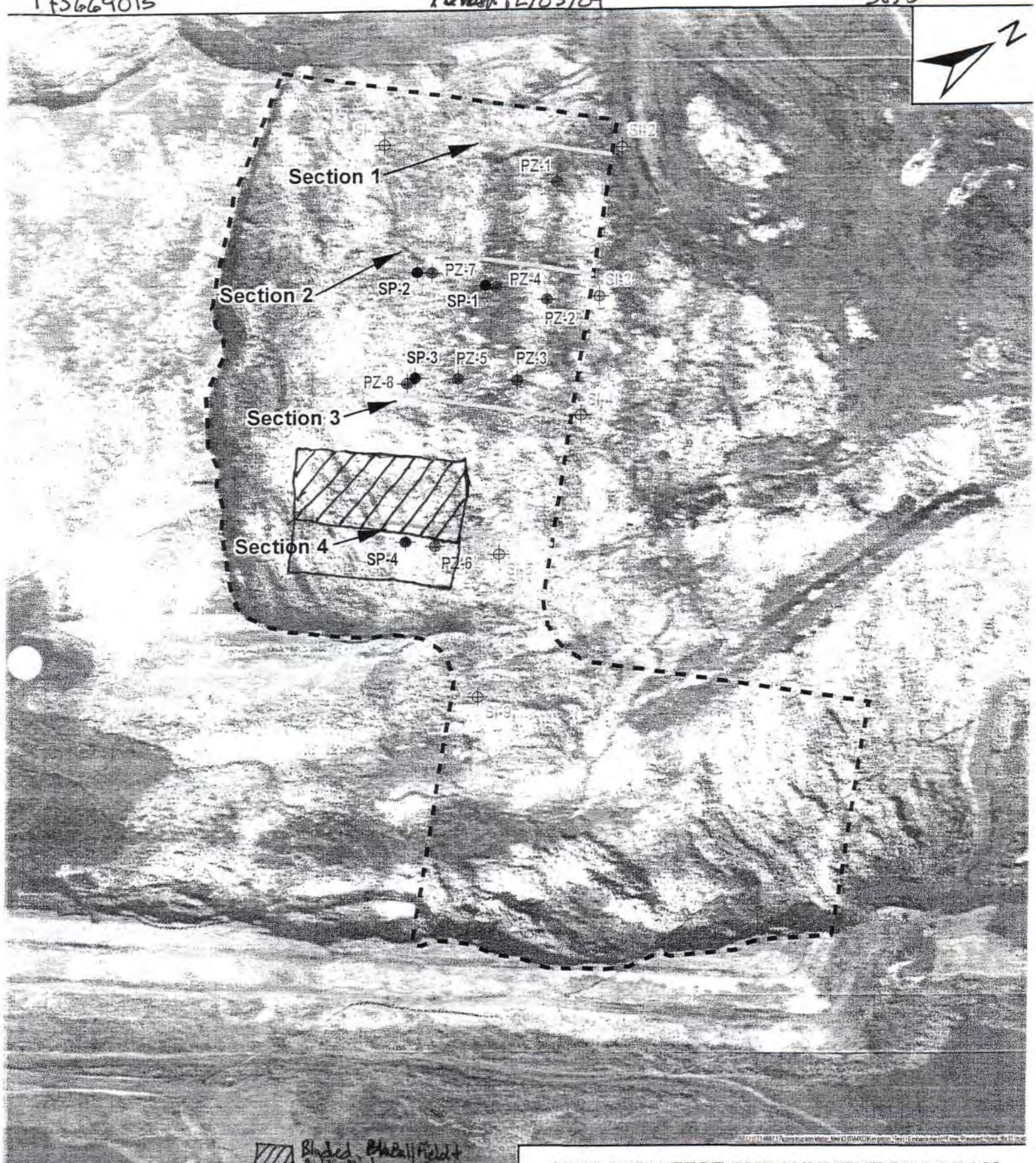
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers/Darlene Berryman	**Date** 12/03/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/05/09



KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	PROJECT NO.	DATE:
MEP	175669015	

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 12/04/09	Day of the Week: Friday
	Weather: Cloudy	Temperature: 40's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Chris Meyers/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (2) John Deere Scraper Specials with two pans each, (1) John Deere 750J Dozer, (5) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Chris Meyers/Darlene Berryman	Report No:	Date: 12/04/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Meyers and Ms. Berryman, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Meyers and Ms. Berryman that material from the relic area and the ball field would be placed within the test embankment on this date.

Civil Projects utilized one dozer to clip approximately six inches of wet material off a section of the test embankment in the Southeast Corner. The area clipped by the dozer was approximately 125' x 119'. Civil Projects then placed fly ash from the ball field using five articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operator bladed it into an approximate 8" to 12" lift from northwest to southeast. The area that the fly ash was placed was approximately 125' x 119'.

Civil Projects utilized two dozers to clip approximately six inches of wet material off a section of the test embankment in the Central area. The area clipped by the dozers was approximately 244' x 324'. Civil Projects then placed fly ash from the relic area and ball field using two scraper specials with two pans each and 5 articulated trucks. The tractors and trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to southeast. The area that the fly ash was placed was approximately 244' x 324'.

Civil Projects utilized one dozer to clip approximately six inches of wet material off a section of the test embankment in the Southwest Corner. The area clipped by the dozer was approximately 135' x 65'. Civil Projects then placed fly ash from the relic area using two scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operator bladed it into an approximate 8" to 12" lift from northwest to southeast. The area that the fly ash was placed was approximately 135' x 65'.

On this date, no field nuclear tests were performed.

On this date, Civil Projects placed 100 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 56 loads of fly ash from the ball field utilizing six articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers/Darlene Berryman	**Date** 12/04/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. QC Manager	**Date** 12/05/09

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	
Distribution:	

Project No.: 175669015	Rep No.: 113	Page No: 1 of 5
Project Name: TVA Kingston – Test Embankment Program		
Location or Address: Kingston, Tennessee		
Date: 12/07/09	Day of the Week: Monday	
Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Chris Meyers/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (2) John Deere Scraper Specials with two pans each, (2) Articulated Dump Trucks	3440 density gauge	Troxler	

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 5
Stantec Field Representative: Chris Meyers/Darlene Berryman	Report No:	Date: 12/07/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Meyers and Ms. Berryman, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Meyers and Ms. Berryman that material from the relic area and the ball field would be placed within the test embankment on this date.

Civil Projects utilized two dozers to clip approximately six inches of wet material off a section of the test embankment in the Central area. The area clipped by the dozers was approximately 133' x 330'. Mr. Meyers and Ms. Berryman performed twelve field density tests in this area, the results and locations of which are on page three of this report. Civil Projects then placed fly ash from the relic area and ball field using two scraper specials with two pans each and two articulated trucks. The tractors and trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to southeast. The area that the fly ash was placed was approximately 133' x 330'.

Mr. Meyers and Ms. Berryman performed eight field density tests on a southeastern section of the test pad, which measured approximately 115' x 170'. See attached map. The results and locations of these tests are on page four of this report.

On this date, Civil Projects placed 82 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 23 loads of fly ash from the ball field utilizing two articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	9:00 p.m.

7:00AM-9:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers/Darlene Berryman	**Date** 12/07/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/09/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA Kingston Test Embankment	Project No: 175d09015	Page No: 3 of 5
Field Representative: D. Berryman / C. Meyers	Report No:	Date: 12-7-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
1	WP135, N35°54.664', W084°30.836'	82.8	32.9	82.8	24.9	95.4	90.0	
2	WP136, N35°54.661', W084°30.818'	74.8	32.4			90.4		
3	WP137, N35°54.667', W084°30.810'	80.4	34.4			97.1		
4	WP138, N35°54.676', W084°30.801'	78.2	29.5			94.5		
5	WP139, N35°54.684', W084°30.793'	78.4	33.0			94.7		
6	WP140, N35°54.690', W084°30.787'	84.5	26.7			102.1		
7	WP141, N35°54.681', W084°30.779'	84.6	28.9			102.2		
8	WP142, N35°54.672', W084°30.785'	80.4	30.1			97.1		
9	WP143, N35°54.664', W084°30.790'	85.5	30.0			103.3		
10	WP144, N35°54.656', W084°30.797'	78.1	34.7			94.3		
11	WP145, N35°54.649', W084°30.803'	74.8	37.9			90.3		
12	WP146, N35°54.641', W084°30.810'	79.9	35.3			96.5		

Remarks: * No Elevations obtained for Test #s 1-12

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA Kingston Test Embankment	Project No: 175669015	Page No: 4 of 5
Field Representative: D. Berryman / C. Meyers	Report No:	Date: 12-7-09

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
13	ELE. 785.232', WP 151, N35°54.631', W084°30.717'	75.1	34.8	82.8	24.9	90.7	90.0	
14	ELE. 786.256', WP ~~159~~ 152, N35°54.627', W084°30.730'	77.2	37.3	↓	↓	93.2	↓	
15	ELE 785.576', WP 153, N35°54.635', W084°30.725'	74.9	33.4			90.5		
16	ELE 783.732', WP 154, N35°54.642', W084°30.720'	80.5	33.0			97.2		
17	ELE 784.763', WP 155, N35°54.646', W084°30.731'	78.9	32.0			95.3		
18	ELE 785.755', WP 156, N35°54.639', W084°30.736'	74.8	34.6			90.4		
19	ELE 786.644', WP 157, N35°54.630', W084°30.742'	75.4	33.8			91.0		
20	ELE 787.055', WP 159, N35°54.622', W084°30.747'	76.5	34.1	↓	↓	92.3	↓	

Remarks:

175669015 12/07/09 5 of 5

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	175669015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 114	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/08/09	Day of the Week: Tuesday	
	Weather: Cloudy/Rainy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Chris Meyers/Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (2) John Deere Scraper Specials with two pans each, (5) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Chris Meyers/Ryan Clark	Report No: 114	Date: 12/08/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Meyers and Mr. Clark, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Meyers and Mr. Clark that material from the relic area and the ball field would be placed within the test embankment on this date.

Civil Projects utilized two dozers to clip approximately six inches of wet material off a section of the test embankment in the southeastern area. The area clipped by the dozers was approximately 150' x 200'. Civil Projects then placed fly ash from the relic area and ball field using two scraper specials with two pans each and five articulated trucks. The tractors and trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to southeast. The area that the fly ash was placed was approximately 150' x 200'. Two dozers were utilized to back drag and track in the area of placement.

Due to rainy/wet conditions the test embankment was shut down at approximately 12:00 PM.

On this date, no field nuclear density tests were performed.

On this date, Civil Projects placed 32 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 35 loads of fly ash from the ball field utilizing five articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:00 p.m.

7:00AM-7:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers/Ryan Clark	**Date** 12/08/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/10/09

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 115	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/09/09	Day of the Week: Wednesday	
	Weather: Partly Cloudy/Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Chris Meyers/Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (2) John Deere Scraper Specials with two pans each, (5) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly. Verify with TVA that work can resume.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers/Ryan Clark	Report No: 115	Date: 12/09/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Meyers and Mr. Clark, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Meyers and Mr. Clark that due to wet conditions, no material would be hauled to the test embankment on this date.

Due to a safety hazard determined by TVA, the entire site was shut down at approximately 10:00 AM.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	12:00 p.m.

7:00AM-12:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 12/09/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/09/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 116	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/10/09	Day of the Week: Thursday	
	Weather: Mostly sunny	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Chris Meyers/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) Scraper specials with two pans each, (1) John Deere 850 Dozer, (1) CAT D6N Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ X ☐ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers/Darlene Berryman	Report No: 116	Date: 12/10/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Meyers and Ms. Berryman, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Meyers and Ms. Berryman that material from the relic area would be placed within the test embankment on this date.

Civil Projects utilized two dozers to clip approximately six inches of wet material off a section of the test embankment in the Central area. The area clipped by the dozers was approximately 50' x 200'. Civil Projects then placed fly ash from the relic area using two scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from northwest to southeast. The area that the fly ash was placed was approximately 50' x 200', and was approximately 100' west of Surveyor Section Line 4.

On this date, Civil Projects placed 28 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

Stantec Field Representative's Activities

Arrive	8:00 a.m.
Depart	8:00p.m.

8:00AM-8:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 12/10/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/11/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 117	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/11/09	Day of the Week: Friday	
	Weather: Mostly sunny	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Chris Meyers/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) Scraper specials with two pans each,			
(1) John Deere 850 Dozer, (2) CAT D6N Dozer			
(3) 40 ton articulating trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ X ☐ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☐ X ☐ Yes

Did you observe anything unexpected? ☐ X ☐ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☐ X ☐ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers/Darlene Berryman	Report No: 117	Date: 12/11/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Meyers and Ms. Berryman, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Meyers and Ms. Berryman that material from the relic area would be placed within the test embankment on this date.

Civil Projects utilized two dozers to clip the excessively wet surface of the test embankment. This material was in the central section between settlement plate SP-2 and settlement plate SP-3. Clipped material was when road north to south along these two borders. All material placed on this date was within boundaries of these to windrows.

On this date, Civil Projects placed 100 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, civil projects placed 38 articulating truckloads of fly ash from the ball field.

Stantec Field Representative's Activities

Arrive	8:00 a.m.
Depart	8:00p.m.

8:00AM-8:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 12/11/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/12/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 118	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/12/09	Day of the Week: Saturday	
	Weather: Mostly sunny	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Chris Meyers/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(2) Scraper specials with two pans each,			
(1) John Deere 850 Dozer, (2) CAT D6N Dozer			
(3) 40 ton articulating trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly. Performance testing only due to wet conditions.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers/Darlene Berryman	Report No: 118	Date: 12/12/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Meyers and Ms. Berryman, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Meyers and Ms. Berryman that material from the relic area would be placed within the test embankment on this date.

Civil Projects continued to place wet material in excess of optimum within the central area of the test pad to complete operations they had started on the previous day.

Due to excessive moisture in the material being brought to the test embankment density testing is being performed as a visual performance test at this point. All areas are being observed for rutting and pumping and any soft areas observed are being excluded from the operations for this day.

On this date, Civil Projects placed 96 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, civil projects placed 57 articulating truckloads of fly ash from the ball field.

Stantec Field Representative's Activities

Arrive	8:00 a.m.
Depart	8:00p.m.

8:00AM-8:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 12/12/09
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/14/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 119	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/14/09	Day of the Week: Monday	
	Weather: Overcast/Foggy/Rain	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly. Check for running and pumping due to excessive moisture.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Darlene Berryman	Report No: 119	Date: 12/14/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Ms. Berryman, technicians with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Ms. Berryman that due to wet conditions, no material would be hauled to the test embankment on this date. No work was performed on the test embankment on this date.

1.25 inches of rain are accumulated at the test embankment from Saturday afternoon to Monday morning.

Mr. Clark and Ms. Berryman spent the remainder of the day collecting data from all instruments on the test embankment and within the failed dredge cell.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	5:30 p.m.

7:00AM-5:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 12/14/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/15/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 120	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/15/09	Day of the Week: Tuesday	
	Weather: Overcast	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Chris Meyers/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly. Check for running and pumping due to excessive moisture.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Darlene Berryman	Report No: 120	Date: 12/15/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Meyers and Ms. Berryman, technicians with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Meyers and Ms. Berryman that due to wet conditions, no material would be hauled to the test embankment on this date. No work was performed on the test embankment on this date.

Mr. Meyers and Ms. Berryman spent the remainder of the day collecting data from all instruments on the test embankment and within the failed dredge cell.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	5:30 p.m.

7:00AM-5:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/15/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/16/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/16/09	Day of the Week: Wednesday	
	Weather: Partly Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer, (2) John Deere Scraper Specials with two pans each	3440	Troxler	26

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark/Darlene Berryman	Report No:	Date: 12/16/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Ms. Berryman, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Ms. Berryman that material from the relic area would be placed within the test embankment on this date.

Civil Projects utilized two dozers to clip approximately six inches of wet material off a section of the test embankment in the northwestern area. The area clipped by the dozers was approximately 190' x 200'. Mr. Clark performed eight field density tests in this area, the results and locations of which are on page three of this report. Civil Projects then placed fly ash from the relic area using two scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southwest to northwest. The area that the fly ash was placed was approximately 190' x 200'. Civil Projects also utilized two dozers to walk in the entire test embankment pad.

Mr. Clark also performed ten field density tests on a southeastern section of the test pad. The results and locations of these tests are on page three of this report.

On this date, Civil Projects placed 85 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:00 p.m.

7:00AM-7:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Darlene Berryman	**Date** 12/16/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/17/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA - Kingston Test Emb Project Location or Address: Kingston, TN Project No.: 175669015 Report No. _____ Date: 12-16-09

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	Wp 201, N35°54.670', W084°30.853'	76.2	35.4	24.9	82.8		92.0	90.0	
2	Wp 202, N35°54.677', W084°30.840'	80.7	28.3				97.5		
3	Wp 203, N35°54.685', W084°30.832'	74.5	32.3				90.0		
4	Wp 204, N35°54.695', W084°30.822'	80.8	26.3				97.5		
5	Wp 205, N35°54.695', W084°30.808'	79.0	28.3				95.4		
6	Wp 206, N35°54.686', W084°30.818'	76.1	31.7				92.0		
7	Wp 207, N35°54.677', W084°30.824'	77.2	32.0				93.3		
8	Wp 208, N35°54.668', W084°30.833'	78.0	33.0				94.2		
9	Wp 214, N35°54.618', W084°30.753'	83.1	27.6				100.4		
10	Wp 215, N35°54.625', W084°30.745'	80.9	29.6				97.7		
11	Wp 216, N35°54.630', W084°30.738'	78.6	31.2				94.9		
12	Wp 217, N35°54.638', W084°30.733'	79.6	29.5				96.1		
13	Wp 218, N35°54.635', W084°30.725'	78.5	30.8				94.8		
14	Wp 219, N35°54.629', W084°30.731'	80.1	32.0				96.7		
15	Wp 221, N35°54.621', W084°30.737'	79.3	31.8				95.8		
16	Wp 222, N35°54.626', W084°30.724'	76.7	33.7				92.7		
17	Wp 223, N35°54.633', W084°30.718'	80.6	31.7				97.3		
18	Wp 224, N35°54.629', W084°30.710'	82.3	29.2				99.4		

Comments:

= area where material was placed on this date.

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MFP	PROJECT NO.	175660015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/17/09	Day of the Week: Thursday	
	Weather: Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer,			
(3) John Deere Scraper Specials with two pans each,			
(6) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark/Darlene Berryman	Report No:	Date: 12/17/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Ms. Berryman, technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Ms. Berryman that material from the relic area and the ball field would be placed within the test embankment on this date.

Civil Projects placed fly ash in the northwestern area of the test embankment area using three scraper specials with two pans each. The tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southeast to northwest. This area was approximately 190' x 150'. This material was hauled to the test embankment area from the relic area. See attached map

Civil Projects also placed fly ash in the northeastern area of the test embankment area using six articulated dump trucks. The dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southeast to northeast This area was approximately 250' x 200'. This material was hauled to the test embankment area from the ball field. See attached map

Civil Projects also placed fly ash in the southern area of the test embankment area using three scraper specials with two pans each and six articulated dump trucks. The tractors and dump trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southeast to southwest. This area was approximately 725' x 70'. This material was hauled to the test embankment area from the relic structure and from the ball field. See attach map

On this date, no field nuclear tests were performed.

On this date, Civil Projects placed 120 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

On this date, Civil Projects placed 73 loads of fly ash from the ball field utilizing six articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Darlene Berryman	**Date** 12/17/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/18/09

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

▨ - area of placement on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 175660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	
Distribution:	

Project No.: 175669015	Rep No.:	Page No: 1 of 2
Project Name: TVA Kingston – Test Embankment Program		
Location or Address: Kingston, Tennessee		
Date: 12/18/09	Day of the Week: Friday	
Weather: Cloudy/Rainy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) Cat D6 Dozer, (1) John Deere Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Darlene Berryman	Report No:	Date: 12/18/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Ms. Berryman, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Ms. Berryman that due to wet conditions, no material would be hauled to the test embankment on this date.

Civil Projects utilized two dozers to knock down ruts that were created by the scraper specials from the previous date on the north section of the test embankment area.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:30 p.m.

7:00AM-7:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Darlene Berryman	**Date** 12/18/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/19/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 123	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/19/09	Day of the Week: Saturday	
	Weather: Rainy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) Cat D6 Dozer, (1) John Deere Dozer	Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly. Check for running and pumping also prepare surface for density and/or performance tests. Work on the drying the test surface.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Darlene Berryman	Report No: 123	Date: 12/19/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Ms. Berryman, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Ms. Berryman that due to wet conditions, no material would be hauled to the test embankment on this date.

Civil projects utilized two dozers to assist with drainage on the top of the test embankment to remove standing water.

Mr. Clark and Ms. Berryman, spent the remainder of the day collecting data from all the instruments on the test embankment and all so acquiring daily readings along the lateral expansion and Dike D.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	5:30 p.m.

7:00AM-5:30PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 12/19/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/21/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/21/09	Day of the Week: Monday	
	Weather: Partly Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark/Leo Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) John Deere 850J Dozer, (2) Cat D6N Dozer, (3) John	Type/Model	Manufacturer	Ser. No./ID No.
Deere Scraper Specials with two pans each, (5) Articulated	3440 density gauge	Troxler	
Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark/Leo Booth	Report No:	Date: 12/21/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark and Mr. Booth, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark and Mr. Booth that material from the relic area and the ball field would be placed within the test embankment on this date.

Civil Projects placed fly ash in the northeastern area of the test embankment area utilizing three scraper specials with two pans each and five articulated trucks. The tractors and trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 6" to 8" lift from southeast to northeast. This material was hauled from the relic area and the ball field. The area of placement was approximately 200' x 190'.

Due to wet and possibly unsafe conditions of the test embankment area, Civil Projects ceased scraper specials activity on the pad at approximately 12:00 PM.

Mr. Clark and Mr. Booth performed field density tests and drive tube cylinders on a northeastern section and northwestern section of the test pad. See attached map. The results and locations of these tests are on page three of this report.

On this date, Civil Projects placed 60 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

On this date, Civil Projects placed 47 loads of fly ash from the ball field utilizing five articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:00 p.m.

7:00AM-7:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Leo Booth	**Date** 12/21/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton Jr.	**Date** 12/22/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

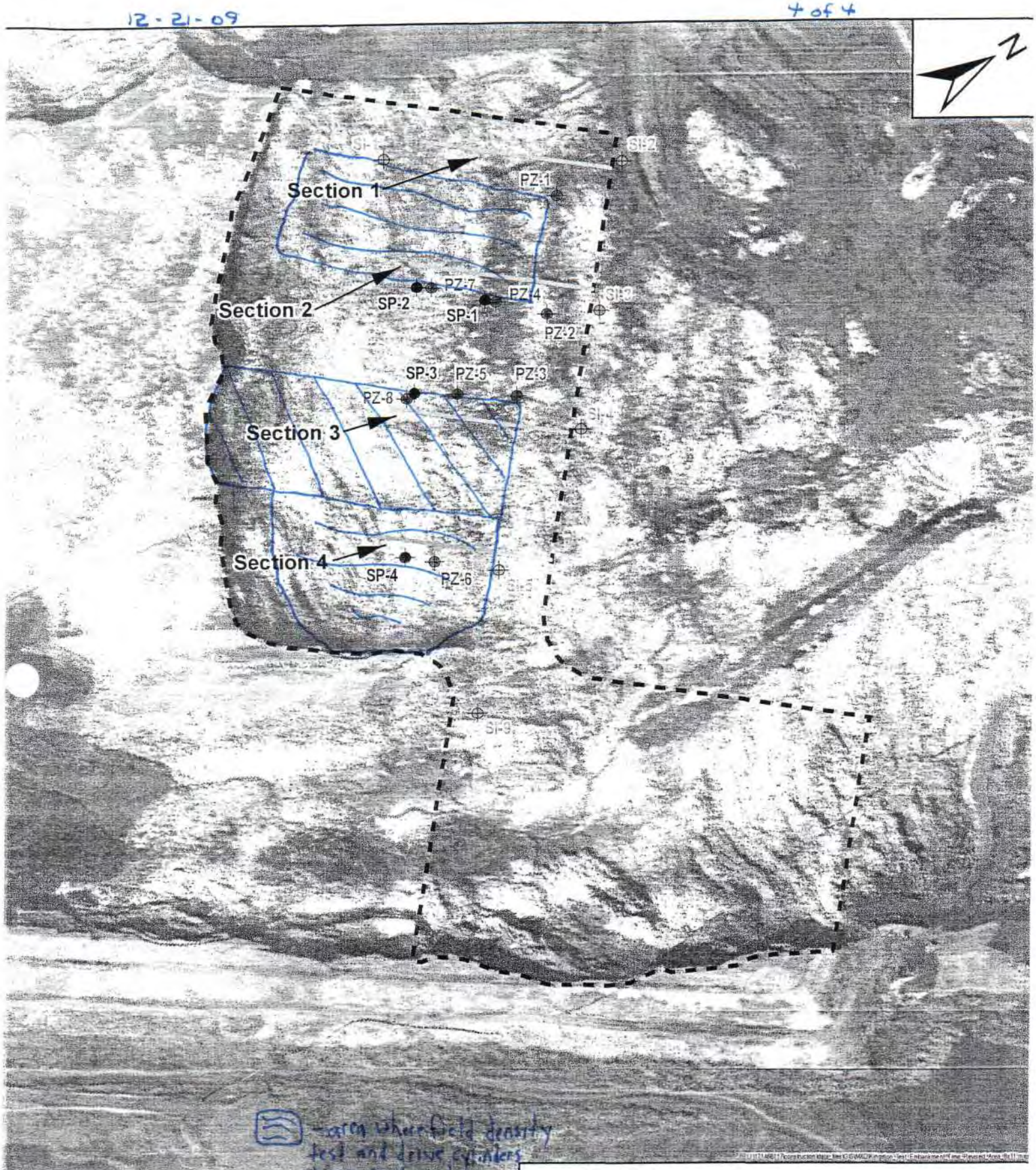
Name of Project: TVA - Kingston Test Embankment Location or Address: Kingston, TN Project No.: 175669015 Report No. _____ Date: 12-21-09

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	Wp 237, N35°54.623', W084°30.759'	81.0	30.4		82.8	24.9	97.8	90.0	
2	Wp 238, N35°54.636', W084°30.752'	RC ~~88~~ 87.5	29.1		91.5	21.1	95.6	↓	
3	Wp 239, N35°54.650', W084°30.742'	88.6	26.6		↓	↓	96.9	↓	
4	Wp 240, N35°54.642', W084°30.723'	82.1	29.8		↓	↓	90.0	↓	
5	Wp 241, N35°54.631', W084°30.733'	92.1	27.1		↓	↓	100.6	↓	
6	Wp 242, N35°54.622', W084°30.740'	90.5	26.5		↓	↓	99.0	↓	
7	Wp 243, N35°54.676', W084°30.846'	74.5	35.2		82.8	24.9	90.0	↓	
8	Wp 244, N35°54.683', W084°30.838'	84.2	31.0		↓	↓	101.7	↓	
9	Wp 245, N35°54.692', W084°30.829'	85.9	29.6		91.5	21.1	93.9	↓	
10	Wp 246, N35°54.699', W084°30.823'	87.4	24.1		↓	↓	95.5	↓	
11	Wp 247, N35°54.707', W084°30.817'	85.9	28.8		↓	↓	93.9	↓	
12	Wp 248, N35°54.692', W084°30.812'	93.0	25.7		↓	↓	101.6	↓	
13	Wp 249, N35°54.683', W084°30.818'	82.0	30.0		↓	↓	90.0	↓	
14	Wp 245, N35°54.676', W084°30.828'	84.4	31.1		82.8	24.9	102.0	↓	
15	Wp 246, N35°54.667', W084°30.835'	79.9	33.7		↓	↓	96.5	↓	

Comments: _____

12-21-09



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	175660015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 126	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/22/09	Day of the Week: Tuesday	
	Weather: Partly Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (3) Cat D6N Dozer, (1) John Deere 750J Dozer, (1) Cat D7T Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 126	Date: 12/22/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that due to wet conditions, no material would be hauled to the test embankment on this date.

Civil Projects utilized six dozers to clip approximately 12" to 14" of wet material off of the entire test embankment area. The material was pushed up the slope of the relic structure and left to dry. The material will be pushed back on the test embankment area at a later date.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 12/22/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/23/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/23/09	Day of the Week: Wednesday	
	Weather: Partly Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer, (1) John Deere 750J Dozer, (3) John Deere Scraper Specials with Two pans each, (5) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 12/23/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that material would be hauled to the test embankment area from the relic structure and the ball field.

Civil Projects placed fly ash in the northwestern section of the test embankment area utilizing three scraper specials with two pans each and five articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southwest to northwest. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 330' x 150'.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing three scraper specials with two pans each and five articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 190' x 130'.

Civil Projects utilized three dozers to push fly ash off the slope of the relic structure. This material was stockpiled at the toe of the relic structure and left to dry. The material will be placed on the test embankment area on a later date.

On this date, no field nuclear density tests were performed.

On this date, Civil Projects placed 90 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

On this date, Civil Projects placed 60 loads of fly ash from the ball field utilizing five articulated trucks

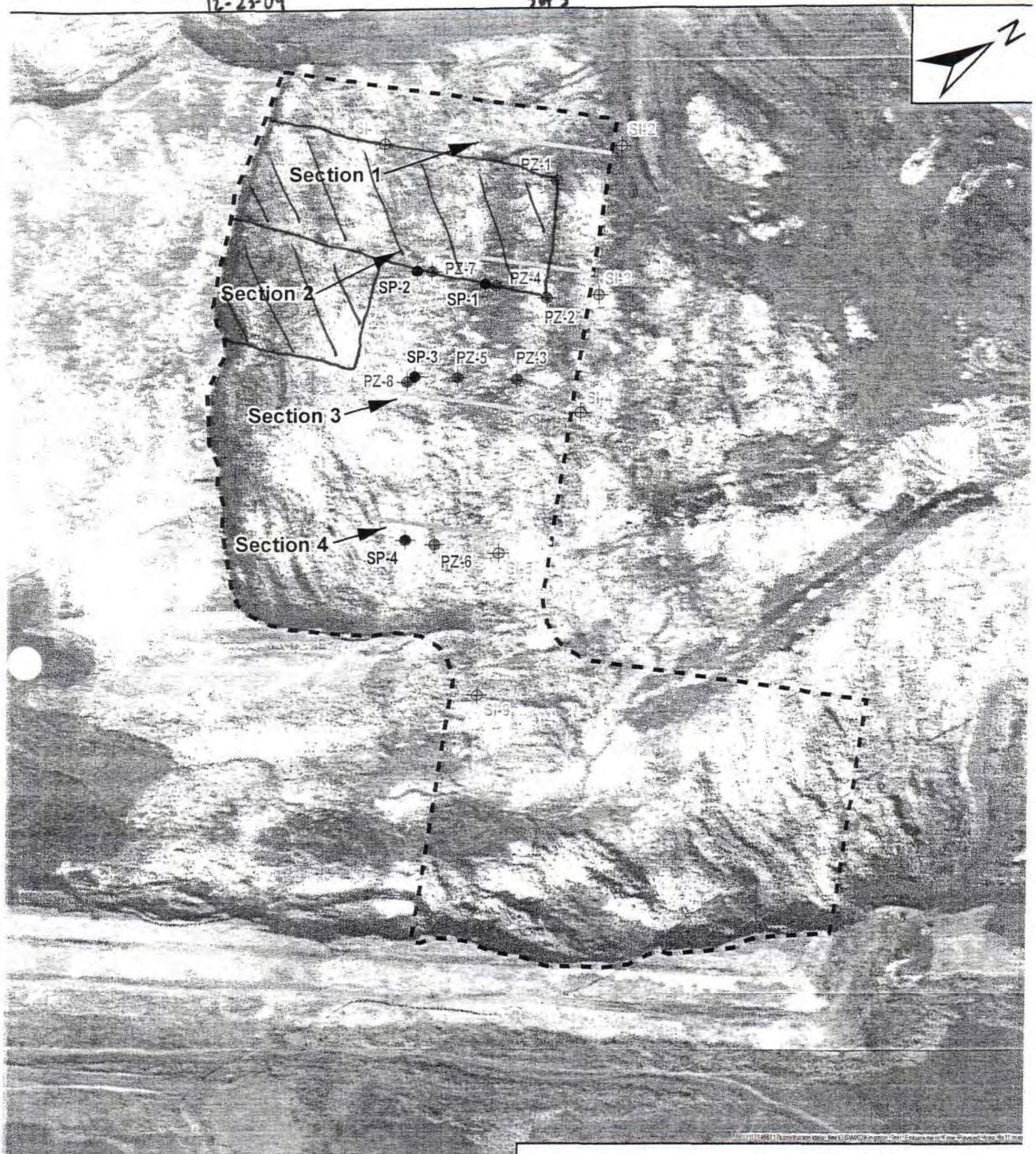
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 12/23/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/29/09



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

= area where material was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/28/09	Day of the Week: Monday	
	Weather: Partly Cloudy/Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) John Deere 850J Dozer, (2) Cat D6N Dozer, (1) John	Type/Model	Manufacturer	Ser. No./ID No.
Deere 750J Dozer, (3) John Deere Scraper Specials with			
Two pans each, (5) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 12/28/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec to discuss the test embankment area. Mr. Andrew informed Mr. Clark that material would be hauled to the test embankment area from the relic structure and the ball field.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing three scraper specials with two pans each and five articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 350' x 450'.

Civil Projects utilized a dozer to clip the stockpiled material from the slope of the relic structure to check the moisture content. Due to excessive moisture the material was left stockpiled at the toe of the relic structure and will be placed on the test embankment at a later date.

On this date, no field nuclear density tests were performed.

On this date, Civil Projects placed 120 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

On this date, Civil Projects placed 64 loads of fly ash from the ball field utilizing five articulated trucks

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 12/28/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/29/09

- area where material was placed on this date

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: Page No: 1 of 5
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 12/29/09	Day of the Week: Tuesday
	Weather: Sunny	Temperature: 40's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
	Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer, (1) John Deere 750J Dozer, (2) John Deere Scraper Specials with Two pans each, (5) Articulated Dump Trucks	3440	Troxler	26

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 5
Stantec Field Representative: Ryan Clark	Report No:	Date: 12/29/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that material would be hauled to the test embankment area from the relic structure and the ball field.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing two scraper specials with two pans each and five articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 250' x 150'.

Civil Projects placed fly ash in the northwestern section of the test embankment area utilizing two scraper specials with two pans each and five articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southwest to northwest. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 100' x 150'.

Civil Projects utilized three dozers to place fly ash that was stockpiled at the toe of the relic structure. The dozer operators bladed the fly ash into an approximately 12" lift across the southeast area of the test embankment area. This area was approximately 700' x 75'.

On this date, Mr. Clark performed field nuclear density tests on the northwest and northeast area of the test embankment. The results are on page three of this report.

On this date, Civil Projects placed 85 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 48 loads of fly ash from the ball field utilizing five articulated trucks

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 12/29/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/30/09

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA - Kingston, Test Emb Project Location or Address: Kingston, TN Project No.: 175669015 Report No. _____ Date: 12-29-09

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	Wp 280, N35°54.851', W084°30.851'	82.6	29.5		82.8	24.9	99.8	90.0	
2	Wp 281, N35°54.678', W084°30.841'	80.8	31.6				97.6		
3	Wp 282, N35°54.689', W084°30.833'	81.9	28.4				98.9		
4	Wp 283, N35°54.698', W084°30.824'	83.1	29.1				100.3		
5	Wp 284, N35°54.696', W084°30.812'	74.5	30.8				90.0		
6	Wp 285, N35°54.688', W084°30.822'	80.8	29.0				97.6		
7	Wp 286, N35°54.679', W084°30.830'	80.1	29.0				96.8		
8	Wp 287, N35°54.669', W084°30.837'	74.7	34.4				90.2		
9	Wp 288, N35°54.661', W084°30.829'	76.7	30.9				92.7		
10	Wp 289, N35°54.671', W084°30.818'	76.0	32.7				91.8		
11	Wp 290, N35°54.677', W084°30.813'	74.5	30.7				90.0		
12	Wp 291, N35°54.688', W084°30.804'	74.5	31.1				90.0		
13	Wp 292, N35°54.684', W084°30.794'	80.8	26.1				97.5		
14	Wp 293, N35°54.673', W084°30.801'	82.0	24.0				99.0		
15	Wp 294, N35°54.664', W084°30.808'	80.9	28.2				97.7		
16	Wp 295, N35°54.655', W084°30.815'	78.6	27.5				94.9		
17	Wp 296, N35°54.647', W084°30.803'	75.8	29.1				91.5		
18	Wp 297, N35°54.654', W084°30.794'	76.7	30.9				92.7		

Comments: _____

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA - Kingston, Test Emb Project Location or Address: Kingston, TN Project No.: 175669015 Report No. _____ Date: 12-27-07

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
19	Wp 298, N35°54.664', W084°30.788'	82.5	30.4		82.8	24.9	99.7	90.0	
20	Wp 299, N35°54.671', W084°30.780'	80.8	30.1		"	"	97.5	"	

Comments: _____

= area where material was placed on this date

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175660016 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 12/30/09	Day of the Week: Wednesday
	Weather: Partly Cloudy/Cloudy	Temperature: 40's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer, (1) John			
Deere 750J Dozer, (2) John Deere Scraper Specials with			
Two pans each, (4) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 12/29/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that material would be hauled to the test embankment area from the relic structure and the ball field.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing two scraper specials with two pans each and four articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 100' x 150'.

Civil Projects placed fly ash in the northwestern section of the test embankment area utilizing two scraper specials with two pans each and four articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southwest to northwest. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 180' x 75'.

Due to excessive moisture from the ball field and relic structure, the articulated trucks were shut down at approximately 2:45 PM and the tractors were shut down at approximately 3:20 PM by Civil Projects and Stantec.

On this date, Civil Projects placed 90 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 30 loads of fly ash from the ball field utilizing four articulated trucks

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 12/30/09
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/30/09

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 176669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 131	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/31/09	Day of the Week: Thursday	
	Weather: Rainy/Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly. Review test embankment conditions after holidays.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 131	Date: 12/29/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to rainy weather conditions, no material would be hauled to the test embankment on this date. Mr. Clark assisted with instrumentation monitoring for the remainder of the day.

The rain gauge indicated .4 inches of rain for a 24 hour period of time.

Since this is a short week for the New Year's Day holiday, Mr. Clark spent the remainder of the day assisting Mr. Layton and Mr. Meyers with collecting data from instruments on the test embankment and the failed dredge cell.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	5:00 p.m.

7:00AM-5:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 12/31/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 12/31/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/4/10	Day of the Week: Monday	
	Weather: Partly Cloudy/Sunny	Temperature: High 20's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) John Deere 850J Dozer, (2) Cat D6N Dozer, (1) John	Type/Model	Manufacturer	Ser. No./ID No.
Deere 750J Dozer, (2) John Deere Scraper Specials with			
Two pans each, (5) Articulated Dump Trucks, (1) Cat			
Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/4/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that material would be hauled to the test embankment area from the relic structure and the ball field.

Due to frozen material on the relic structure, Civil Projects utilized an excavator to load the tractors from the relic structure.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing two scraper specials with two pans each and five articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 100' x 150'.

Civil Projects placed fly ash in the northwestern section of the test embankment area utilizing two scraper specials with two pans each and five articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southwest to northwest. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 150' x 100'.

On this date, Civil Projects placed 48 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 66 loads of fly ash from the ball field utilizing four articulated trucks

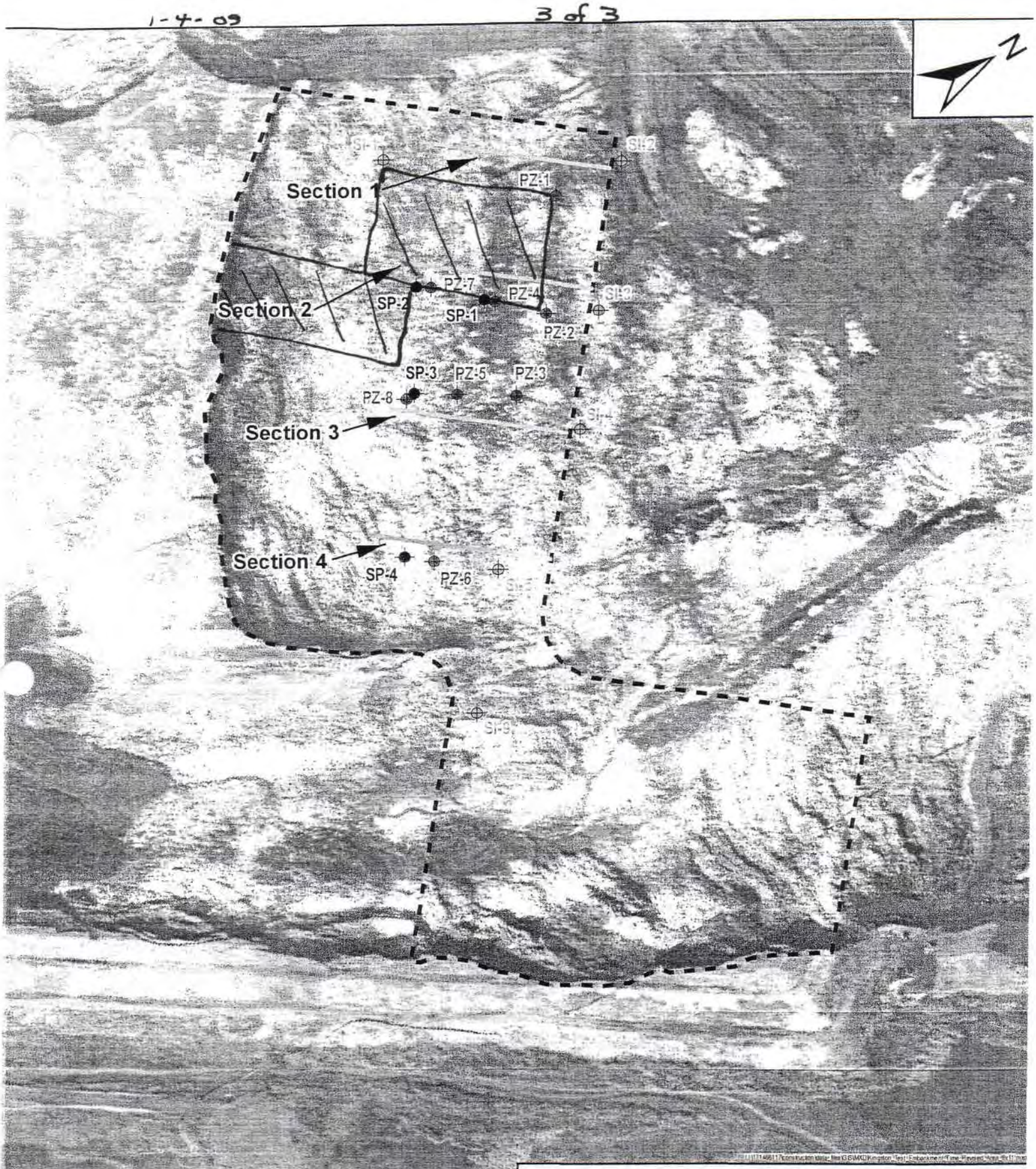
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/4/10
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 1/05/10



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

- area where material was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/5/10	Day of the Week: Tuesday	
	Weather: Partly Cloudy/Sunny	Temperature: 20's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer, (1) John			
Deere 750J Dozer, (3) John Deere Scraper Specials with			
Two pans each, (7) Articulated Dump Trucks, (1) Cat			
Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/5/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that material would be hauled to the test embankment area from the relic structure and the ball field.

Due to frozen material on the relic structure, Civil Projects utilized an excavator to load the tractors from the relic structure.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing three scraper specials with two pans each and seven articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 300' x 300'.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing three scraper specials with two pans each and seven articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 50' x 75'.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing three scraper specials with two pans each and seven articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 300' x 75'.

On this date, Civil Projects placed 89 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

On this date, Civil Projects placed 58 loads of fly ash from the ball field utilizing seven articulated trucks

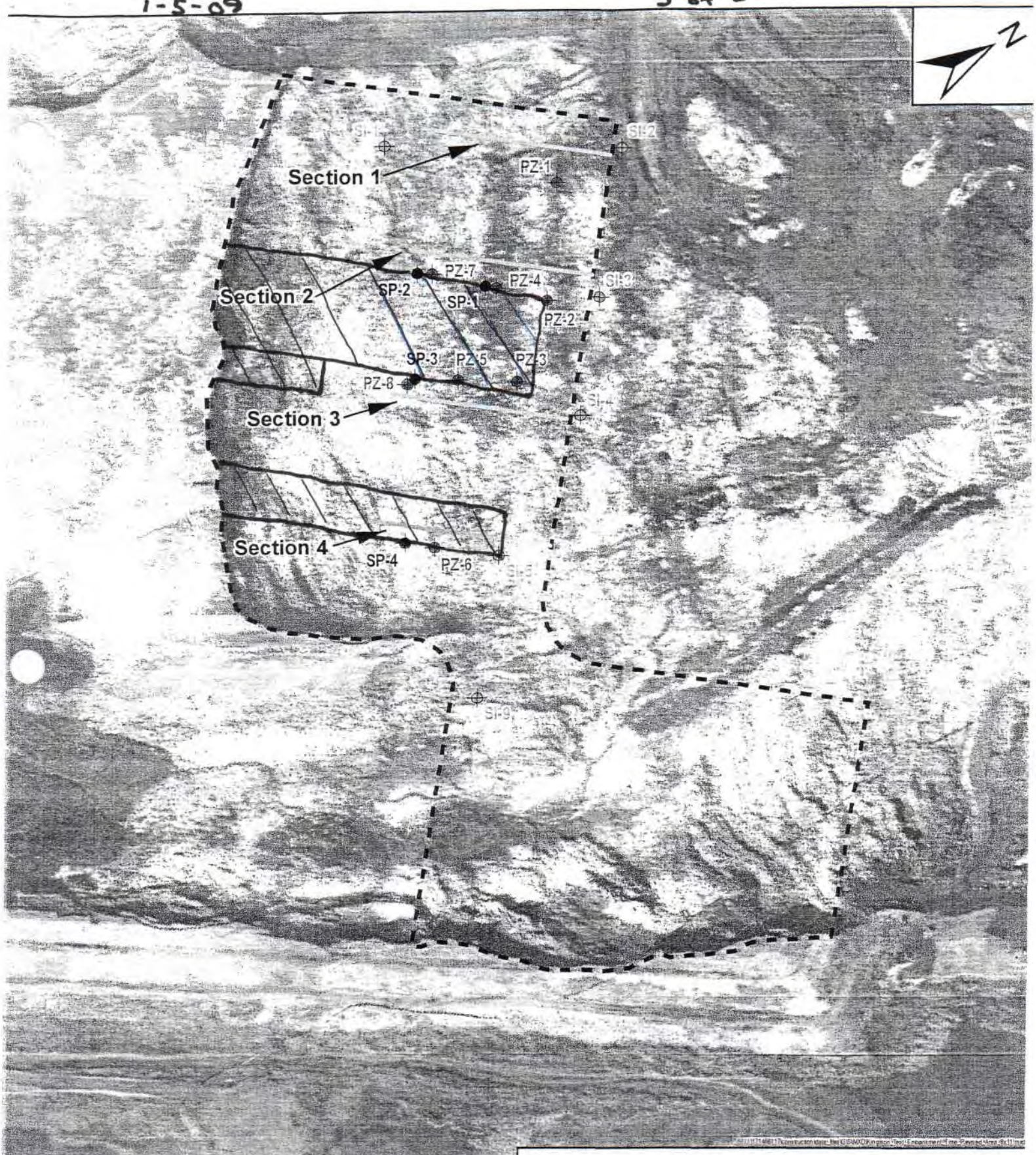
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/5/10
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 1/7/10



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

▨ - area where material was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175689015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/6/10	Day of the Week: Wednesday	
	Weather: Partly Cloudy/Sunny	Temperature: Low 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) John Deere 850J Dozer, (2) Cat D6N Dozer, (1) John	Type/Model	Manufacturer	Ser. No./ID No.
Deere 750J Dozer, (3) John Deere Scraper Specials with			
Two pans each, (7) Articulated Dump Trucks, (1) Cat			
Excavator, (1) Cat Smooth Drum Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/6/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that material would be hauled to the test embankment area from the relic structure and the ball field.

Due to frozen material on the relic structure, Civil Projects utilized an excavator to load the tractors from the relic structure.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing three scraper specials with two pans each and seven articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 200' x 300'.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing three scraper specials with two pans each and seven articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 200' x 175'.

On this date, Civil Projects placed 117 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

On this date, Civil Projects placed 118 loads of fly ash from the ball field utilizing seven articulated trucks

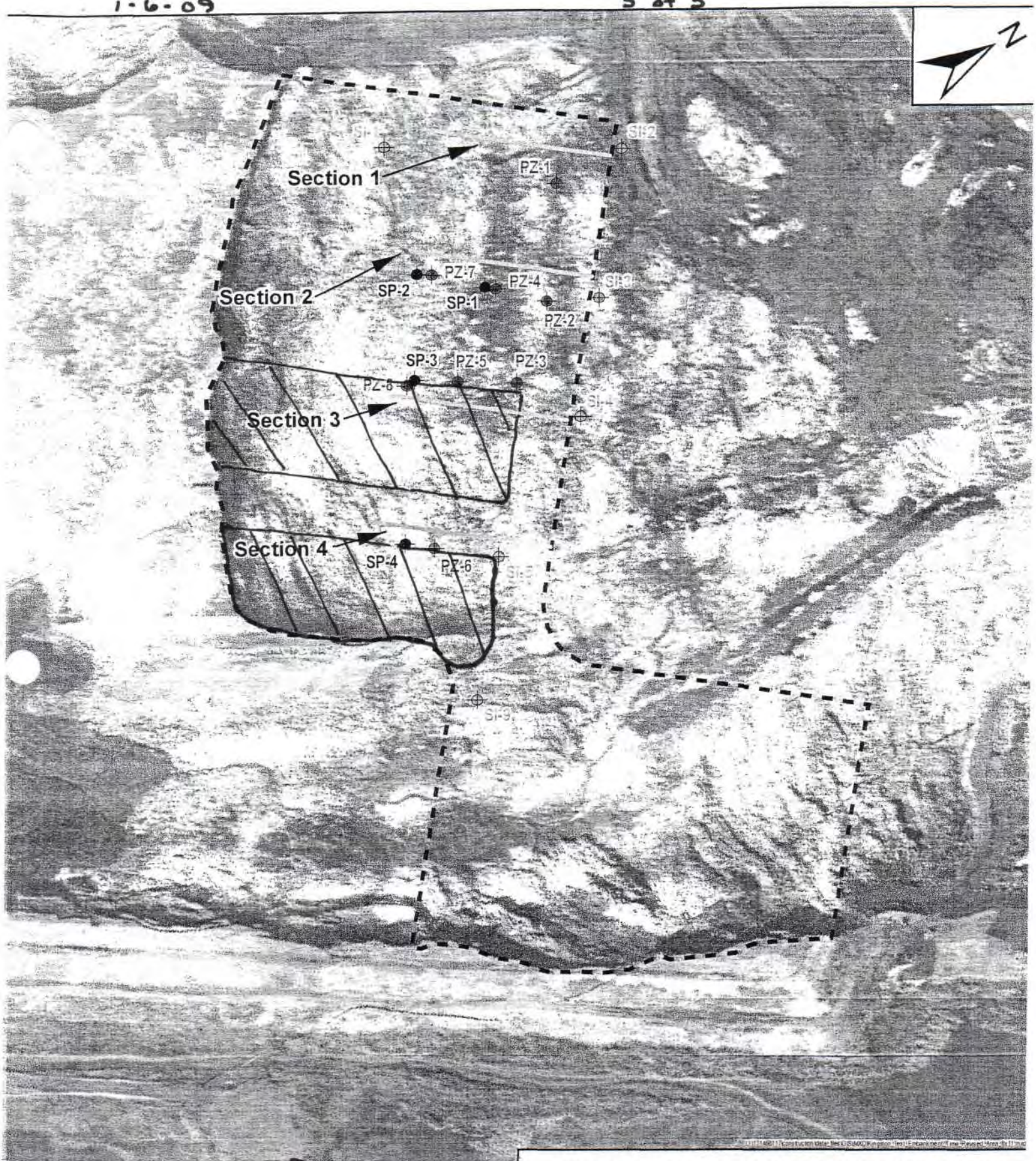
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/6/10
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 1/07/10



- area where material was placed on this date

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 175660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/7/10	Day of the Week: Thursday	
	Weather: Partly Cloudy/Snowing	Temperature: High 20's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer,			
(3) John Deere Scraper Specials with two pans each,			
(8) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/7/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark that material from the relic area and the ball field would be placed within the test embankment on this date.

Due to frozen material on the relic structure, Civil Projects utilized an excavator to load the tractors from the relic structure.

Civil Projects placed fly ash in the northeastern area of the test embankment area using three scraper specials with two pans each and eight articulated dump trucks. The tractors and trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southwest to northeast. This area was approximately 150' x 150'. This material was hauled to the test embankment area from the relic area and the ball field.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using three scraper specials with two pans each and eight articulated dump trucks. The trucks and tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southwest to northeast This area was approximately 150' x 150'. This material was hauled to the test embankment area from the ball field and the relic area.

On this date, no field nuclear tests were performed.

On this date, Civil Projects placed 78 loads of fly ash from the relic area utilizing three scraper special tractors with two pans each.

On this date, Civil Projects placed 141 loads of fly ash from the ball field utilizing eight articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/7/10
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 1/09/10

- area of placement on this date

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	175660015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/8/10	Day of the Week: Friday	
	Weather: Partly Cloudy	Temperature: 20's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Darlene Berryman/Leo Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer,			
(2) John Deere Scraper Specials with two pans each,			
(7) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No [X] Yes

Did you observe anything unexpected? [X] No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Darlene Berryman/Leo Booth	Report No:	Date: 1/8/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Ms. Berryman and Mr. Booth technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark that material from the relic area and the ball field would be placed within the test embankment on this date.

Due to frozen material on the relic structure, Civil Projects utilized an excavator to load the tractors from the relic structure.

Civil Projects placed fly ash in the northeastern area of the test embankment area using two scraper specials with two pans each and seven articulated dump trucks. The tractors and trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southwest to northeast. This area was approximately 300' x 300'. This material was hauled to the test embankment area from the relic area and the ball field.

Civil Projects also placed fly ash in the southeastern area of the test embankment area using two scraper specials with two pans each and seven articulated dump trucks. The trucks and tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southwest to southeast This area was approximately 300' x 300'. This material was hauled to the test embankment area from the ball field and the relic area.

Mr. Layton and Ms. Berryman raised settlement plates 1, 2 and 3.

On this date, no field nuclear tests were performed.

On this date, Civil Projects placed 111 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 163 loads of fly ash from the ball field utilizing seven articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

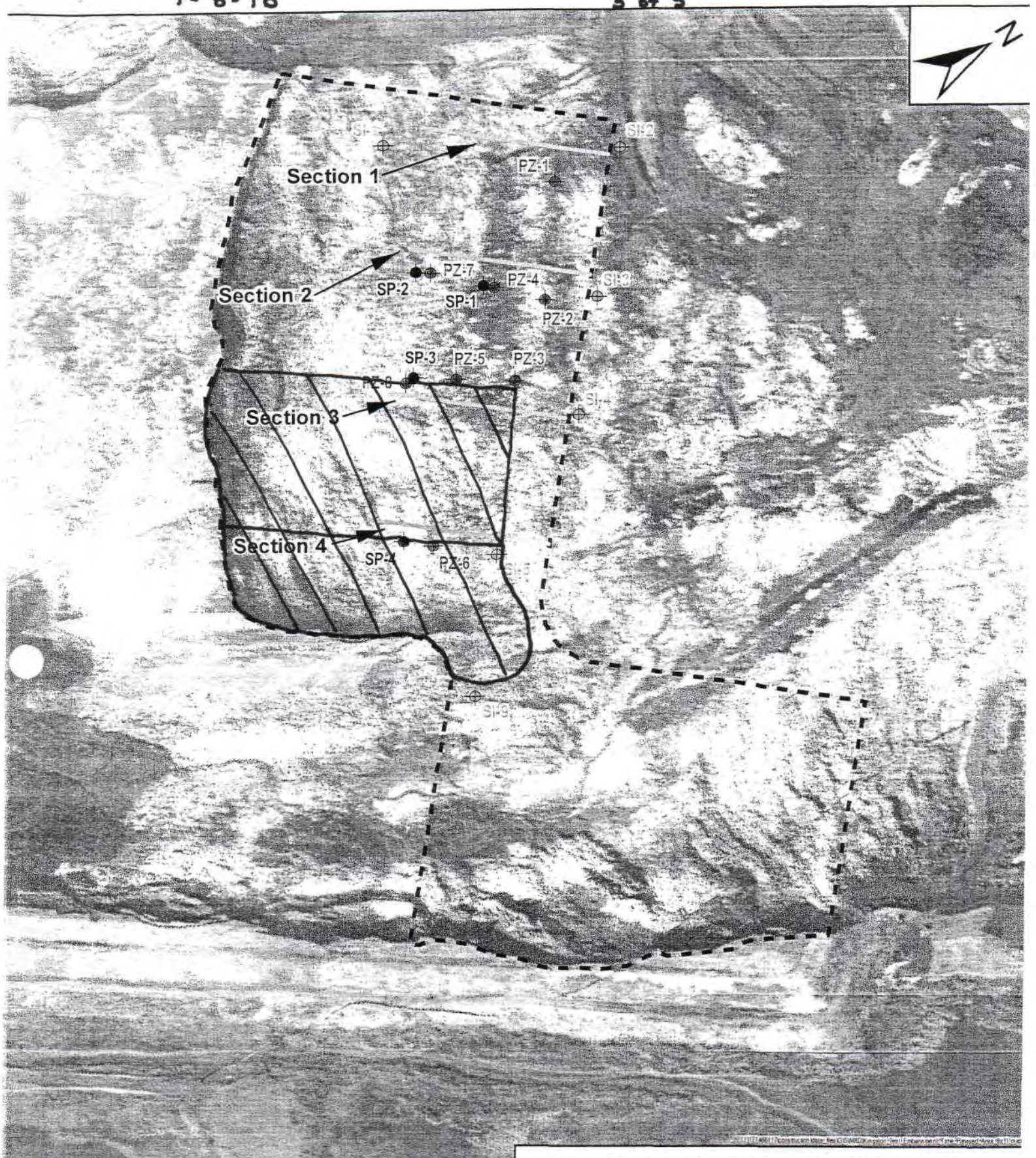
7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman/Leo Booth	**Date** 1/8/10
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 1/14/10

1-8-10

3 of 3



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

- area where material was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	175668015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/9/10	Day of the Week: Saturday	
	Weather: Partly Cloudy	Temperature: 20's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Darlene Berryman/Leo Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer,			
(2) John Deere Scraper Specials with two pans each,			
(8) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Darlene Berryman/Leo Booth	Report No:	Date: 1/9/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Ms. Berryman and Mr. Booth technicians with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark that material from the relic area and the ball field would be placed within the test embankment on this date.

Due to frozen material on the relic structure, Civil Projects utilized an excavator to load the tractors from the relic structure.

Civil Projects placed fly ash in the northwestern area of the test embankment area using two scraper specials with two pans each and eight articulated dump trucks. The tractors and trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southeast to northwest. This area was approximately 150' x 150'. This material was hauled to the test embankment area from the relic area and the ball field.

Civil Projects also placed fly ash in the southwestern area of the test embankment area using two scraper specials with two pans each and seven articulated dump trucks. The trucks and tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southwest to southeast This area was approximately 50' x 400'. This material was hauled to the test embankment area from the ball field and the relic area.

For dust control purposes, the test embankment was shut down from approximately 11:15 am to 2:00 pm.

On this date, no field nuclear tests were performed.

On this date, Civil Projects placed 64 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 102 loads of fly ash from the ball field utilizing eight articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

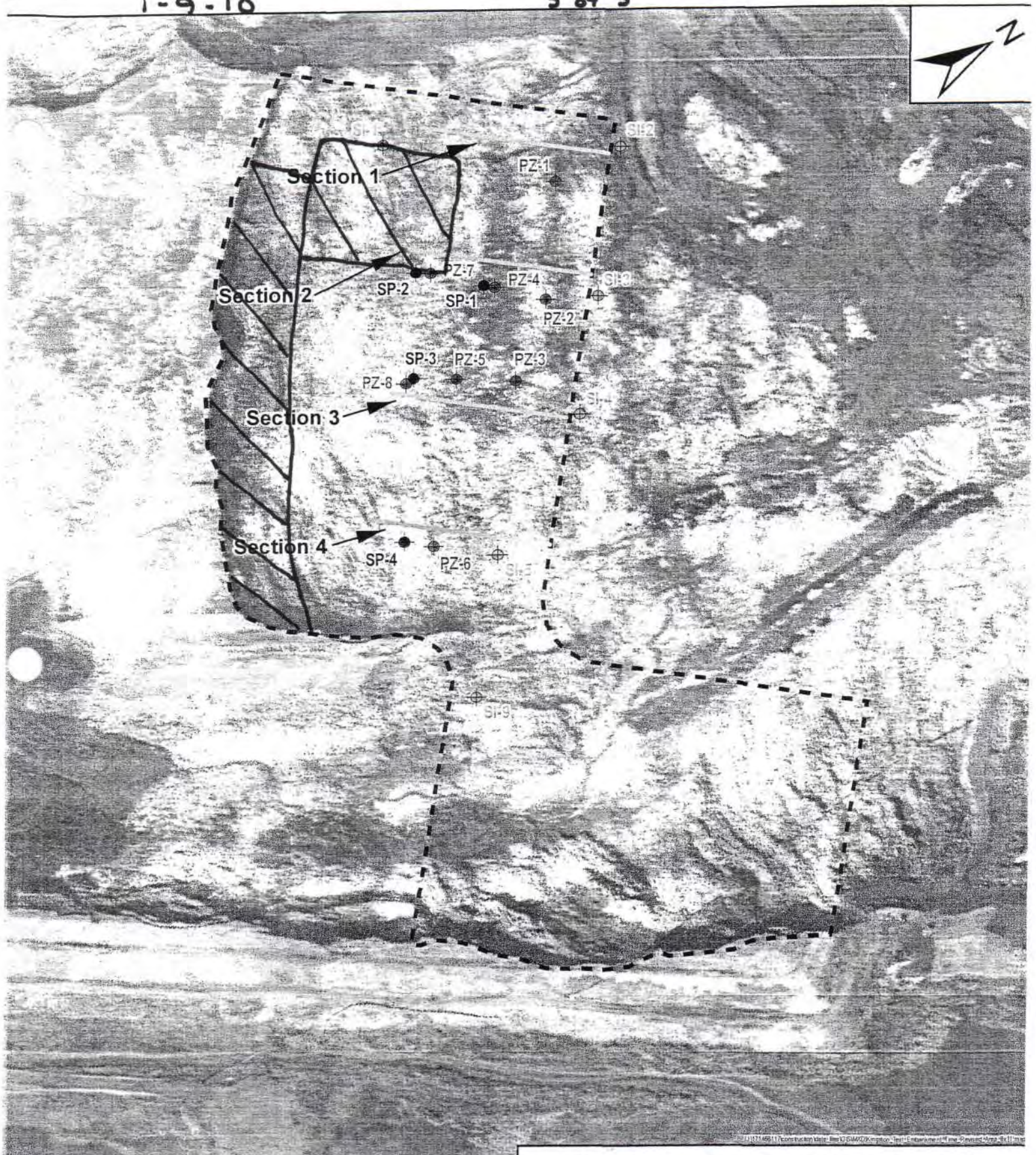
7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman/Leo Booth	**Date** 1/9/10
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 1/14/10

1-9-10

3 of 3



- area where material was placed on this date

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MEP	PROJECT NO.	176660015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/11/10	Day of the Week: Monday	
	Weather: Partly Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer,			
(2) John Deere Scraper Specials with two pans each,			
(9) Articulated Dump Trucks, (1) Cat Excavator			
(1) Smooth Drum Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/11/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark technician with Stantec, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that material from the relic area and the ball field would be placed within the test embankment on this date.

Due to frozen material on the relic structure, Civil Projects utilized an excavator to load the tractors from the relic structure.

Civil Projects placed fly ash in the northwestern area of the test embankment area using two scraper specials with two pans each and nine articulated dump trucks. The tractors and trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southeast to northwest. This area was approximately 150' x 150'. This material was hauled to the test embankment area from the relic area and the ball field. This area was sealed with a smooth drum compactor.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using two scraper specials with two pans each and nine articulated dump trucks. The trucks and tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southwest to northeast This area was approximately 180' x 300'. This material was hauled to the test embankment area from the ball field and the relic area. This area was sealed with a smooth drum compactor.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using two scraper specials with two pans each and nine articulated dump trucks. The trucks and tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southwest to northeast This area was approximately 300' x 170'. This material was hauled to the test embankment area from the ball field and the relic area. This area was sealed with a smooth drum compactor.

On this date, no field nuclear tests were performed.

On this date, Civil Projects placed 82 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 126 loads of fly ash from the ball field utilizing nine articulated trucks.

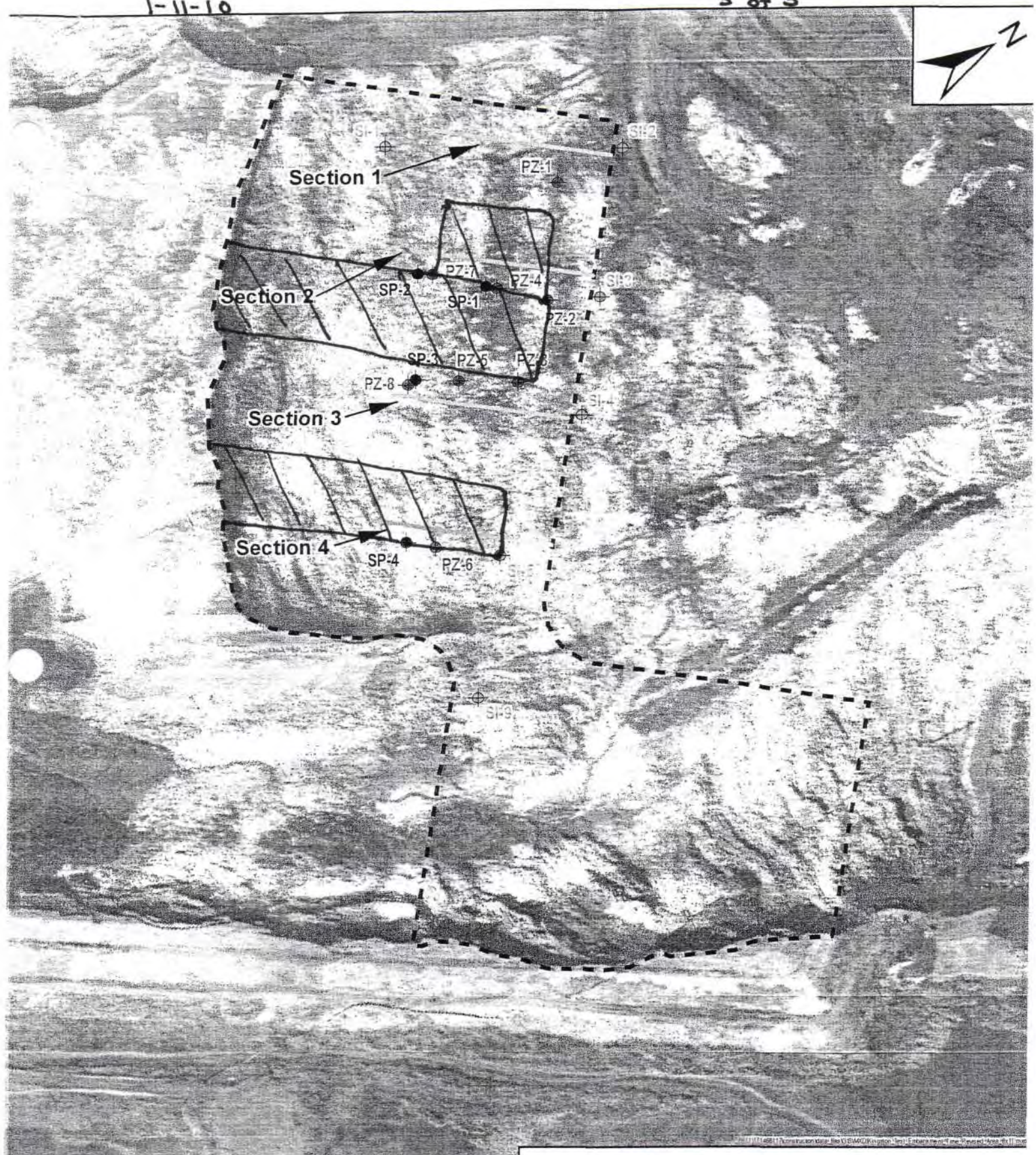
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/11/10
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 1/14/10



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

- area where material was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 176660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/12/10	Day of the Week: Tuesday	
	Weather: Partly Cloudy/Sunny	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer, (1) John			
Deere 750J Dozer, (2) John Deere Scraper Specials with			
Two pans each, (7) Articulated Dump Trucks, (1) Cat			
Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/12/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that material would be hauled to the test embankment area from the relic structure and the ball field.

Due to frozen material on the relic structure, Civil Projects utilized an excavator to load the tractors from the relic structure.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing two scraper specials with two pans each and seven articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 250' x 100'.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing two scraper specials with two pans each and seven articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 300' x 300'.

On this date, Civil Projects placed 82 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 126 loads of fly ash from the ball field utilizing seven articulated trucks

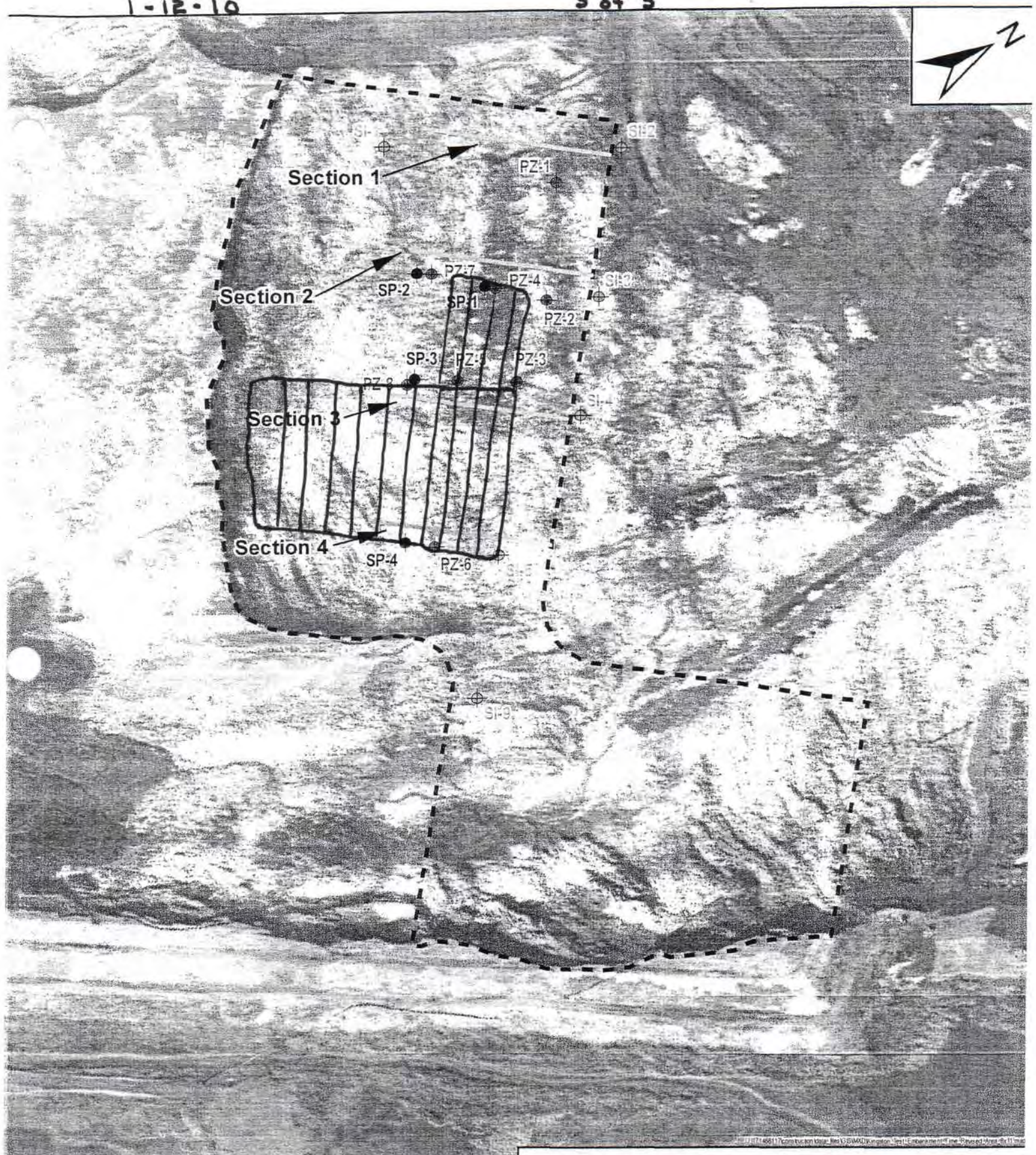
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/12/10
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 1/14/10



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

= area where material was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY:	MFP	PROJECT NO.	175669015	DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 1/13/10	Day of the Week: Wednesday
	Weather: Partly Cloudy	Temperature: 30's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer,			
(2) John Deere Scraper Specials with two pans each,			
(5) Articulated Dump Trucks, (1) Cat Excavator			
(1) Smooth Drum Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/13/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark that material from the relic area and the ball field would be placed within the test embankment on this date.

Due to frozen material on the relic structure, Civil Projects utilized an excavator to load the tractors from the relic structure.

Civil Projects placed fly ash in the northwestern area of the test embankment area using two scraper specials with two pans each and five articulated dump trucks. The tractors and trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southeast to northwest. This area was approximately 150' x 200'. This material was hauled to the test embankment area from the relic area and the ball field. This area was sealed with a smooth drum compactor. Mr. Clark and Mr. Meyers performed field density tests on this area.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using two scraper specials with two pans each and nine articulated dump trucks. The trucks and tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southwest to northeast This area was approximately 150' x 300'. This material was hauled to the test embankment area from the ball field and the relic area. This area was sealed with a smooth drum compactor. Mr. Clark and Mr. Meyers performed field nuclear density tests on this area.

Mr. Clark and Mr. Meyers also performed two drive cylinder tests on this date.

On this date, Civil Projects placed 86 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 100 loads of fly ash from the ball field utilizing nine articulated trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/13/10
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 1/14/10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: Kingston - TVA Test Embankment Location or Address: Kingston, TN Project No.: 175669015 Report No. _____ Date: 1-13-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	Wp323, N35°54.700', W084°30.815'	87.1	28.9		91.5	21.1	91.9	90.0	
2	Wp324, N35°54.691', W084°30.825'	83.2	28.8				90.9		
3	Wp347, N35°54.683', W084°30.831'	88.8	27.2				97.0		
* 4	Wp444, N35°54.676', W084°30.840'	84.0	28.5				91.8		
5	Wp448, N35°54.673', W084°30.834'	86.0	30.3				94.0		
6	Wp449, N35°54.677', W084°30.824'	87.4	27.4				95.5		
7	Wp459, N35°54.684', W084°30.817'	82.6	30.0				90.2		
8	Wp460, N35°54.690', W084°30.807'	88.2	26.1				96.4		
9	Wp934, N35°54.617', W084°30.765'	75.4	27.5		82.8	24.9	91.0		
10	Wp992, N35°54.623', W084°30.760'	75.3	33.3				90.9		
11	Wp993, N35°54.631', W084°30.753'	75.2	29.5				90.9		
12	Wp001, N35°54.638', W084°30.747'	76.0	31.0				91.8		
* 13	Wp002, N35° 54.634', W084° 30.737'	75.1	32.2				90.8		

Comments: * Drive cylinder tests

area where material was placed on this date

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MEP | PROJECT NO. 175660015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program	
	Location or Address: Kingston, Tennessee	
	Date: 1/14/10	Day of the Week: Thursday
	Weather: Sunny	Temperature: 40's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer,			
(2) John Deere Scraper Specials with two pans each,			
(11) Articulated Dump Trucks, (1) Cat Excavator			
(1) Smooth Drum Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/13/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark technician with Stantec, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark that material from the relic area and the ball field would be placed within the test embankment on this date.

Due to frozen material on the relic structure, Civil Projects utilized an excavator to load the tractors from the relic structure.

Civil Projects placed fly ash in the northwestern area of the test embankment area using two scraper specials with two pans each and eleven articulated dump trucks. The tractors and trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southeast to northwest. This area was approximately 150' x 150'. This material was hauled to the test embankment area from the relic area and the ball field. This area was sealed with a smooth drum compactor.

Civil Projects placed fly ash in the central area of the test embankment area using two scraper specials with two pans each and eleven articulated dump trucks. The tractors and trucks end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southeast to northwest. This area was approximately 225' x 300'. This material was hauled to the test embankment area from the relic area and the ball field. This area was sealed with a smooth drum compactor.

Civil Projects also placed fly ash in the northeastern area of the test embankment area using two scraper specials with two pans each and eleven articulated dump trucks. The trucks and tractors end dumped the fly ash near the placement area and the dozer operators bladed it into an approximate 8" to 12" lift from southwest to northeast This area was approximately 125' x 300'. This material was hauled to the test embankment area from the ball field and the relic area. This area was sealed with a smooth drum compactor.

On this date, Civil Projects placed 84 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 197 loads of fly ash from the ball field utilizing eleven articulated trucks.

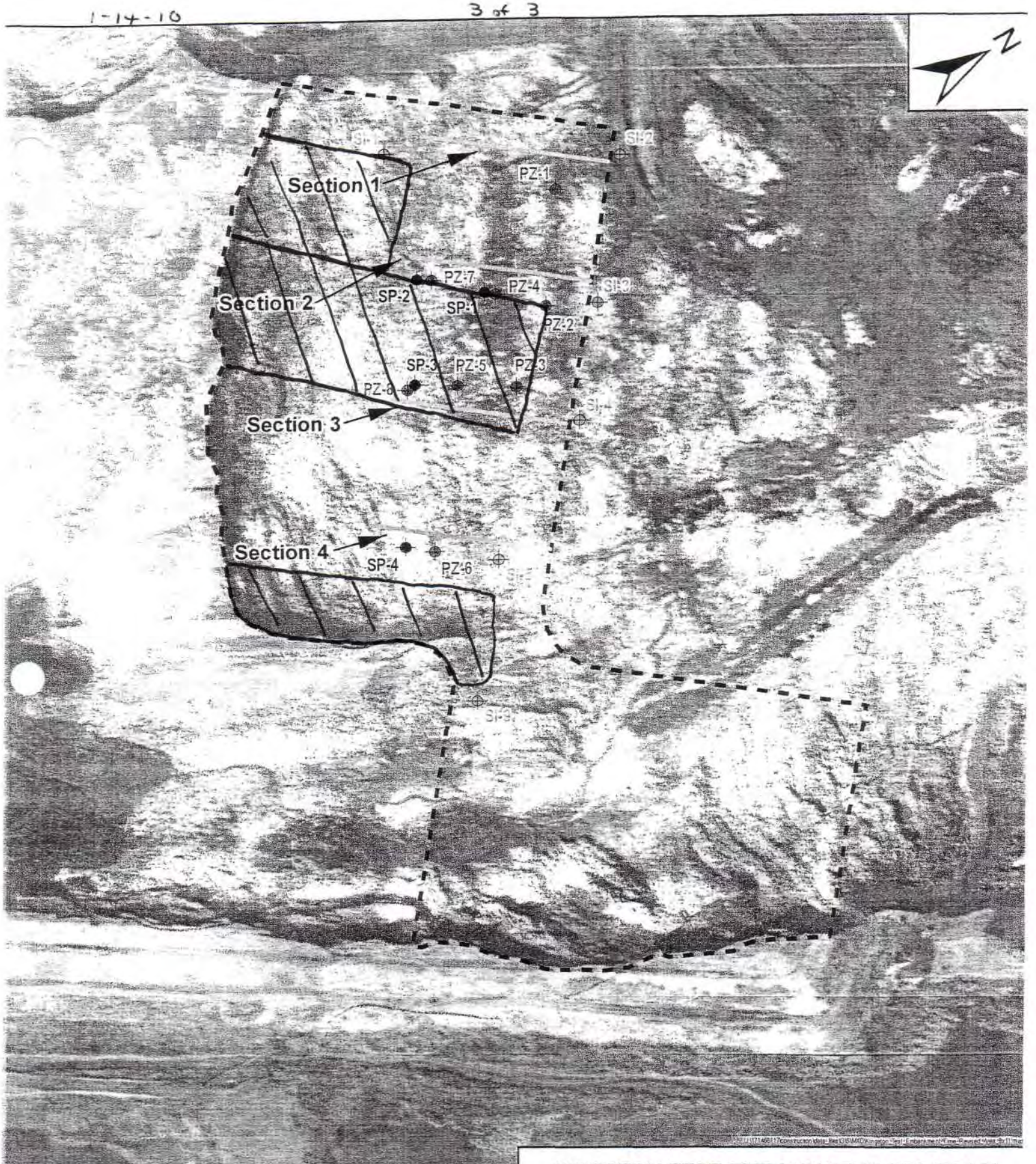
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/14/10
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 1/15/10



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

Area that was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 175669015 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/15/10	Day of the Week: Friday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer, (1) John			
Deere 750J Dozer, (2) John Deere Scraper Specials with			
Two pans each, (9) Articulated Dump Trucks, (1) Cat			
Excavator, (1) Smooth Drum Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/15/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that material would be hauled to the test embankment area from the relic structure and the ball field.

Due to frozen material on the relic structure, Civil Projects utilized an excavator to load the tractors from the relic structure.

Civil Projects placed fly ash in the central section of the test embankment area utilizing two scraper specials with two pans each and nine articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 300' x 300'.

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing two scraper specials with two pans each and nine articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 300' x 200'.

On this date, Civil Projects placed 90 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 145 loads of fly ash from the ball field utilizing nine articulated trucks

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/15/10
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 1/17/10

N
Section 1
Section 2
Section 3
Section 4
SI-2
PZ-1
PZ-7
PZ-4
SI-3
SP-2
SP-1
PZ-2
SP-3
PZ-5
PZ-3
PZ-8
SI-4
SP-4
PZ-6
SI-5
SI-1
Legend
Cross Section
Piezometer (PZ)
Slope Inclinometer (SI)
- area where material was placed on 11-x date
KINGSTON TEST EMBANKMENT PROGRAM
Stantec
Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027
DRAWN BY: MFP
PROJECT NO. 175660015
DATE

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	
Distribution:	

Project No.: 175669015	Rep No.:	Page No: 1 of 3
Project Name: TVA Kingston – Test Embankment Program		
Location or Address: Kingston, Tennessee		
Date: 1/16/10	Day of the Week: Saturday	
Weather: Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (2) Cat D6N Dozer, (1) John			
Deere 750J Dozer, (2) John Deere Scraper Specials with			
Two pans each, (9) Articulated Dump Trucks, (1) Cat			
Excavator, (1) Smooth Drum Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction and lift/area based density testing with an occasional drive cylinder test, possibly.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/16/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that material would be hauled to the test embankment area from the relic structure and the ball field.

Due to frozen material on the relic structure, Civil Projects utilized an excavator to load the tractors from the relic structure.

Civil Projects placed fly ash in the western section of the test embankment area utilizing two scraper specials with two pans each and nine articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southwest to northwest. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 75' x 300'. This area was sealed utilizing a smooth drum compactor.

Civil Projects placed fly ash in the eastern section of the test embankment area utilizing two scraper specials with two pans each and nine articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 150' x 150'. This area was sealed utilizing a smooth drum compactor.

Civil Projects also placed fly ash in the southern section of the test embankment area utilizing two scraper specials with two pans each and nine articulated dump trucks. The tractors and trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic structure and the ball field. The area of placement was approximately 75' x 400'. This area was back drug utilizing a dozer due to wet and soft material.

On this date, Civil Projects placed 100 loads of fly ash from the relic area utilizing two scraper special tractors with two pans each.

On this date, Civil Projects placed 145 loads of fly ash from the ball field utilizing nine articulated trucks

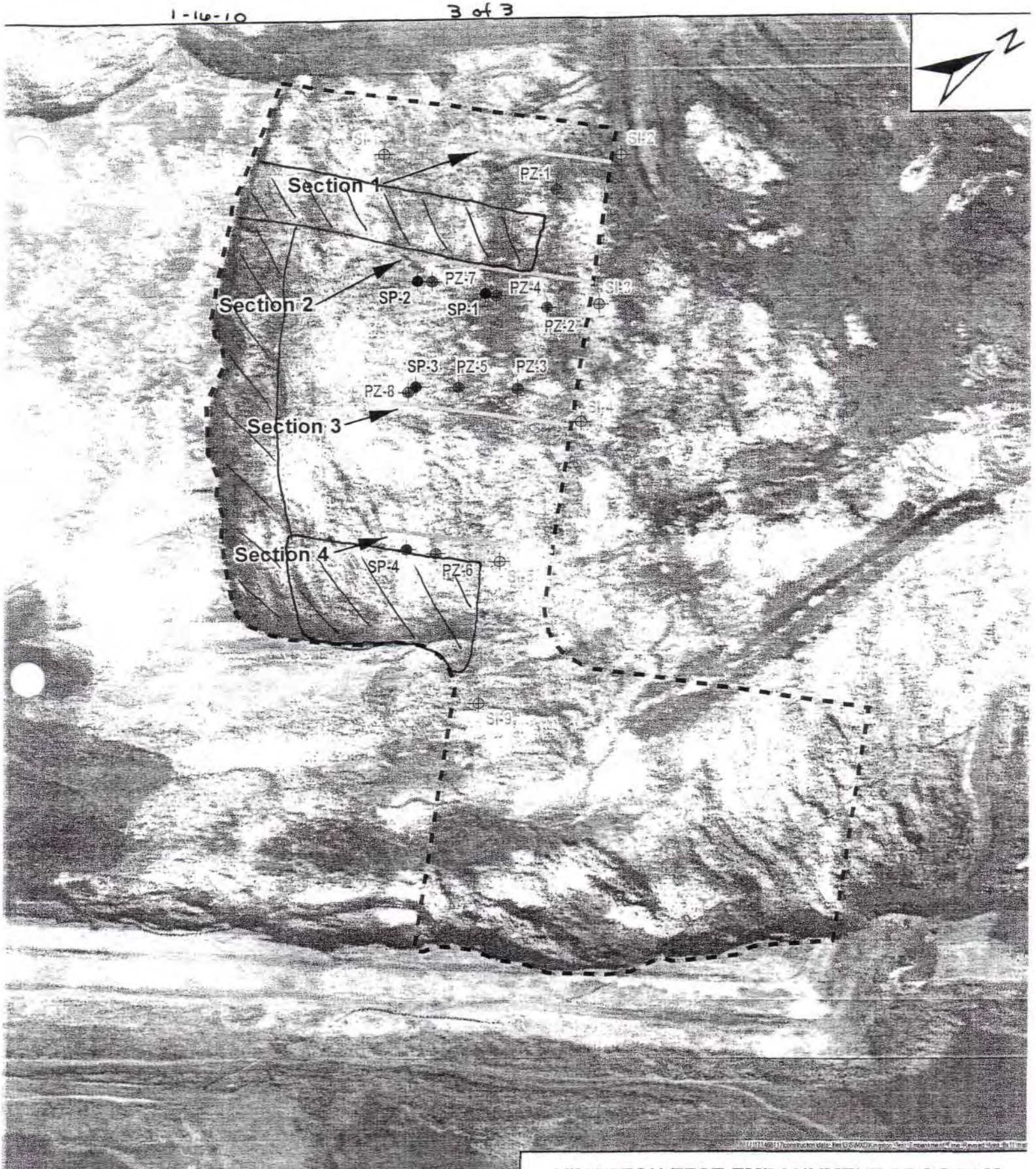
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

☐ **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/16/10
☒ **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manager	**Date** 1/18/10



KINGSTON TEST EMBANKMENT PROGRAM

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

= area of placement on this date

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. 175669015 | DATE:

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/18/10	Day of the Week: Monday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) Cat Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Fill placement may commence depending upon the completion of access for trucks and tractors. Observe degree of de-watering and rutting and/or pumping due to rain-softened subgrade surface.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/18/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to wet conditions, no material would be hauled to the test embankment area from the relic structure and the ball field.

At approximately 1:30 PM, Mr. Andrew, QC Manager with Stantec and Mr. Layton met with Mr. Kilby, Foreman with Civil Projects to discuss a de-watering method for ponding water on the test embankment. As a result of this discussion, Civil Projects utilized a dozer to trench out ponding water on the southeastern corner of the test embankment area.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/18/10
[ ] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-19-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/19/10	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (2) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ X ☐ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☐ X ☐ Yes

Did you observe anything unexpected? ☐ X ☐ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☐ X ☐ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of rutting and/or pumping of subgrade under weight of loaded trucks and tractors hauling fill material.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/19/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to wet conditions, no material would be hauled to the test embankment area from the relic structure or the ball field. No fill material was moved to the test embankment, therefore no rutting or pumping was observed on this date. Most of the ponded water had been removed from the surface of the test embankment on the previous date.

Civil Projects placed sand on the southeast access road utilizing two articulated dump trucks and a dozer. This material was hauled to the test embankment area from Dike C. The sand was placed on the road to gain access through wet material on the southeast corner of the test embankment area.

Civil Projects placed 8 loads of sand utilizing two articulated dump trucks

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.
Arrive	10:00 a.m.
Depart	11:00 a.m.

Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/19/10
[ ] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-20-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/20/10	Day of the Week: Wednesday	
	Weather: Cloudy/Rainy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/19/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to wet conditions, no material would be hauled to the test embankment area from the relic structure and the ball field. No material was hauled to the test embankment on this date, therefore no rutting or pumping was observed.

Civil Projects did not perform any construction on the test embankment area.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment construction and instrumentation readings.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/20/10
[ ] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-21-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/21/10	Day of the Week: Thursday	
	Weather: Cloudy/Rainy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/21/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to wet conditions, no material would be hauled to the test embankment area from the relic structure or the ball field. No material was hauled to the test embankment on this date, therefore no rutting or pumping was observed.

Civil Projects did not perform any construction on the test embankment area.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/21/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-22-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.:	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/22/10	Day of the Week: Friday	
	Weather: Partly Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No:	Date: 1/22/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to wet conditions, no material would be hauled to the test embankment area from the relic structure and the ball field. No material was hauled to the test embankment on this date, therefore no rutting or pumping was observed.

Civil Projects did not perform any construction on the test embankment area.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/22/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-23-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 150	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/23/10	Day of the Week: Saturday	
	Weather: Partly Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors. With
Large rains predicted for Sunday, repair of washes and rills in the Test Embankment will be reviewed as soon as work can resume.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth	Report No: 150	Date: 1/23/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Layton, Assist. Q.C. Manager with Stantec Consulting Services, Inc., met with Mr. Leo Booth, technician with Stantec Consulting, to discuss the test embankment area. Mr. Layton informed Mr. Booth that due to wet conditions, no material would be hauled to the test embankment area from the relic structure and the ball field. No material was hauled to the test embankment on this date, therefore no rutting or pumping was observed.

Civil Projects did not perform any construction on the test embankment area.

Mr. Layton assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 1/23/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. Q.C. Manger	**Date** 1/23/10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 151	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/25/10	Day of the Week: Monday	
	Weather: Cloudy/Rainy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 151	Date: 1/25/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to wet conditions, no material would be hauled to the test embankment area from the relic structure and the ball field. No material was hauled to the test embankment on this date, therefore no rutting or pumping was observed.

Civil Projects did not perform any construction on the test embankment area.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/25/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-26-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 152	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/26/10	Day of the Week: Tuesday	
	Weather: Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 152	Date: 1/26/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to wet conditions, no material would be hauled to the test embankment area from the relic structure and the ball field. No material was hauled to the test embankment on this date, therefore no rutting or pumping was observed.

Civil Projects utilized a dozer to clip off wet material on the northeastern section of the test embankment. Due to wet and soft areas, construction of the flume ditches was not performed on this date.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/26/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-27-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 153	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/27/10	Day of the Week: Wednesday	
	Weather: Partly Cloudy/Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (1) Cat Dozer, (1) Cat			
Excavator, (3) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 153	Date: 1/27/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that material would be hauled to the test embankment area from the west embankment. Due to wet material and the thawing of previously placed fly ash, pumping and rutting was observed. The flume ditches were not constructed on this date.

Civil Projects utilized three articulated trucks to place material on the first bench of the test embankment area. This material was used to fill in the washouts on the bench. The dump trucks end dumped the material near the area of placement and the dozers and excavator placed the ash in the washouts. The material was compacted using the bucket of the excavator.

Civil Projects placed 16 loads of material utilizing three articulated dump trucks.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	12:00 p.m.

7:00AM-12:00PM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/27/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-28-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 154	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/28/10	Day of the Week: Thursday	
	Weather: Partly Cloudy/Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (1) Cat Dozer, (1) Cat			
Excavator, (2) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No: 154	Date: 1/28/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that material would be hauled to the test embankment area from the west embankment. Due to wet material and the thawing of previously placed fly ash, pumping and rutting was observed.

Civil Projects utilized two articulated trucks to place material on the first bench of the test embankment area. This material was used to fill in the washouts on the bench. The dump trucks end dumped the material near the area of placement and the dozers and excavator placed the ash in the washouts. The material was compacted using the bucket of the excavator.

Mr. Andrew, QC Manager with Stantec met with Mr. Kilby, Foreman with Civil Projects to discuss the construction of the drainage ditch. Stantec's design called for the placement of fabric prior to the placement of rock. After review of the field conditions, Mr. Andrew concluded that fabric would not be required. Civil Projects utilized an excavator to construct a drainage ditch on the western corner of the test embankment area. The ditch was approximately 50' long, 5' wide and 3' deep. Civil Projects placed one load of 3" x 6" rip rap in the ditch utilizing an articulated dump truck. Then one load of 3" rock was placed on top of the rip rap. The rock was bladed in using a dozer. The 10" pipe was brought to the test embankment but not placed on this date.

Civil Projects placed 11 loads of fly ash utilizing two articulated dump trucks.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	12:00 p.m.

7:00AM-12:00PM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/28/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-29-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 155	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/29/10	Day of the Week: Friday	
	Weather: Cloudy/Snow	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (1) Cat Excavator,			
(1) Articulated Dump Truck			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No: 155	Date: 1/29/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that material would be hauled to the test embankment area from the west embankment to be used as fill in washouts from previous rain events. Due to wet material and the thawing of previously placed fly ash, pumping and rutting was observed on the test embankment, and no fill material was placed on the test embankment.

Civil Projects utilized one articulated truck to place material on the first bench of the test embankment area. This material was used to fill in the washouts on the bench. The dump truck end dumped the material near the area of placement and the dozers and excavator placed the ash in the washouts. The material was compacted using the bucket of the excavator.

Civil Projects utilized an excavator to place two 10" drainage pipes in the flume ditch on the western corner of the test embankment area. Civil Projects placed one load of 3" x 6" rip rap in the ditch utilizing an articulated dump truck. Then one load of shot rock was placed on top of the rip rap. The rock was bladed in using a dozer.

Civil Projects placed 4 loads of fly ash utilizing one articulated dump truck.

Due to hazardous weather conditions (snow), Civil Projects ceased construction at approximately 1:30 PM.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	1:30 p.m.

7:00AM-1:30PM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/29/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-30-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 156	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 1/30/10	Day of the Week: Saturday	
	Weather: Cloudy/Snow/Sleet	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 156	Date: 1/30/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Due to inclement weather (snow, sleet, ice), no work was performed on the test embankment on this date.

Stantec Field Representative's Activities

Arrive	8:00 a.m.
Depart	9:00 a.m.

8:00AM-9:00AM Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 1/30/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-1-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 157	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/01/10	Day of the Week: Monday	
	Weather: Partly Cloudy/Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (1) Cat Dozer, (1) Cat			
Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 157	Date: 2/01/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that material would be hauled from the ball field to the test embankment area for placement, however, due to the presence of only saturated material in the ballfield, no fly ash was hauled to the test embankment.

Civil Projects utilized two dozers to clip approximately 6" of wet material off of the northeastern area of the test embankment. This area was clipped in preparation for the placement of ash. Due to wet material, no fly ash was placed on this date.

Civil Projects utilized an excavator to construct a drainage ditch on the north central section of the first bench on the test embankment area. The ditch was approximately 50' long, 5' wide and 3' deep. Civil Projects also utilized an excavator to place two 10" diameter dredge pipes in the drainage channel leaving this bench at the north end of the drainage ditch excavated across the bench and down the lower north slope of the test embankment.

On this date, Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	12:00 p.m.

7:00AM-12:00PM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/01/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-3-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 158	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/02/10	Day of the Week: Tuesday	
	Weather: Cloudy/Rainy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 158	Date: 2/02/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to rain softened test embankment subgrade and saturated fill material; no fly ash would be hauled to the test embankment on this date.

Civil Projects did not perform any construction on the flume ditches for the test embankment on this date.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/02/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-3-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 159	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/03/10	Day of the Week: Wednesday	
	Weather: Partly Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 159	Date: 2/03/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to rain softened test embankment subgrade and saturated fill material; no fly ash would be hauled to the test embankment on this date.

Civil Projects attempted to utilized a dozer to clip wet material off of the northeastern section of the test embankment area. Due to soft, saturated subgrade conditions, the dozer was unable to clip the area. Mr. Kilby, Foreman with Civil Projects, informed Mr. Layton of the field conditions and it was determined that Civil Projects would not clip the test pad until the subgrade was less than saturated. Civil Projects did not perform any other construction on the test pad on this date.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/03/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-4-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 160	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/04/10	Day of the Week: Thursday	
	Weather: Cloudy/Rainy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 160	Date: 2/04/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to weather-related wet conditions, no work would be done on the test embankment on this date.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/04/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-5-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 161	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/05/10	Day of the Week: Friday	
	Weather: Cloudy/Rainy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 161	Date: 2/05/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that due to weather-related wet conditions, no work would be done on the test embankment on this date.

Civil Projects did not perform any construction on the test embankment on this date.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/05/10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-6-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 162	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/06/10	Day of the Week: Saturday	
	Weather: Cloudy/Windy/ Lt. Snow	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Leo Booth / Chris Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment. Installation of additional PZ's in the Relic Area. Moisture tests for materials being stockpiled in the Valley Area coming from the East Embayment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Chris Meyers	Report No: 162	Date: 2/06/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Booth and Mr. Meyers, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Booth and Mr. Meyers that due to weather-related wet conditions, no work would be done on the test embankment on this date.

Civil Projects did not perform any construction on the test embankment on this date.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 2/06/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-8-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 163	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/08/10	Day of the Week: Monday	
	Weather: Mostly Overcast	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Leo Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment. Installation of additional PZ's in the Relic Area. Moisture tests for materials being stockpiled in the Valley Area coming from the East Embayment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth	Report No: 163	Date: 2/08/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Booth, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Booth that due to weather-related wet conditions, no work would be done on the test embankment on this date.

Civil Projects did not perform any construction on the test embankment on this date.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 2/08/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-9-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 164	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/09/10	Day of the Week: Tuesday	
	Weather: Rain	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Leo Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number 163

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment. Installation of additional PZ's in the Relic Area. Moisture tests for materials being stockpiled in the Valley Area coming from the East Embayment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth	Report No: 164	Date: 2/09/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Booth, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Booth that due to weather-related wet conditions, no work would be done on the test embankment on this date.

Civil Projects did not perform any construction on the test embankment on this date.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 2/09/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-10-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 165	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/10/10	Day of the Week: Wednesday	
	Weather: Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Leo Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number 164

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Construction of flume ditches on test embankment. Installation of additional PZ's in the Relic Area. Moisture tests for materials being stockpiled in the Valley Area coming from the East Embayment.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth	Report No: 164	Date: 2/10/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Booth, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Booth that Civil Projects intends to put a dozer on the test embankment to cut the spoiled layer on the surface off to enable construction to proceed. This did not occur.

Civil Projects did not perform any construction on the test embankment on this date.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00AM-8:00AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 2/10/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-11-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 166	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/11/10	Day of the Week: Thursday	
	Weather: Partly Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Leo Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) John Deere 850J Dozer, (1) Cat D6N Dozer	Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number 165

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Installation of additional PZ's in the Relic Area.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth	Report No: 166	Date: 2/11/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Booth, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Booth that on this date, Civil Projects is planning to put a dozer on the test embankment to cut the spoiled layer on the surface off to enable construction to proceed.

In preparation for fill placement, Civil Projects had two dozers track the frozen material on the eastern half of the test embankment to break up the frozen material on the surface, and then the dozers pushed the soft, wet surface material off the eastern portion of the test embankment. No fill material was placed in the test embankment on this date, therefore no rutting or pumping of subgrade material under loaded truck traffic was observed.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.
Arrive	1:00 p.m.
Depart	4:30 p.m.

7:00AM-8:00AM
1:00PM-4:30PM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 2/11/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-12-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 167	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/12/10	Day of the Week: Friday	
	Weather: Partly Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Leo Booth / Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer			
(4) Articulating 40 Ton Off-Road Trucks			
(1) Kobelco 320 Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Installation of additional PZ's in the Relic Area. Repairs to washes in the north face of the slope on the second bench.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Mike Crouch	Report No: 167	Date: 2/12/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Booth and Mr. Crouch, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Booth that on this date, Civil Projects (CP) is planning to put two dozers on the test embankment to break the frozen surface and then receive, place and compact ash being hauled from the Ball Field. CP also put an excavator on the east side of the Test Embankment to cut out the washes in the north slope of the second bench and rebuild these areas with dry ash compacted in 12" lifts with the excavator.

In preparation for fill placement, Civil Projects had two dozers track the frozen material on the eastern half of the test embankment to break up the frozen material on the surface. Civil Projects placed fly ash in the central section of the eastern half of the test embankment area using four articulated dump trucks (see attached location map). The dump trucks end dumped the fly ash near the placement area and the dozers bladed it out in approximately 8" to 10" lift. The dozers then tracked the material in to achieve compaction.

A total of 57 articulated dump truck loads of ash from the Ball Field were placed on this date.

Stantec Field Representative's Activities

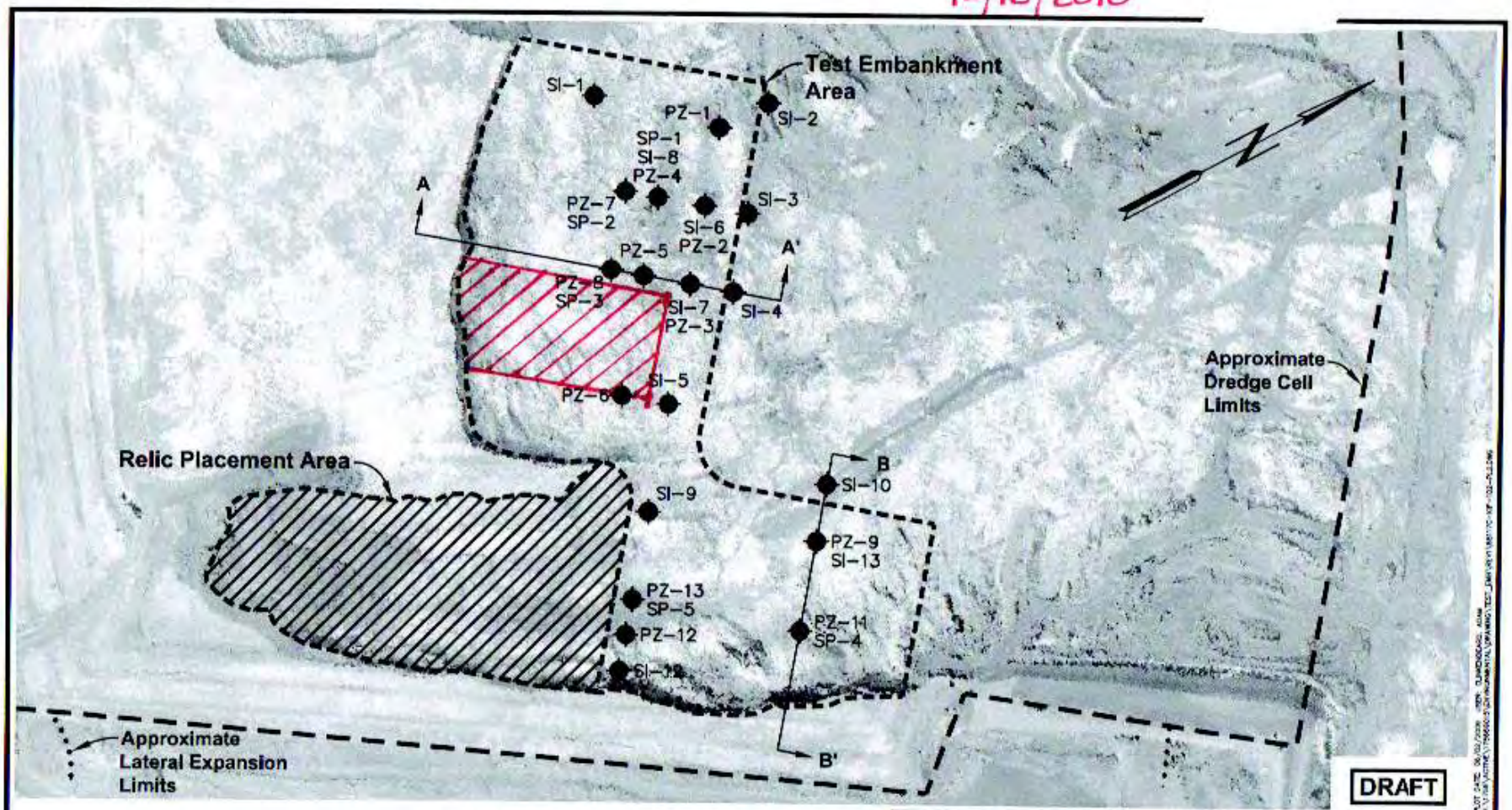
Arrive	7:00 a.m.
Depart	5:00 p.m.

7:00 AM – 5::00 PM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 2/12/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-15-10

12/12/2010



100 0 200 400 FEET

GRAPHIC SCALE: 1" = 200'

LEGEND

PZ-1 Piezometer
SI-1 Slope Inclinometer
SP-1 Settlement Platform

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

ASH PLACEMENT AREA 12" THICK LIFT (TYP)

INSTRUMENTATION PLAN
KINGSTON TEST EMBANKMENT PROGRAM

Stantec

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175689015	1. 3.	2 OF 7
CHECKED BY	MJS	SCALE	AS SHOWN	2. 4.	

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 168	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/13/10	Day of the Week: Saturday	
	Weather: Partly Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Leo Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) John Deere 850J Dozer, (1) Cat D6N Dozer	Type/Model	Manufacturer	Ser. No./ID No.
(5) Articulating 40 Ton Off-Road Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number 167

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Installation of additional PZ's in the Relic Area.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth	Report No: 168	Date: 2/13/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Booth and Mr. Crouch, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Booth that on this date, Civil Projects is planning to put two dozers on the test embankment to break the frozen surface to enable construction to proceed.

In preparation for fill placement, Civil Projects had two dozers track the frozen material on the eastern half of the test embankment to break up the frozen material on the surface. Five articulating trucks were utilized to place ash from the Ball Field. Civil Projects placed fly ash in the central section of the eastern half of the test embankment area using five articulated dump trucks (see attached location map). The dump trucks end dumped the fly ash near the placement area and the dozers bladed it out in approximately 8" to 10" lift. The dozers then tracked the material in to achieve compaction. Rutting of the compacted subgrade material under the loaded dump trucks was observed and further compaction of this material will be required. The foreman of the Civil Projects crew was informed that further compaction would be required, and he stated that a smooth drum roller would be employed after drying weather had reduced the moisture content of the ash material.

A total of 87 loads of ash from the Ball Field were placed and tracked in with the dozers on this date.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30 p.m.

7:00 AM – 6:30 PM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 2/13/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-15-10

2/13/10

100 0 200 400 FEET

GRAPHIC SCALE: 1" = 200'

LEGEND

PZ-1 Piezometer
SI-1 Slope Inclinometer
SP-1 Settlement Platform

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

ASH PLACEMENT AREA 12" THICK LIFT (TYP)

INSTRUMENTATION PLAN
KINGSTON TEST EMBANKMENT PROGRAM

Stantec

DESIGNED	TJ	DATE	JUNE, 2009	REVISED	SHEET
DRAWN	KDL	PROJ. NO.	175681015		2 OF 7
CHECKED	MJS	SCALE	AS SHOWN		

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 169	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/14/10	Day of the Week: Sunday	
	Weather: Partly Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Skip Layton

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat D6N Dozer			
(5) Articulating 40 Ton Off-Road Trucks			
(1) Kobelco 320 Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Installation of additional PZ's in the Relic Area. Repairs to washes in the north face of the slope on the second bench.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Skip Layton	Report No: 169	Date: 2/14/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Booth and Mr. Crouch, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Booth that on this date, Civil Projects is planning to put two dozers on the test embankment to cut the spoiled layer on the surface off to enable construction to proceed. CP also put an excavator on the east side of the Test Embankment to cut out the washes in the north slope of the second bench and rebuild these areas with dry ash compacted in 12" lifts with the excavator.

In preparation for fill placement, Civil Projects had two dozers track the frozen material on the eastern half of the test embankment to break up the frozen material on the surface. Civil Projects placed fly ash in the far eastern section of the test embankment area using four articulated dump trucks (see attached location map). The dump trucks end dumped the fly ash near the placement area and the dozers bladed it out in approximately 8" to 10" lift. The dozers then tracked the material in to achieve compaction. Rutting of the compacted subgrade material under the loaded dump trucks was observed and further compaction of this material will be required. The foreman of the Civil Projects crew was informed that further compaction would be required.

A total of 24 loads of ash from the Ball Field were placed.

Mr. Layton requested CP to stop placement of ash at approx. 1:30 PM due to wet ash being brought from the Ball Field and also requested that the dozers regrade the area to remove all ruts and low spots to minimize water ponding on the surface.

Stantec Field Representative's Activities

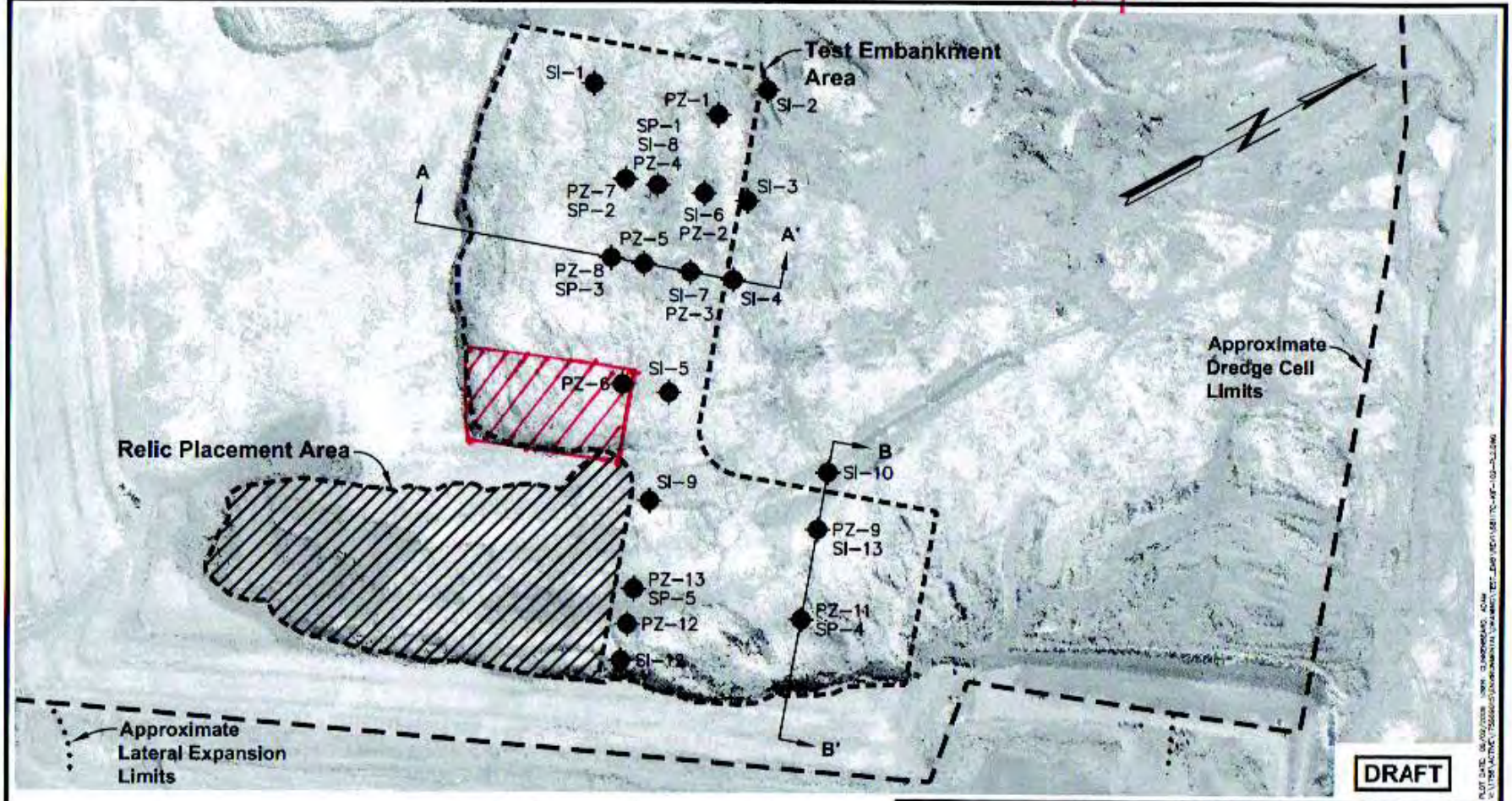
Arrive	7:00 a.m.
Depart	3:00 p.m.

7:00 AM – 3::00 PM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Skip Layton Assist. Q.C. Manager	**Date** 2/14/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-15-10

2/14/10



100 0 200 400 FEET

GRAPHIC SCALE: 1" = 200'

LEGEND

PZ-1 Piezometer
SI-1 Slope Inclinometer
SP-1 Settlement Platform

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

ASH PLACEMENT AREA 12" THICK LIFT (TYP.)

INSTRUMENTATION PLAN
KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services Inc.
www.stantec.com

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1. 3.	2 OF 7
CHECKED BY	MJS	SCALE	AS SHOWN	2. 4.	

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 170	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/15/10	Day of the Week: Monday	
	Weather: Partly Cloudy/Sunny	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.
Repairs to washes in the north face of the slope on the second bench.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 170	Date: 2/15/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that on this date, Civil Projects would not be hauling fly ash to the test embankment due to inclement weather, therefore, no rutting or pumping was observed.

Mr. Clark assisted Mr. Meyers, technician with Stantec with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00 AM – 8::00 AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/15/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-16-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 171	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/16/10	Day of the Week: Tuesday	
	Weather: Partly Cloudy/Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) Cat D6T Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ X No ☐ Yes

Did you observe everything you expected to? ☐ No ☐ X Yes

Did you observe anything unexpected? ☐ X No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☐ X No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 171	Date: 2/16/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that on this date, Civil Projects would not be hauling fly ash to the test embankment due to saturated material, therefore, no rutting or pumping was observed.

Civil Projects utilized a dozer to walk in previously placed fly ash on the northeast area of the test embankment. This area was opened by the dozer to allow the moisture to surface and drain toward the southern drainage ditch. The area opened was approximately 400' x 300'.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	10:00 a.m.

7:00 AM – 10:00 AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/16/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-17-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 172	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/17/10	Day of the Week: Wednesday	
	Weather: Partly Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 172	Date: 2/17/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark that on this date, Civil Projects would not be hauling fly ash to the test embankment due to saturated material, therefore, no rutting or pumping was observed.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00 AM – 8:00 AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/17/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-18-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 173	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/18/10	Day of the Week: Thursday	
	Weather: Partly Cloudy/Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) Cat D6T Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ X ☐ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 173	Date: 2/18/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark that on this date, Civil Projects would not be hauling fly ash to the test embankment due to saturated material, therefore, no rutting or pumping was observed.

Civil Projects utilized a dozer to walk in previously placed fly ash on the northeast area of the test embankment. This area was opened by the dozer to allow the moisture to surface and drain toward the southern drainage ditch. The area opened was approximately 400' x 300'.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00 AM – 8:00 AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/18/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-20-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 174	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/19/10	Day of the Week: Friday	
	Weather: Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) Cat D6T Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ X ☐ No ☐ Yes

Did you observe everything you expected to? ☐ No ☐ X ☐ Yes

Did you observe anything unexpected? ☐ X ☐ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☐ X ☐ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Rutting and/or pumping of test embankment water-softened subgrade under loaded trucks and tractors.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 174	Date: 2/19/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark that on this date, Civil Projects would not be hauling fly ash to the test embankment due to saturated material, therefore, no rutting or pumping was observed.

Civil Projects continued to walk in the area that had been worked on the previous day in the northeast area of the test embankment.

Mr. Clark assisted Mr. Booth, technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00 AM – 8:00 AM
Observations of test embankment.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/19/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-20-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 175	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/20/10	Day of the Week: Saturday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn / Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
(1) Cat D6T Dozer	Type/Model	Manufacturer	Ser. No./ID No.
	3440 Surface Moisture-Density Gauge	Troxler	20231

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction. Placement of ash and compaction efforts. Additional density testing on subsequent lifts. Drive tube testing for samples acquired 2/20/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark	Report No: 175	Date: 2/20/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Clark that on this date, Civil Projects would be working on the eastern half of the Test Embankment with a west boundary along the instrument line from PZ-8 to SI-4, to remove wet material and prepare the surface to receive ash. Mr. Layton requested Mr. Clark to run density testing across the surface of this area to allow for placement of ash tomorrow.

Civil Projects utilized a dozer to blade off approx. 8" of ash previously placed on the northeast area of the test embankment. This area was opened by the dozer to remove wet material from the surface and drain toward the southern drainage ditch. The area opened was approximately 150' x 300'. All the material pushed from the surface of the test embankment was windrowed along the area that forms the 50 foot bench at the top of the second tier of the test embankment. (See Attached Map)

Mr. Clark assisted Mr. Mike Crouch, technician with Stantec, with instrumentation monitoring while CP worked on the surface.

After CP completed their operations of removing the moist material from the surface of the test embankment, Mr. Clark and Mr. Crouch utilized a Troxler nuclear gauge to perform moisture and density testing across the surface. All test results fell within the approved QC plan criteria. (See Attached Density Sheet)

Drive tubes samples were also collected but due to the late hour these samples will be run at a later date.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	8:00 a.m.

7:00 AM – 7:30 AM Observations of test embankment.
7:30 AM – 3:00 PM Instrumentation monitoring
3:00 PM – 4:30 PM Density Testing
4:30 PM – 5:00 PM Report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/20/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-21-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

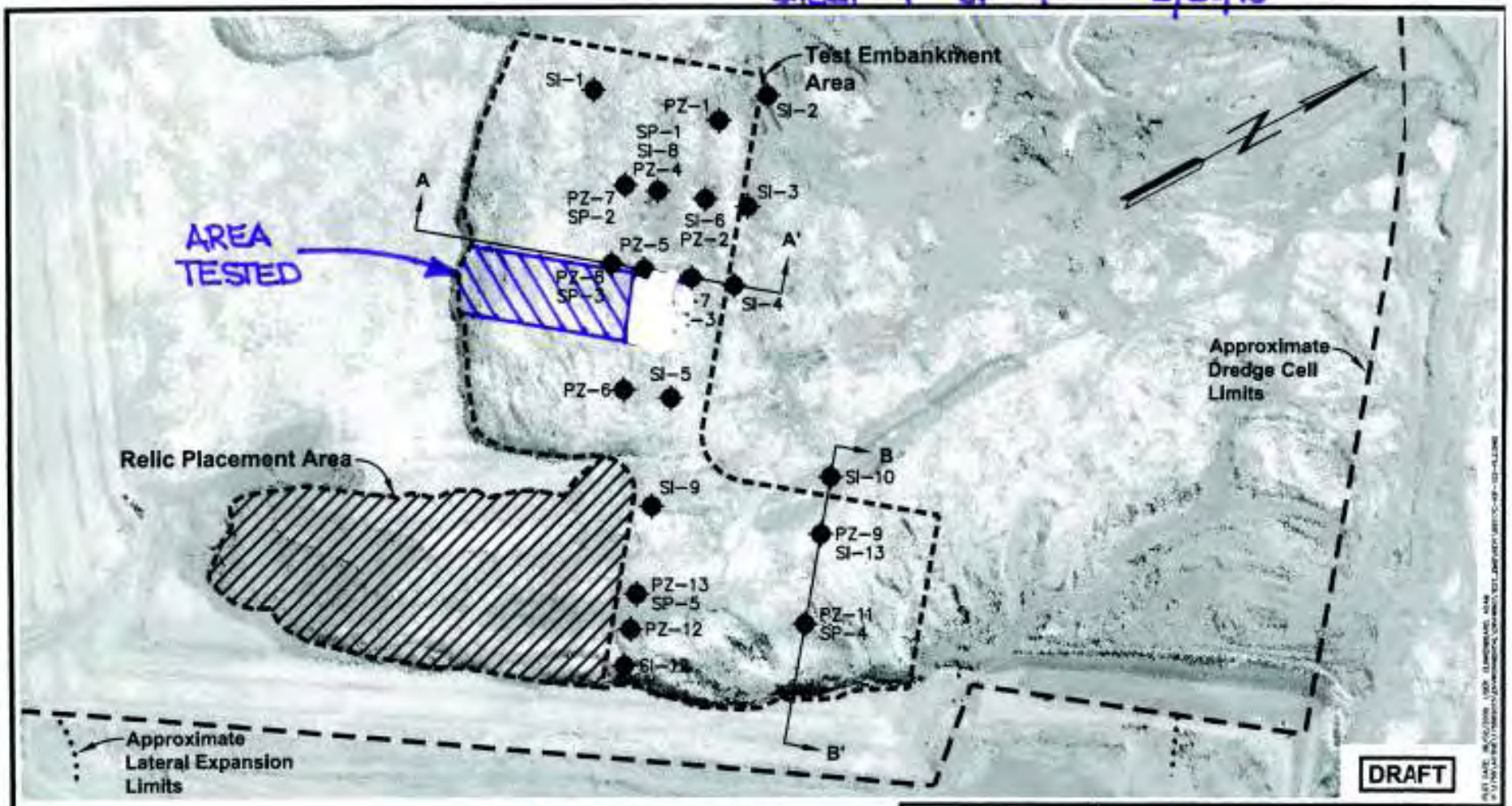
Name of Project: Kingston - TVA TIER II Ash Program Location or Address: Kingston, TN Project No: 175190015 Report No: 175 Date: 2-20-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	N35°54.637', W084°30.801'	94.7	24.2				103.5	90.0	
2	N35°54.628', W084°30.791'	95.3	22.1				104.2		
3	N35°54.625', W084°30.779'	94.2	25.5				103.0		
4	N35°54.631', W084°30.775'	88.7	28.5				97.0		
5	N35°54.636', W084°30.784'	84.3	30.3				92.1		
6	N35°54.637', W084°30.794'	92.2	24.2				101.6		
7	N35°54.650', W084°30.787'	98.8	22.4				108.0		
8	N35°54.662' W084° 30.782'	98.2	22.4				107.3		
9	N35°54.669' W084°30.775'	98.3	25.1				107.5		
10	N35°54.658' W084°30.766	91.4	26.6				99.9		
11	N35°54.646' W084°30.770	89.7	28.0				98.1		
12	N35°54.634' W084°30.775	89.9	27.2				98.2		
	~~N35°~~	98.6	22.5				107.7		
	N35°54.622' W084°30.779								

Comments:

SHEET 4 OF 4 2/20/10



100 0 200 400 FEET
GRAPHIC SCALE: 1" = 200'

LEGEND

- PZ-1 Piezometer
- SI-1 Slope Inclinometer
- SP-1 Settlement Platform

NOTE:
Aerial mapping was provided by Tennessee Valley Authority on February 2, 2009. File nomenclature indicates an imagery date of January 24, 2009.

INSTRUMENTATION PLAN
KINGSTON TEST EMBANKMENT PROGRAM

Stantec

DRAWN BY	TJ	DATE	JUNE, 2009	REVISED	SHEET
CHECKED BY	KDL	PROJ. NO.	175669015	1. 3.	2 OF 7
CHECKED BY	MJS	SCALE	AS SHOWN	2. 4.	

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 176	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/2110	Day of the Week: Sunday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(3) Cat D6 Size Dozers			
(7) 40 Ton Articulated Dump Trucks			
(1) Smooth Drum Roller			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction. Dozers tracking the eastern half of the test embankment to provide additional compaction and remove moisture from the rainfall that is expected overnight. Additional testing will be required prior to placement of any future materials.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Mike Crouch	Report No: 176	Date: 2/21/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Crouch, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec, to discuss the test embankment area. Mr. Layton informed Mr. Crouch that on this date, Civil Projects would be working on the eastern half of the Test Embankment with a west boundary along the instrument line from PZ-8 to SI-4. Ash is being transported by articulating dump trucks from the ball field area. These operations would work from west to east, on the area that had been tested the previous day, and would provide a new lift of material approx. 12" thick.

Civil Projects utilized seven articulated dump trucks to transport material to the test embankment. Stockpiles from various locations were used to provide material at suitable moisture content. Moisture content tests were conducted on two samples from the material stockpiled east of Dike T-2. Moisture content test results indicated the moisture content of this material was in excess of the acceptable moisture content for compaction (> 30%).

An attempt was made to use the smooth drum roller to provide final compaction and seal the surface of the embankment, however the material placed was too wet for access by the smooth drum roller. The dozers where used to track in and back drag the ash fill material placed on this date.

A total of 142 articulated dump truck loads of ash were placed on this date.

Civil Projects also utilized a dozer to blade off approx. 8" of wet material from the surface previously placed on the eastern most area of the test embankment. This wet material was wind rowed along the eastern edge of the second bench. The prepared area was left open to allow drying of the subgrade.

.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	5:00 p.m.

7:00 AM – 8:30 AM
Embankment instrumentation
8:30 AM – 5:00 PM
Observations of test embankment.
5:00 PM – 5:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch	**Date** 2/21/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-22-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 177	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/22/10	Day of the Week: Monday	
	Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction. Additional testing will be required prior to placement of any future materials.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 177	Date: 2/22/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that on this date, Civil Projects would not be hauling fly ash to the test embankment due to saturated material, therefore, no rutting or pumping was observed. Approximately .5" of rain occurred over a 24 hour period.

Civil Projects utilized a dozer to work the northeastern area of the test embankment. The dozer cut a drainage ditch to allow ponding water to drain to the north toe of the first bench. The dozer also tracked in the material that was placed on the previous day on the northeast corner of the test embankment. The work was performed in preparation of the placement of fly ash.

Due to saturated material, no density testing was performed on this date.

Mr. Clark assisted Mr. Crouch, technician with Stantec, with instrumentation monitoring.

.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	9:00 a.m.

7:00 AM – 8:00 AM
Observations of test embankment.
8:00 AM – 9:00 AM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/22/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-23-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 178	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/23/10	Day of the Week: Tuesday	
	Weather: Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction. Additional testing will be required prior to placement of any future materials.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 178	Date: 2/23/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that on this date, Civil Projects would not be hauling fly ash to the test embankment due to saturated material, therefore, no rutting or pumping was observed.

Civil Projects utilized a dozer to work the northeastern area of the test embankment. The dozer clipped approximately 6" to 8" of wet material off of the northeast area. The dozer also tracked in the material that was previously placed on the northeast corner of the test embankment. The work was performed in preparation of the placement of fly ash. Civil Projects also utilized an excavator to cut a drainage ditch on the north toe of the second bench. This work was performed to allow the water to drain off of the northeast area to the north flume ditch on the first bench.

Due to saturated material, no density testing was performed on this date.

Mr. Clark assisted Mr. Crouch, technician with Stantec, with instrumentation monitoring.

.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	10:00 a.m.

7:00 AM – 9:00 AM
Observations of test embankment.
9:00 AM – 10:00 AM
Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/23/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-24-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 179	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/24/10	Day of the Week: Wednesday	
	Weather: Partly Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction. Additional testing will be required prior to placement of any future materials.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 179	Date: 2/24/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that on this date, Civil Projects would not be hauling fly ash to the test embankment due to saturated material, therefore, no rutting or pumping was observed.

Civil Projects utilized a dozer to work the northeastern area of the test embankment. The dozer clipped approximately 6" to 8" of wet material off of the northeast area. This material was bladed to the second bench and left to dry. This material will be bladed across the second bench on a future date. The dozer also tracked in the material that was previously placed on the northeast corner of the test embankment. The work was performed in preparation of density tests and the placement of fly ash.

Due to saturated material, no density testing was performed on this date.

Mr. Clark assisted Mr. Crouch, technician with Stantec, with instrumentation monitoring.

.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	10:00 a.m.

7:00 AM – 9:00 AM
Observations of test embankment.
9:00 AM – 10:00 AM
Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/24/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-25-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 180	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/25/10	Day of the Week: Thursday	
	Weather: Partly Cloudy/Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Komatsu Dozer,	3440	Troxler	29
(10) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Dozers tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark	Report No: 180	Date: 2/25/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that on this date, Civil Projects/Sevenson would be hauling fly ash to the test embankment from the ball field.

Mr. Clark and Mr. Crouch, technician with Stantec, performed field density tests on the northeast area of the test embankment prior to the placement of ash on this date. All field density test results indicated the compaction of the ash fill material met or exceeded project requirements (see attached density test results and test locations).

Civil Projects placed fly ash in the northeastern section of the test embankment area utilizing ten articulated dump trucks. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the ball field. The area of placement was approximately 150' x 250'.

On this date, Sevenson placed 38 loads of fly ash from the ball field area utilizing six articulated dump trucks.

On this date, Civil Projects placed 23 loads of fly ash from the ball field utilizing four articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 5:00 PM
Observations of test embankment.
10:00 AM – 11:00 AM Field Density Testing
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/25/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-26-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone (859) 422-3000
Fax (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: Kingston - Tva Test Emb Program Location or Address: Kingston, TN Project No. 175669015 Report No. 180 Date: 2-25-10

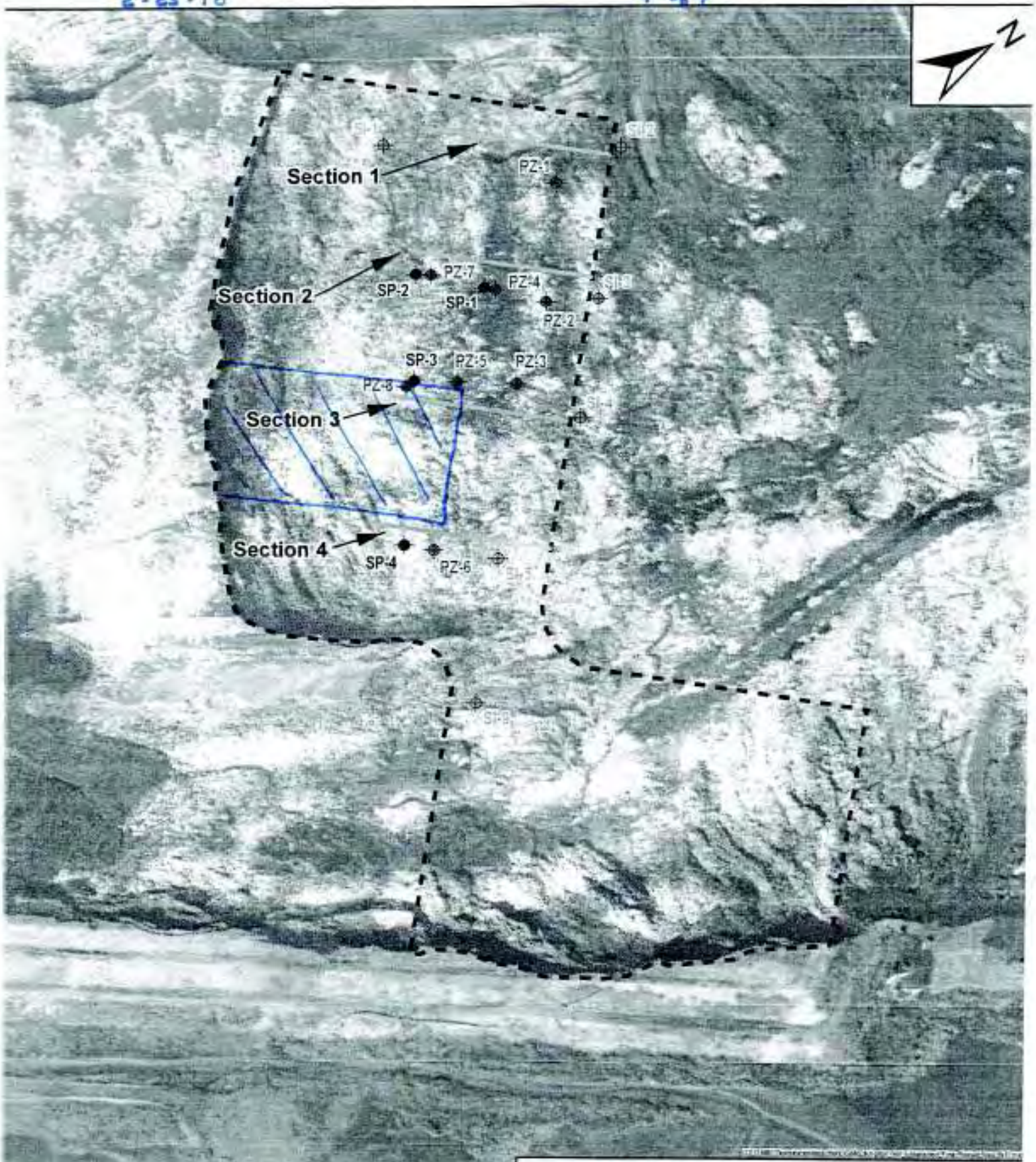
Soil Density Tests (Continued)

Test No.	Test Location		Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	N35°54.632	W084°30.804	82.3	31.8		91.5	21.1	91.0	90.0	
2	N35°54.641	W084°30.795	87.7	34.2				95.8		
3	N35°54.649	W084°30.790	87.1	33.2				95.2		
4	N35°54.666	W084°30.780	87.2	30.4				95.3		
5	N35°54.621	W084°30.794	83.8	33.7				91.5		
6	N35°54.653	W084°30.788	87.6	32.1				95.7		
7	N35°54.640	W084°30.783	84.8	35.2				92.7		
8	N35°54.648	W084°30.778	84.9	35.3				92.8		
9	N35°54.657	W084°30.768	86.0	34.6				94.0		
10	N35°54.652	W084°30.761	87.9	31.4				96.0		
11	N35°54.644	W084°30.766	84.2	37.7				92.1		
12	N35°54.637	W084°30.770	84.4	34.8				92.3		
13	N35°54.630	W084°30.776	87.2	30.1				95.3		
14	N35°54.630	W084°30.782	90.5	28.4				98.9		

Comments:

2-25-10

4 of 4



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

▨ - area of placement on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Wedgwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: | PROJECT NO. | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 181	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/26/10	Day of the Week: Friday	
	Weather: Sunny	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer,	3440	Troxler	29
(5) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Dozers tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark	Report No: 181	Date: 2/26/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that on this date, Civil Projects would be hauling fly ash to the test embankment from the relic area.

Mr. Clark and Mr. Crouch, technician with Stantec, performed field density tests on the northeast area of the test embankment prior to the placement of ash on this date. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and test location).

Civil Projects utilized one excavator and five articulated dump trucks to place fly ash in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic area. The area of placement was approximately 150' x 250'.

On this date, Civil Projects placed 106 loads of fly ash from the relic area utilizing five articulated dump trucks

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 5:00 PM
Observations of test embankment.
10:00 AM – 11:00 AM Field Density Testing
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/26/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-27-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422 3000
Fax: (859) 422 3100

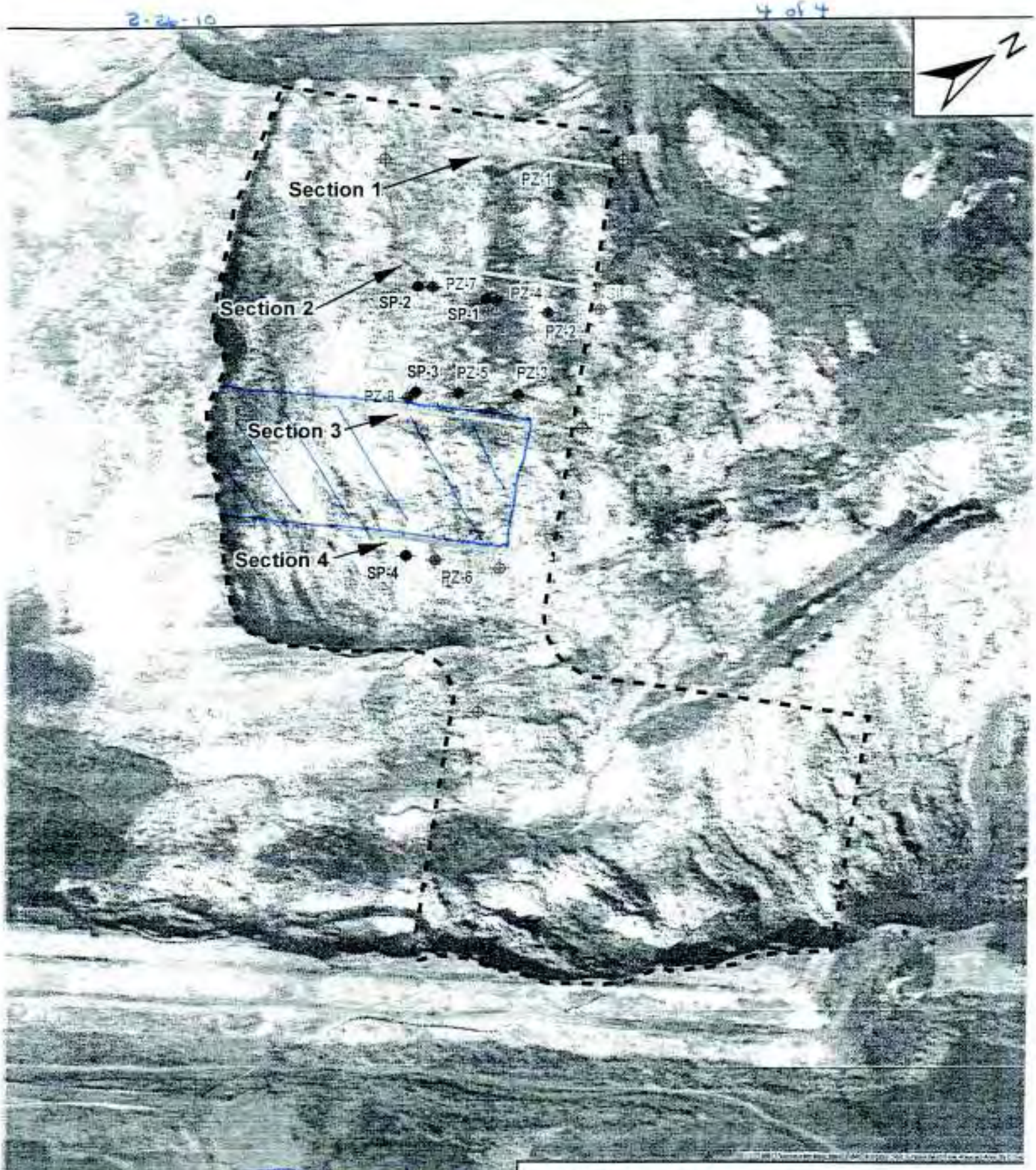
On-Site Daily Field Report
Density Testing and Observations

Name of Project: Kingston TVA Test Emb Program Location or Address: Kingston, TN Project No: 175662015 Report No: 181 Date: 2-26-10

Soil Density Tests *(Continued)*

Test No	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	N 35° 54.634' W 84° 30.800	84.7	29.3		91.5	21.1	94.8	90.0	
2	N 35° 54.644 W 84° 30.793	85.4	30.6				93.3	90	
3	N 35° 54.636 W 84° 30.782	83.6	32.2				91.2	90	
4	N 35° 54.627 W 84° 30.789	86.1	28.7				94.1	90	
5	N 35° 54.620 W 84° 30.776	83.8	31.2				91.6	90	
6	N 35° 54.630 W 84° 30.769	84.8	30.8				92.6	90	
					83.8				

Comments:



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

Area where material was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: | PROJECT NO. | DATE

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 182	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/27/10	Day of the Week: Saturday	
	Weather: Partly Cloudy/Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer,	3440	Troxler	29
(5) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observations of test embankment construction.
Dozers tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark	Report No: 182	Date: 2/27/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that on this date, Civil Projects would be hauling fly ash to the test embankment from the relic area.

Mr. Clark performed field density tests on the northeast area of the test embankment prior to the placement of ash fill on this date. Field density test results indicated the compaction of the ash fill material met project requirements (see attached test results).

Civil Projects utilized one excavator and five articulated dump trucks to place fly ash in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic area. The area of placement was approximately 300' x 100'.

Civil Projects utilized one dozer to clip wet material off of the eastern section of the test embankment. This work was performed in preparation for the placement of fly ash. Mr. Clark ran field density tests on this area.

On this date, Civil Projects placed 103 loads of fly ash from the relic area utilizing five articulated dump trucks

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 5:00 PM
Observations of test embankment.
10:00 AM – 11:00 AM Field Density Testing
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/27/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-28-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: Tva-Kingston Test Embankment Location or Address: Kingston, TN Project No: 175669.015 Report No: 102 Date: 2-27-09

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	N35°54.633', W084°30.798'	76.5	33.9		82.8	24.2	92.3	90.0	
2	N35°54.636', W084°30.791'	80.2	31.9				96.9		
3	N35°54.656', W084°30.781'	78.5	32.2				94.8		
4	N35°54.645', W084°30.773'	74.6	38.8				90.1		
5	N35°54.636', W084°30.781'	83.1	30.7				100.3		
6	N35°54.625', W084°30.791'	82.3	32.1				99.3		
7	N35°54.619', W084°30.776'	76.4	37.0				92.2		
8	N35°54.615', W084°30.764'	75.7	32.4				91.5		
9	N35°54.611', W084°30.753'	74.6	34.0				90.1		
10	N35°54.619', W084°30.743'	83.2	30.5				100.3		
11	N35°54.629', W084°30.744'	76.5	33.7				92.3		
12	N35°54.63', W084°30.752'	86.2	27.4				104.1		
13	N35°54.634', W084°30.780'	87.4	25.9		91.5	21.1	95.6		
14	N35°54.632', W084°30.722'	83.3	28.4		94.6		91.6		
15	N35°54.621', W084°30.738'	87.2	27.2				95.3		

Comments:

2-27-10

4 of 4

Legend

Cross Section
Piezometer (PZ)
Slope Inclinometer (SI)

Area where material was placed on this date.

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: | PROJECT NO. | DATE

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 183	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 2/28/10	Day of the Week: Sunday	
	Weather: Partly Cloudy/Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer,	3440	Troxler	29
(5) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Ryan Clark	Report No: 183	Date: 2/28/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that on this date, Civil Projects would be hauling fly ash to the test embankment from the relic area.

Mr. Clark performed field density tests on the northeast area of the test embankment prior to the placement of ash fill material on this date. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and test location).

Civil Projects utilized one excavator and five articulated dump trucks to place fly ash in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic area. The area of placement was approximately 400' x 150'.

On this date, Civil Projects placed 111 loads of fly ash from the relic area utilizing five articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:30 p.m.

7:00 AM – 5:00 PM
Observations of test embankment.
10:00 AM – 11:00 AM Field Density Testing
5:00 PM – 4:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 2/28/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-1-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA-Kingston Test Emb Program Location or Address: Kingston, TN Project No: 175469015 Report No: 183 Date: 2-28-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	N35°54.629', W084°30.728'	76.7	36.4		82.8	24.9	92.7	90.0	
2	N35°54.635', W084°30.728'	76.7	35.1				92.6		
3	N35°54.628', W084°30.722'	76.9	27.8				92.9		
4	N35°54.620', W084°30.726'	78.9	32.5				95.3		
5	N35°54.616', W084°30.721'	76.6	33.7				92.5		
6	N35°54.627', W084°30.759'	78.8	32.1				95.1		
7	N35°54.622', W084°30.747'	78.7	32.4				95.1		
8	N35°54.615', W084°30.746'	81.7	29.5				98.6		
9	N35°54.612', W084°30.737'	77.0	26.6				93.0		
10	N35°54.616', W084°30.733'	83.3	27.6				100.5		

Comments: 400' - 150'

2-28-10

4 of 4

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

▨ - area where material was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY | PROJECT NO. | DATE

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 184	Page No: 1 of 5
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/01/10	Day of the Week: Monday	
	Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer,	3440	Troxler	29
(5) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 5
Stantec Field Representative: Ryan Clark	Report No: 184	Date: 3/01/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that on this date, Civil Projects would be hauling fly ash to the test embankment from the relic area.

Mr. Clark and Mr. Meyers, technician with Stantec, performed field density tests on the northeast area of the test embankment prior to the place of ash on this date. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and test location).

Civil Projects utilized one excavator and five articulated dump trucks to place fly ash in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic area. The area of placement was approximately 200' x 100'.

Civil Projects also placed fly ash in the southern section of the test embankment area utilizing five articulated dump trucks. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southwest to southeast. This material was hauled to the test embankment from the relic area. The area of placement was approximately 350' x 75'.

On this date, Civil Projects placed 126 loads of fly ash from the relic area utilizing five articulated dump trucks

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 6:00 PM Observations of test embankment.
10:00 AM – 11:00 AM Field Density Testing
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/01/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-2-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Kingston-KIF Test Embankment Program	Project No: 175569015	Page No: 3 of 5
Field Representative: Ryan Clark / Chris Meyers	Report No: 184	Date: 3-1-10

Test No.	Test Location Provided By: Stantec Consultants	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
1	N35°54.623', W084°30.802'	81.3	31.2	82.8	24.9	98.2	90.0	
2	N35°54.617', W084°30.791'	80.5	30.4			97.2		
3	N35°54.614', W084°30.783'	81.2	31.1			98.1		
4	N35°54.608', W084°30.767'	79.5	32.5			96.0		
5	N35°54.606', W084°30.755'	80.3	31.8			97.0		
6	N35°54.619', W084°30.748'	81.8	30.8			98.9		
7	N35°54.626', W084°30.761'	79.4	32.3			95.9		
8	N35°54.628', W084°30.766'	80.3	31.7			97.0		
9	N35°54.633', W084°30.777'	79.9	33.0			96.5		
10	N35°54.641', W084°30.789'	82.2	29.9			99.3		
11	N35°54.650', W084°30.783'	76.1	33.4			91.9		
12	N35°54.645', W084°30.771'	81.1	29.1			98.0		

Remarks: 126

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA - Kingston Test Cell Program Location or Address: Kingston, TN Project No: 175669015 Report No: 184 Date: 3-1-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
13	N35°54.638', W084°30.759'	79.1	29.5		82.8	24.9	95.5	90.0	
14	N35°54.632', W084°30.747'	83.0	31.8				100.3		
15	N35°54.621', W084°30.737'	79.7	33.1				96.2		
16	N35°54.617', W084°30.726'	78.4	31.6				94.6		
17	N35°54.632', W084°30.732'	79.9	34.8				96.5		
18	N35°54.640', W084°30.740'	78.2	31.5				94.4		
19	N35°54.644', W084°30.750'	77.1	30.9				93.1		
20	N35°54.651', W084°30.763'	77.5	33.6				93.6		
21	N35°54.661', W084°30.777'	78.9	32.9				94.6		

Comments:

3-1-10

5 of 5

area where material was placed on this date

Legend

Cross Section
Piezometer (PZ)
Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY | PROJECT NO. | DATE

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 185	Page No: 1 of 5
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/02/10	Day of the Week: Tuesday	
	Weather: Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer,	3440	Troxler	29
(10) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 5
Stantec Field Representative: Ryan Clark	Report No: 185	Date: 3/02/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that on this date, Civil Projects would be hauling fly ash to the test embankment from the relic area and from the east embankment.

Mr. Clark and Mr. Meyers, technician with Stantec, performed field density tests on the northeast area and southern section of the test embankment prior to the place of ash on this date. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and test locations numbered 1 - 9).

Civil Projects utilized ten articulated dump trucks to place fly ash in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic area. The area of placement was approximately 200' x 250'. Mr. Clark and Mr. Meyers performed field density tests on this area on this date. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and test locations numbered 10 - 30).

Civil Projects also placed fly ash in the southern section of the test embankment area utilizing ten articulated dump trucks. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southwest to southeast. This material was hauled to the test embankment from the relic area. The area of placement was approximately 300' x 75'.

On this date, Civil Projects placed 105 loads of fly ash from the relic area utilizing five articulated dump trucks.

On this date, Civil Projects placed 70 loads of fly ash from the east embankment area utilizing five articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 6:00 PM
Observations of test embankment.
10:00 AM – 11:00 AM Field Density Testing
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/02/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-3-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA - Kingston Test Cell Program Location or Address: Kingston, TN Project No.: 175669015 Report No: 185 Date: 3-2-11

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	N35°54.629 W084°30.807	82.1	29.0		82.8	24.9	99.2	90.0	
2	N35°54.629' W084°30.801	78.0	24.0				94.2		
3	N35°54.620' W084°30.789'	77.1	27.1				93.1		
4	N35°54.612' W084°30.775'	76.7	29.4				92.6		
5	N35°54.609' W084°30.762'	77.5	29.8				93.6		
6	N35°54.616' W084°30.752'	75.4	30.5				91.1		
7	N35°54.616' W084°30.741'	78.7	21.7				95.0		
8	N35°54.619' W084°30.730'	78.7	33.5				95.0		
9	N35°54.633' W084°30.722'	76.2	33.8				92.0		
10	N35°54.627' W084°30.805'	78.1	30.1				94.3		
11	N35°54.620' W084°30.795'	82.4	28.0				99.5		
12	N35°54.615' W084°30.784'	81.3	29.1				98.2		
13	N35°54.608' W084°30.773'	76.1	29.2				92.0		
14	N35°54.607' W084°30.757'	81.1	30.1				98.0		
15	N35°54.630' W084°30.797'	76.9	32.4				92.9		
16	N35°54.643' W084°30.785'	78.5	31.3				94.8		
17	N35°54.652' W084°30.780'	78.4	25.6				94.6		
18	N35°54.661' W084°30.774'	83.0	30.6				100.2		

Comments: 105

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

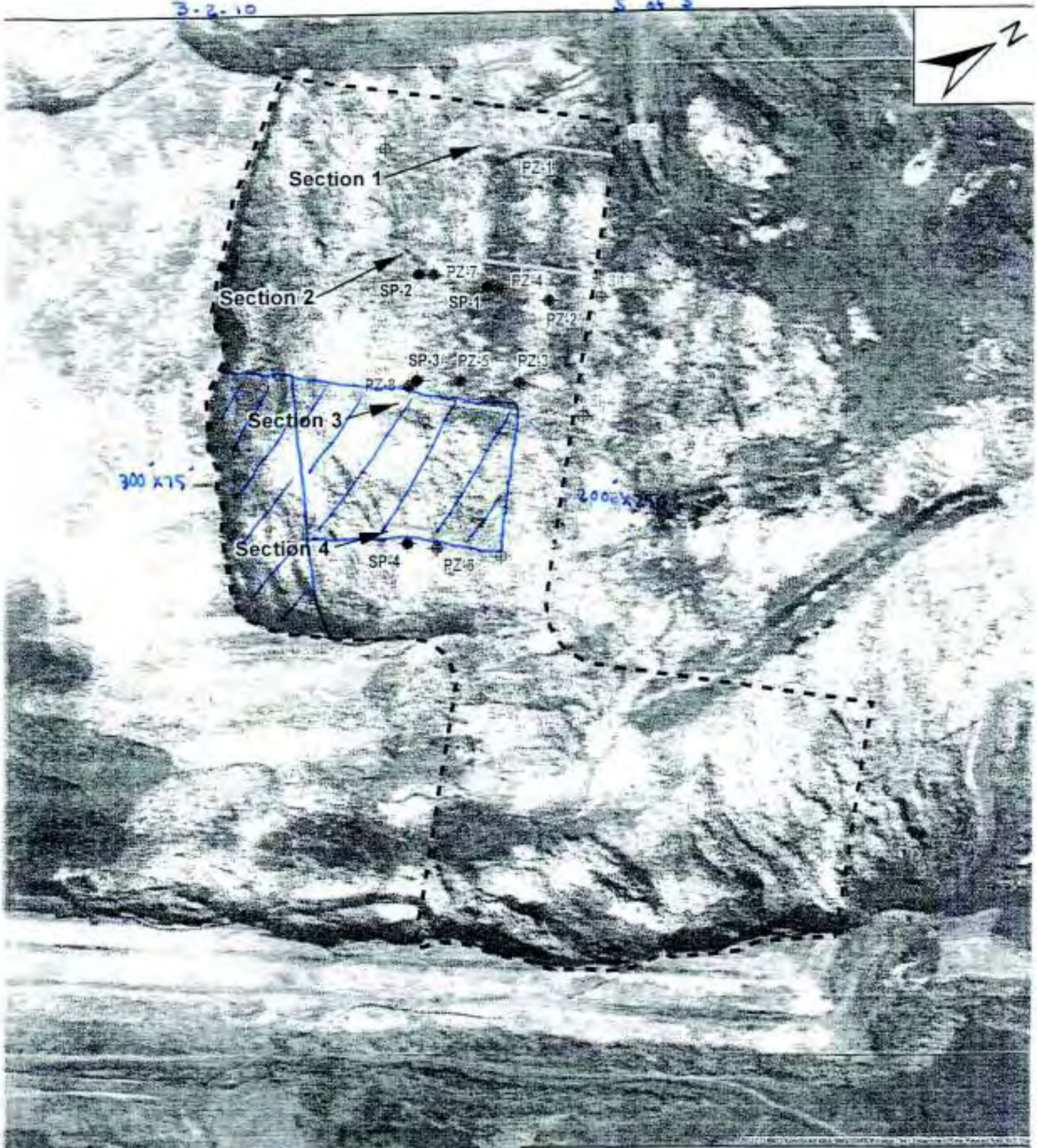
On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA - Kingston Test Cell Program Location or Address: Kingston, TN Project No.: 175669015 Report No.: 185 Date: 3-2-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
19	N35°54.651' W084°30.762'	84.2	27.7		82.8	24.9	101.7	90.0	
20	N35°54.641' W084°30.771'	81.3	30.6				98.2		
21	N35°54.632' W084°30.778'	82.6	28.7				99.8		
22	N35°54.623' W084°30.782'	77.9	29.9				94.1		
23	N35°54.617' W084°30.773'	75.9	35.2				91.6		
24	N35°54.627' W084°30.766'	79.9	29.3				96.5		
25	N35°54.636' W084°30.761'	77.9	32.4				94.1		
26	N35°54.646' W084°30.757'	74.5	33.4				90.0		
27	N35°54.640' W084°30.745'	80.1	24.4				96.8		
28	N35°54.629' W084°30.750'	81.2	31.4				98.1		
29	N35°54.621' W084°30.753'	75.1	27.3				90.7		
30	N35°54.613' W084°30.755'	75.7	36.1				91.4		

Comments:



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

/// - date when material was placed on this date

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: | PROJECT NO. | DATE

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 186	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/03/10	Day of the Week: Wednesday	
	Weather: Partly Cloudy/Sunny	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 186	Date: 3/03/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to a safety stand down ordered by TVA, no work was performed. Stantec employees conducted a safety audit during this period.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	12:00 p.m.

7:00 AM – 12:00 PM Safety Stand down
11:00 AM – 12:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/03/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3-4-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 187	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/04/10	Day of the Week: Thursday	
	Weather: Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer,			
(10) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ X ☐ No ☐ Yes

Did you observe everything you expected to? ☐ No ☐ X ☐ Yes

Did you observe anything unexpected? ☐ X ☐ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☐ X ☐ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No: 187	Date: 3/04/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Due to a safety stand down ordered by TVA, no work was performed between 7:00 am and 12:30 pm. Civil Projects resumed work at 12:30 pm.

Civil Projects utilized ten articulated dump trucks to place fly ash in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic area and the east embankment. The area of placement was approximately 200' x 150'.

On this date, Civil Projects placed 51 loads of fly ash from the relic area utilizing five articulated dump trucks.

On this date, Civil Projects placed 25 loads of fly ash from the upper east embayment area utilizing five articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 12:30 PM TVA Safety Stand Down
12:30 PM – 5:00 PM Observed Construction of Test Embankment
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/04/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-5-10

KINGSTON TEST EMBANKMENT PROGRAM

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

= area where material was placed on this date

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MCP | PROJECT NO: | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 188	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/05/10	Day of the Week: Friday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer,	3440	Troxler	29
(16) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any further materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Mike Crouch	Report No: 188	Date: 3/05/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Crouch, technician with Stantec Consulting, met Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Crouch that Civil Projects/Sevenson would be placing material in the test embankment area from the relic area, upper east embayment area, Dragline Road and the ball field. Civil Projects hauled material from the relic area and the upper east embayment area. Sevenson hauled material from Dragline Road and the ball field. The material from Dragline Road contained lime to lower the moisture content. Mr. Crouch obtained a moisture content sample from this material and the test results indicated the moisture content was 30.31%.

Civil Projects/Sevenson utilized sixteen articulated dump trucks to place fly ash in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic area, upper east embayment, Dragline Road and the ball field. The area of placement was approximately 300' x 75'.

Civil Projects/Sevenson also utilized sixteen articulated dump trucks to place fly ash in the far northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic area, upper east embayment, Dragline Road and the ball field. The area of placement was approximately 300' x 150'. Mr. Crouch and Mr. Meyers, technicians with Stantec, performed field density tests on this area. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and fill locations).

On this date, Civil Projects placed 151 loads of fly ash from the relic area utilizing five articulated dump trucks.

On this date, Civil Projects placed 54 loads of fly ash from the upper east embayment area utilizing five articulated dump trucks.

On this date, Sevenson placed 61 loads of fly ash from Dragline Road and the ball field area utilizing six articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 5:00 PM Observed Construction of Test Embankment
1:00 PM – 2:00 PM Field Density Testing
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch	**Date** 3/05/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-6-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA - Kingston Test Ends Program Location or Address: Kingston, TN Project No: 175669015 Report No: 188 Date: 3-5-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	N35°54.612' W084°30.786'	88.6	27.9		82.8	24.9	107.0	90.0	
2	N35°54.617' W084°30.774'	86.7	28.7				104.7		
3	N35°54.627' W084°30.768'	93.2	26.2				112.6		
4	N35°54.637' W084°30.760'	83.4	34.4				100.7		
5	N35°54.631' W084°30.749'	77.0	29.6				93.0		
6	N35°54.622' W084°30.756'	80.7	27.6				97.4		
7	N35°54.612' W084°30.765'	83.2	31.0				100.5		
8	N35°54.605' W084°30.757'	88.2	26.7		91.5	21.1	96.4	[illegible]	
9	N35°54.614' W084°30.745'	80.7	28.4		82.8	24.9	97.4		
10	N35°54.623' W084°30.738'	80.8	25.0		[illegible]		97.6		
11	N35°54.632' W084°30.729'	83.2	23.7				100.5		
12	N35°54.626' W084°30.720'	85.2	25.3				102.8		
13	N35°54.618' W084°30.733'	88.6	25.2				100.7		
14	N35°54.613' W084°30.726'	80.6	25.8				97.4		
15	N35°54.603' W084°30.745'	85.8	26.2				103.6		
16	N35°54.605' W084°30.768'	88.5	25.4				106.9		

Comments:

91.5

Area where material was placed on this date

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: | PROJECT NO. | DATE

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 189	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/06/10	Day of the Week: Friday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer,	3440	Troxler	29
(16) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Mike Crouch	Report No: 189	Date: 3/06/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Crouch, technician with Stantec Consulting, met Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Crouch that Civil Projects/Sevenson would be placing material in the test embankment area from the relic area, upper east embayment area, Dragline Road and the ball field. Civil Projects hauled material from the relic area and the upper east embayment area. Sevenson hauled material from Dragline Road and the ball field. The material from Dragline Road contained lime to lower the moisture content.

Civil Projects/Sevenson utilized sixteen articulated dump trucks to place fly ash in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic area, upper east embayment, Dragline Road and the ball field. The area of placement was approximately 300' x 100'. Mr. Crouch technician with Stantec performed field density tests on this area. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and fill placement location).

Civil Projects/Sevenson also utilized sixteen articulated dump trucks to place fly ash in the far northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic area, upper east embayment, Dragline Road and the ball field. The area of placement was approximately 100' x 75'. Mr. Crouch technician with Stantec performed field density tests on this area. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and fill placement location).

On this date, Civil Projects placed 149 loads of fly ash from the relic area utilizing five articulated dump trucks.

On this date, Civil Projects placed 56 loads of fly ash from the upper east embayment area utilizing five articulated dump trucks.

On this date, Sevenson placed 12 loads of fly ash from Dragline Road and the ball field area utilizing six articulated dump trucks. There were only 12 loads hauled from this area prior to stopping hauling from this area due to high moisture content of the material.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 5:00 PM Observed Construction of Test Embankment
1:00 PM – 2:00 PM Field Density Testing
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch	**Date** 3/06/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-8-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: KINGSTON - TEST EMBANKMENT Location or Address: Project No: 175620015 Report No: 189 Date: 5-6-10

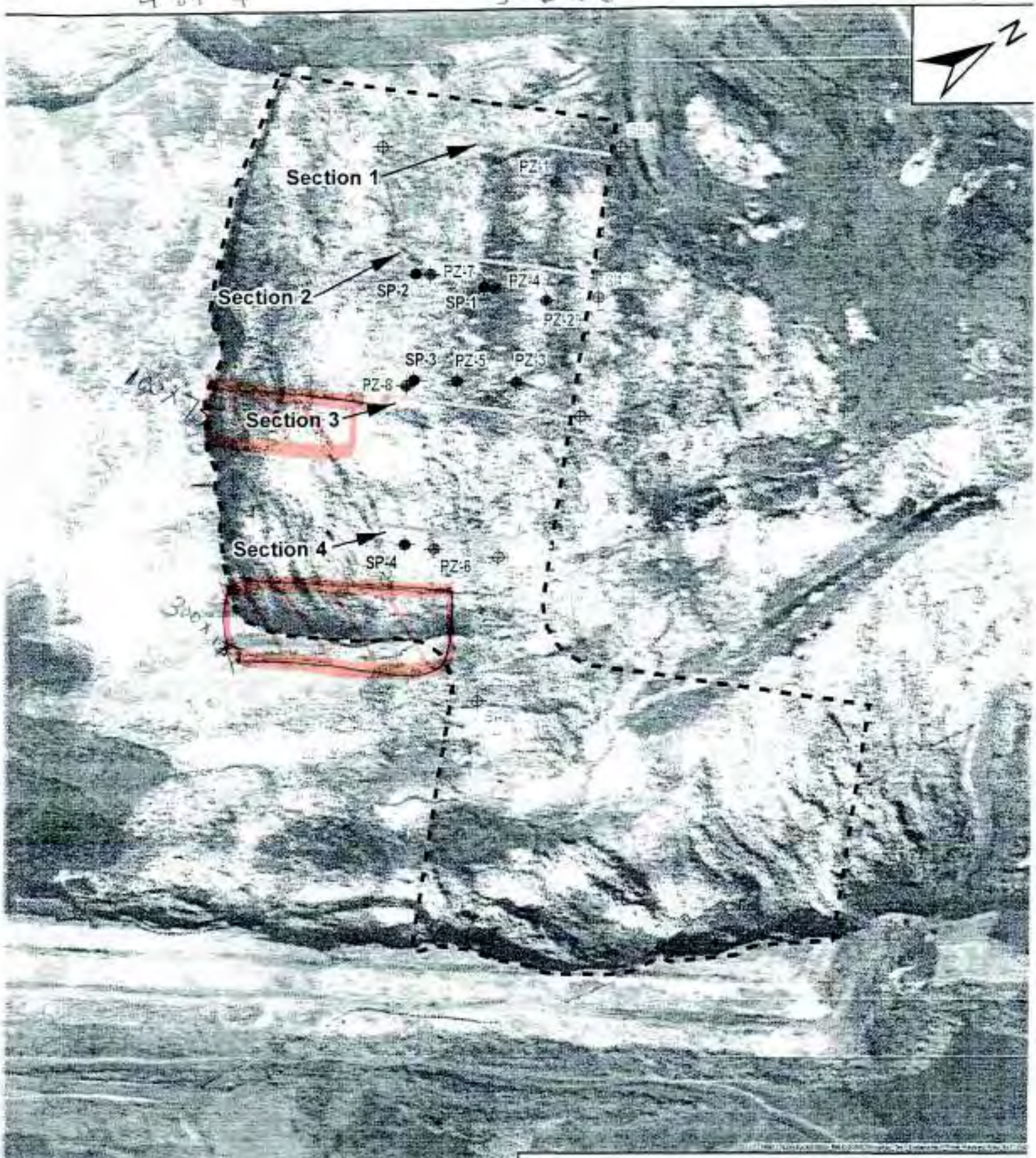
Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
	N35°54.631 W084°30.803	84.2	28.4		91.5	21.1	92.1	90	
	N35°54.636 W084°30.795	92.6	34.6				101.2		
	N35°54.645 W084°30.787	82.5	29.6				90.2		
	N35°54.641 W084°30.780	91.5	30.3				100.0		
	N35°54.631 W084°30.789	83.1	34.3				90.8		
	N35°54.625 W084°30.795	86.0	29.8				94.0		
	N35°54.611 W084°30.724	82.5	24.6		82.8	24.9	99.6		
	N35°54.607 W084°30.736	77.5	25.1				93.6		
	N35°54.622 W084°30.734	94.8	24.3		91.5	21.1	103.6		
	N35°54.627 W084°30.724	91.5	26.1				100.0		
	N35°54.631 W084°30.734	85.6	23.9				93.6		
	N35°54.635 W084°30.737	84.1	24.5				92.0		
	N35°54.619 W084°30.743	91.5	26.5				100.0		
	N35°54.622 W084°30.754	83.8	28.6				91.6		
	N35°54.612 W084°30.751	84.2	25.3				92.1		
	N35°54.615 W084°30.757	92.3	24.7				101.0		
	N35°54.607 W084°30.755	86.0	29.1				93.9		

Comments:

4 of 4

3-6-10



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY	PROJECT NO.	DATE

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 190	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/07/10	Day of the Week: Sunday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer,	3440	Troxler	29
(8) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Mike Crouch	Report No: 190	Date: 3/07/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Crouch, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Crouch that Civil Projects would be placing material in the test embankment area from the relic and the upper east embayment area. Civil Projects hauled material from the relic area and the upper east embayment area. .

Civil Projects utilized ten articulated dump trucks to place fly ash in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southeast to northeast. This material was hauled to the test embankment from the relic area and the upper east embayment. The area of placement was approximately 300' x 150'.

Mr. Crouch technician with Stantec performed field density tests on area. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and fill placement location).

On this date, Civil Projects placed 165 loads of fly ash from the relic area utilizing five articulated dump trucks.

On this date, Civil Projects placed 3 loads of fly ash from the upper east embayment area utilizing three articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 5:00 PM Observed Construction of Test Embankment
8:00 AM – 9:00 AM Field Density Testing
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch	**Date** 3/07/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-8-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: _____ Location or Address: _____ Project No.: 17566-7015 Report No. 190 Date 3-7-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
	N35° 54. [illegible] W084° 30. 734	82.9	21.3		82.8	24.9	100.1	90	
	N35° 54. [illegible] W084° 30. 725	82.1	18.7				99.1		
	N35° 54. 414 W084° 30. 721	86.3	17.2				104.2		
	N35° 54. 620 W084° 30. 7[illegible]	79.8	20.6				96.4		
	N35° 54. 627 W084° 30. 718	86.9	15.1				105.0		
	N35° 54. 628 W084° 30. 728	87.4	19.6		91.5	21.1	95.5		
	N35° 54. 617 W084° 30. 737	83.6	20.2				91.4		
	N35° 54. 610 W084° 30. [illegible]	91.1	18.0				99.6		
	N35° 54. 608 W084° 30. 749	85.3	18.9				93.2		
	N35° 54. 602 W084° 30. 757	83.1	15.8				90.8		
	N35° 54. 605 W084° 30. 743	90.4	18.4				98.8		

Comments: _____

KINGSTON TEST EMBANKMENT PROGRAM

Legend

Cross Section

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO: 171ARR117 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 191	Page No: 1 of 4
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/07/10	Day of the Week: Monday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer,	3440	Troxler	29
(7) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 4
Stantec Field Representative: Mike Crouch	Report No: 191	Date: 3/08/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Crouch, technician with Stantec Consulting, met Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Crouch that Civil Projects and Sevenson would be placing material in the test embankment area from the relic and the ball field. Civil Projects/Sevenson hauled material from the relic area and the ball field.

Civil Projects/Sevenson utilized seven articulated dump trucks to place fly ash in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from east to west. This material was hauled to the test embankment from the relic area and the ball field. The area of placement was approximately 300' x 150'.

Mr. Crouch technician with Stantec performed field density tests on area. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and locations).

On this date, Civil Projects placed 113 loads of fly ash from the relic area utilizing four articulated dump trucks.

On this date, Sevenson placed 67 loads of fly ash from the ball field utilizing three articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 5:00 PM Observed Construction of Test Embankment
8:00 AM – 9:00 AM Field Density Testing
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch	**Date** 3/08/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-9-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA - Kingston Test Emb. Proj. Location or Address: Kingston Tn Project No.: 175669015 Report No. 191 Date: 3-8-10

Soil Density Tests *(Continued)*

Test No.	Test Location		Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	N35°54.606	W084°30.768	91.5	18.6	91.5	21.1		100.2	90	
2	N35°54.609	W084°30.779	87.9	16.5				96.1		
3	N35°54.614	W084°30.791	93.4	15.0				102.1		
4	N35°54.621	W084°30.804	89.4	16.3				97.7		
5	N35°54.615	W084°30.767	90.5	22.8				98.9		
6	N35°54.624	W084°30.756	83.7	24.6				91.5		
7	N35°54.633	W084°30.747	92.9	19.6				101.6		
8	N35°54.643	W084°30.758	86.6	21.3				94.6		
9	N35°54.633	W084°30.766	84.9	22.0				92.8		
10	N35°54.623	W084°30.770	86.9	22.6				95.0		
11	N35°54.618	W084°30.776	86.3	23.2				94.4		
12	N35°54.620	W084°30.788	93.7	19.3				102.4		
13	N35°54.600	W084°30.785	82.5	27.2				90.1		
14	N35°54.640	W084°30.781	92.1	26.0				100.7		
15	N35°54.647	W084°30.775	85.8	28.2				93.8		
16	N35°54.644	W084°30.788	85.6	19.0				93.5		
17	N35°54.635	W084°30.794	92.7	18.3				101.3		
18	N35°54.626	W084°30.798	87.2	28.8				~~[illegible]~~ 95.3		

Comments:

4 of 4 3-8-10

Legend

Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MED | PROJECT NO. | DATE:

Density Test

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 192	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/09/10	Day of the Week: Tuesday	
	Weather: Partly cloudy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer,	3440	Troxler	29
(8) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Mike Crouch	Report No: 192	Date: 3/09/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Crouch, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec to discuss the test embankment area. Mr. Andrew informed Mr. Crouch that Civil Projects and Sevenson would be placing material in the test embankment area from the relic and the ball field. Civil Projects/Sevenson hauled material from the relic area and the ball field.

Civil Projects/Sevenson utilized eight articulated dump trucks to place fly ash in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from south to north. This material was hauled to the test embankment from the relic area and the ball field. The area of placement was approximately 300' x 100'.

On this date, Civil Projects placed 138 loads of fly ash from the relic area utilizing four articulated dump trucks.

On this date, Sevenson placed 54 loads of fly ash from the ball field utilizing three articulated dump trucks.

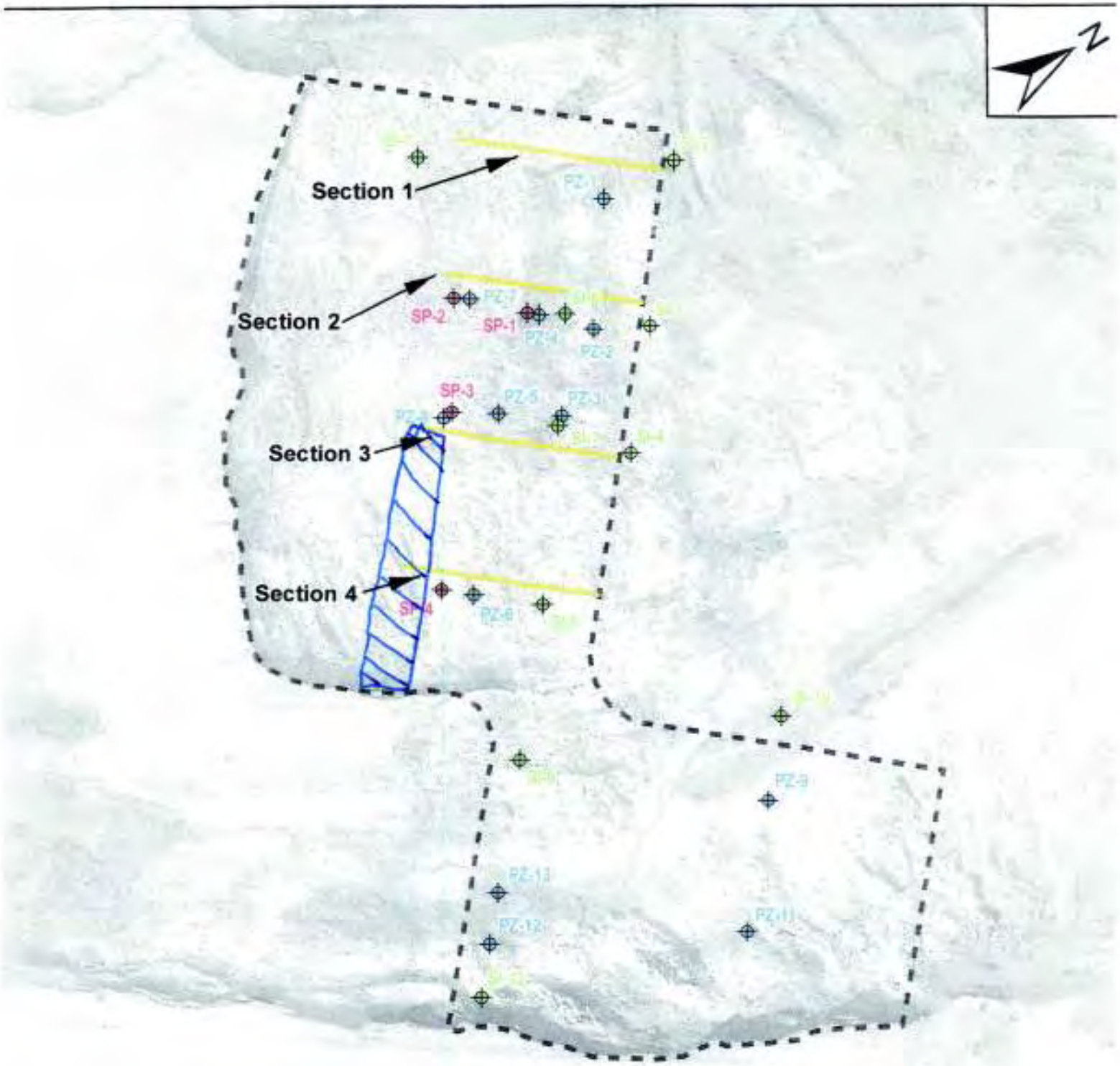
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 5:00 PM Observed Construction of Test Embankment
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch	**Date** 3/09/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-11-10



Area of Fill Placement

3 of 3 3/09/10

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 400
Brentwood, TN 37027

DRAWN BY: MCP | PROJECT NO. 1[illegible] | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 193	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/10/10	Day of the Week: Wednesday	
	Weather: Partly cloudy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer,			
(4) Articulated Dump Trucks, (1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ X ☐ No ☐ Yes

Did you observe everything you expected to? ☐ No ☐ X ☐ Yes

Did you observe anything unexpected? ☐ X ☐ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☐ X ☐ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Mike Crouch	Report No: 193	Date: 3/10/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Crouch, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec to discuss the test embankment area. Mr. Andrew informed Mr. Crouch that Civil Projects would be hauling material to the test embankment area from the relics area and the ball field.
Civil Projects utilized four articulated dump trucks to place fly ash in the northeastern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from south to north. This material was hauled to the test embankment from the relics area and the ball field. The area of placement was approximately 100' x 50'. The placement of materials was completed at 1:30 P.M. on the test embankment.

Civil Projects utilized one dozer to work on the bench on the north side of the test embankment. The work was being performed due to the forecast of rain, to facilitate runoff drainage for this area.

Civil Projects utilized three dozers to grade the area of the relics, where materials were excavated for the test embankment.

On this date, Civil Projects placed 32 loads of fly ash from the relic area utilizing four articulated dump trucks.

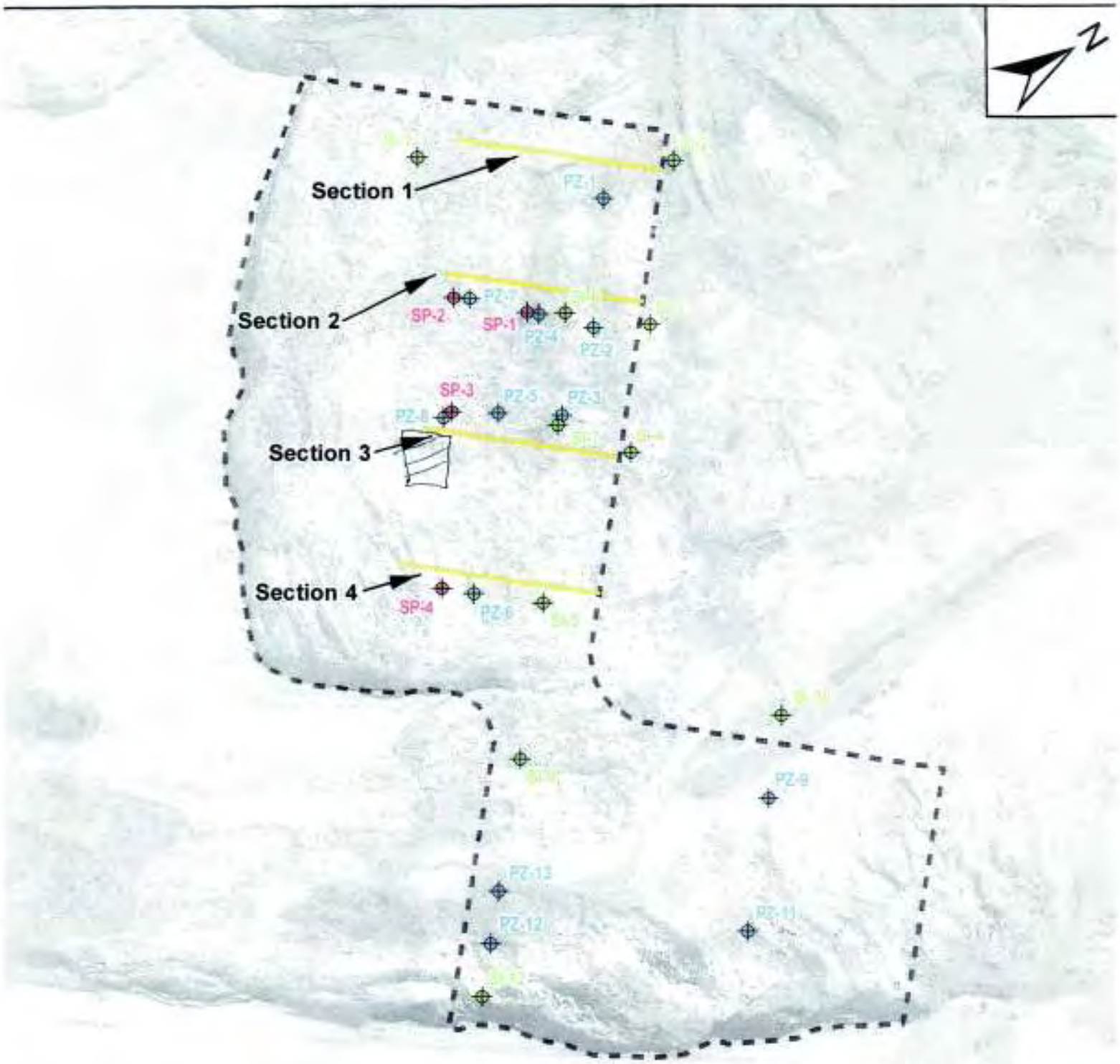
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 5:00 PM Observed Construction of Test Embankment
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch	**Date** 3/10/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-11-10


Section 1
Section 2
Section 3
Section 4
SP-1
SP-2
SP-3
SP-4
PZ-1
PZ-2
PZ-3
PZ-4
PZ-5
PZ-6
PZ-7
PZ-8
PZ-9
PZ-10
PZ-11
PZ-12
PZ-13
Area of Fill Placement
100'x50'
3 of 3
3-10-10
Legend
Cross Section
Piezometer (PZ)
Slope Inclinometer (SI)
KINGSTON TEST EMBANKMENT PROGRAM
Stantec
Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027
DRAWN BY:
MFP
PROJECT NO.
DATE:

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 194	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/17/10	Day of the Week: Wednesday	
	Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 850J Dozer, (1) Cat Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?

Additional testing will be required prior to placement of any future materials.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 194	Date: 3/17/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area.

Civil Projects utilized two dozers to dress the slope of the second bench on the northeast area of the test embankment. The dozer operators utilized excess fly ash to fill in washouts along the northeast slope. Civil Projects also utilized the dozers to dress the first bench on the northeast area of the test embankment. The dozer operators utilized excess fly ash to fill in washouts on the northeast bench.

Mr. Clark assisted Mr. Meyers, technician with Stantec with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:30 p.m.

7:00 AM – 3:00 PM Observed Construction of Test Embankment
3:30 PM – 4:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/17/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-18-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 195	Page No: 1 of 5
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/18/10	Day of the Week: Thursday	
	Weather: Partly Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) Cat Dozer	3440	Troxler	29

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?

Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 195	Date: 3/18/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area.

Mr. Clark and Mr. Meyers, technician with Stantec performed field nuclear density tests on the northwestern area of the test embankment area prior to the placement of fly ash. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and test location).

Civil Projects utilized one dozer to track in the northwestern area of the test embankment. This work was performed in preparation of the placement of fly ash.

Mr. Clark assisted Mr. Meyers, technician with Stantec with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:30 p.m.

7:00 AM – 3:00 PM Observed Construction of Test Embankment
3:30 PM – 4:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/18/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-22-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: Tva - Kingston Test Emb Program Location or Address: Kingston, TN Project No. 175669015 Report No. 195 Date: 3-18-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	N35°54.641' W084°30.808'	85.1	22.2		91.5	21.1	93.0	90.0	
2	N35°54.648' W084°30.801'	84.7	21.4				92.5		
3	N35°54.656' W084°30.795'	84.6	22.2				92.5		
4	N35°54.664' W084°30.789'	87.9	19.7				96.0		
~~5~~	~~N35°54.673' W084°30.784'~~	~~83.2~~	~~21.7~~				~~90.9~~		
6	N35°54.677' W084°30.792'	85.4	23.4				93.3		
7	N35°54.670' W084°30.797'	84.7	23.3				92.6		
8	660' 802'	82.8	20.5				90.5		
9	653' 811'	84.9	22.0				92.8		
10	646' 817'	86.2	21.2				94.2		
11	649' 828'	82.6	26.6				90.3		
12	655' 822'	83.7	22.6				91.4		
13	663' 814'	82.7	23.9				90.3		
14	672' 806'	82.8	20.6				90.5		
15	681' 812'	83.6	23.7				91.3		
16	675' 819'	83.4	23.0				91.2		
17	666' 827'	82.0	22.3				90.0		
18	660' 834'	83.2	21.5				90.9		

Comments:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA-Kingston Test Emb Program Location or Address: Kingston, TN Project No.: 175669015 Report No. 195 Date: 3-18-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
19	N35°54.658', W084°30.841'	84.7	21.4		91.5	21.1	92.5	90.0	

Comments:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 196	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/19/10	Day of the Week: Friday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) Cat Dozer, (1) John Deere 750J Dozer			
(13) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No: 196	Date: 3/19/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that Civil Projects would be placing material on the test embankment from the relic area and from the east embayment.

Civil Projects utilized 13 articulated dump trucks to place fly ash in the northwestern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southwest to northwest. This material was hauled to the test embankment from the relic area and the east embayment. The fly ash material from the east embayment was lime treated. The area of placement was approximately 300' x 250'.

On this date, Civil Projects placed 118 loads of fly ash from the relic area utilizing six articulated dump trucks.

On this date, Civil Projects placed 103 loads of fly ash from the east embayment utilizing seven articulated dump trucks.

Stantec Field Representative's Activities

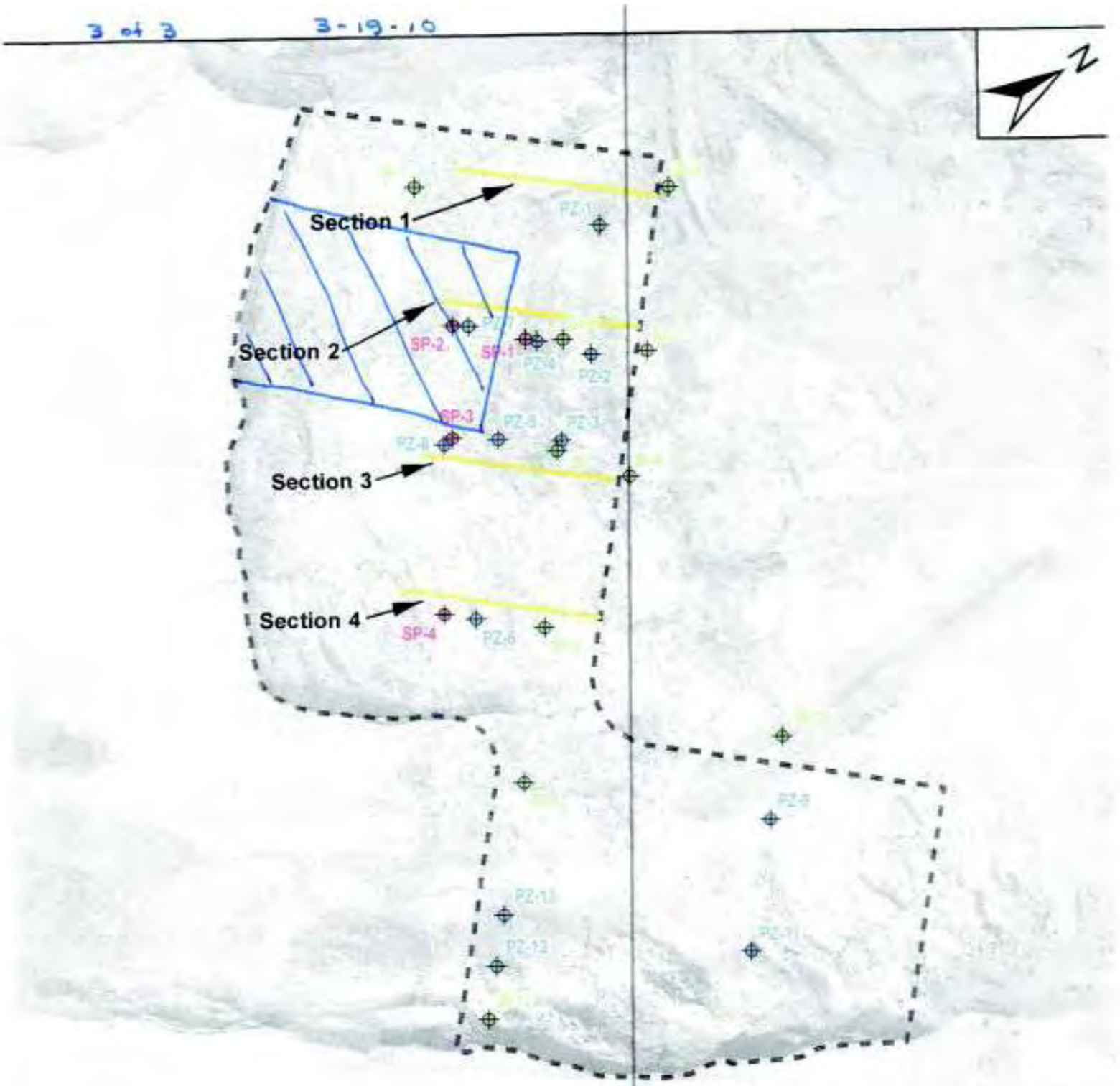
Arrive	7:00 a.m.
Depart	4:30 p.m.

7:00 AM – 3:00 PM Observed Construction of Test Embankment
3:30 PM – 4:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/19/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-22-10

3 of 3 3-19-10



Area of Fill Placement

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 100
Brentwood, TN 37027

DRAWN BY: MFP PROJECT NO. 175660016 DATE:

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 197	Page No: 1 of 7
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/20/10	Day of the Week: Saturday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) Cat Dozer, (1) John Deere 750J Dozer,	3440	Troxler	29
(1) Komatsu Dozer, (12) Articulated Dump Trucks			
(1) Long Stick Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 7
Stantec Field Representative: Ryan Clark	Report No: 197	Date: 3/20/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that Civil Projects would be placing material on the test embankment from the relic area and from the east embayment.

Mr. Clark and Mr. Meyers, technician with Stantec performed field nuclear density tests on the northwestern area of the test embankment area prior to the placement of fly ash. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and test location).

Mr. Clark and Mr. Meyers, technician with Stantec also performed field nuclear density tests on the final lift in the northeastern area of the test embankment area. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and test location).

Civil Projects utilized 12 articulated dump trucks to place fly ash in the northwestern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southwest to northwest. This material was hauled to the test embankment from the Relic Area and the East Embayment. The fly ash material from the East Embayment was lime treated. The area of placement was approximately 50' x 250' and 100' x 250'.

Civil Projects utilized one long stick excavator to clean out the drainage ditch on the first bench and fill in washouts in the north section of the Test Embankment. Civil Projects placed one load of shot rock in the ditch to prevent future washouts.

On this date, Civil Projects placed 110 loads of fly ash from the relic area utilizing six articulated dump trucks.

On this date, Civil Projects placed 84 loads of fly ash from the east embayment utilizing six articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:30 p.m.

7:00 AM – 3:00 PM Observed Construction of Test Embankment
1:30 PM – 2:30 PM Field Density Testing
3:30 PM – 4:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/20/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/26/10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA - Kingston Test Fuels Program Location or Address: Kingston, TN Project No.: 125662015 Report No.: 197 Date: 3-20-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
1	N35°54.634' W084°30.816'	87.2	29.3		~~92.8~~	~~24.9~~	97.2	90.0	
2	N35°54.642' W084°30.809'	84.1	24.6		89.7	23.0	93.7		
3	N35°54.650' W084°30.805'	87.5	30.2				97.6		
4	N35°54.659' W084°30.793'	81.3	31.2				90.7		
5	N35°54.668' W084°30.788'	80.9	31.2				90.1		
6	N35°54.668' W084°30.800'	85.6	24.6				95.4		
7	N35°54.659' W084°30.807'	84.9	32.8				94.6		
8	N35°54.653' W084°30.813'	84.1	26.8				93.7		
9	N35°54.643' W084°30.825'	84.8	27.1				94.5		
10	N35°54.634' W084°30.830'	92.5	22.9				103.1		
11	N35°54.644' W084°30.835'	88.8	29.0				99.0		
12	N35°54.652' W084°30.829'	83.9	25.2				93.6		
13	N35°54.660' W084°30.822'	85.7	32.8				95.6		
14	N35°54.671' W084°30.807'	81.5	31.5				90.8		
15	N35°54.675' W084°30.803'	82.5	36.4				91.9		
16	N35°54.675' W084°30.819'	85.7	30.5				95.5		
17	N35°54.667' W084°30.824'	85.4	32.0				95.2		
18	N35°54.659' W084°30.832'	85.1	30.3				94.9		

Comments:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA-Kingston Test Emb Program Location or Address: Kingston, TN Project No. 123669015 Report No. 197 Date: 3-20-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
19	N35°54.653' W084°30.841'	89.7	28.5		89.7	23.0	100.0	90.0	
20	N35°54.622' W084°30.797'	82.4	30.0				91.9		
21	N35°54.628' W084°30.794'	82.1	32.9				91.5		
22	N35°54.638' W084°30.783'	77.4	35.6		82.8	24.9	93.5		
23	N35°54.647' W084°30.775'	78.8	33.5				95.1		
24	N35°54.646' W084°30.759'	79.1	31.7				95.5		
25	N35°54.641' W084°30.765'	79.9	32.2				96.4		
26	N35°54.628' W084°30.777'	79.3	34.2				95.8		
27	N35°54.624' W084°30.778'	78.1	34.4				94.4		
28	N35°54.613' W084°30.773'	80.6	28.5				97.3		
29	N35°54.618' W084°30.769'	80.8	33.1				97.6		
30	N35°54.627' W084°30.762'	79.2	34.2				95.6		
31	N35°54.635' W084°30.753'	76.8	33.4				92.8		
32	N35°54.636' W084°30.738'	80.5	27.4				97.2		
33	N35°54.626' W084°30.746'	80.5	33.4				97.2		
34	N35°54.619' W084°30.755'	80.2	33.6				96.9		
35	N35°54.608' W084°30.764'	78.6	34.2				94.9		
36	N35°54.606' W084°30.748'	81.4	33.7				98.3		

Comments:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA-Kingston Test Emb Program Location or Address: Kingston, TN Project No.: 175669015 Report No.: 137 Date: 3-20-16

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
37	N35°54.616' W084°30.741'	83.3	31.8		82.8	24.9	100.6	90.0	
38	N35°54.619' W084°30.739'	84.0	28.4				101.5		
39	N35°54.633' W084°30.726'	78.8	26.5				95.2		
40	N35°54.627' W084°30.721'	80.6	27.7				97.3		
41	N35°54.616' W084°30.723'	82.3	31.2				99.4		
42	N35°54.608' W084°30.735'	83.8	29.9				101.2		

Comments:

Area of Fill Placement

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

3-20-10

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 120
Brentwood, TN 37027

DRAWN BY: MFB | PROJECT NO. | DATE:

Location of Density Tests

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

3-20-10

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 3702

DRAWN BY: MFD | PROJECT NO: 176402014 | DATE:

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 198	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/21/10	Day of the Week: Sunday	
	Weather: Cloudy/Rainy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) Cat Dozer, (1) John Deere 750J Dozer,			
(12) Articulated Dump Trucks, (1) Smooth Drum Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No: 198	Date: 3/21/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Layton informed Mr. Clark that Civil Projects would be placing material on the Test Embankment from the Relic Area and from the East Embayment.

Civil Projects utilized 12 articulated dump trucks to place fly ash in the northwestern section of the Test Embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southwest to northwest. This material was hauled to the Test Embankment from the Relic Area and the East Embayment. The material fly ash from the East Embayment was lime treated. Civil Projects shut the East Embayment trucks down at approximately 10:30 AM due to saturated material. Civil Projects continued placing Relic Material. The area of placement was approximately 50' x 150' and 100' x 250'. Civil Projects utilized a smooth drum compactor to seal this area from precipitation.

Civil Projects shut down the trucks from the Relic Area at approximately 3:30 PM due to precipitation.

On this date, Civil Projects placed 140 loads of fly ash from the Relic Area utilizing six articulated dump trucks.

On this date, Civil Projects placed 21 loads of fly ash from the East Embayment utilizing six articulated dump trucks.

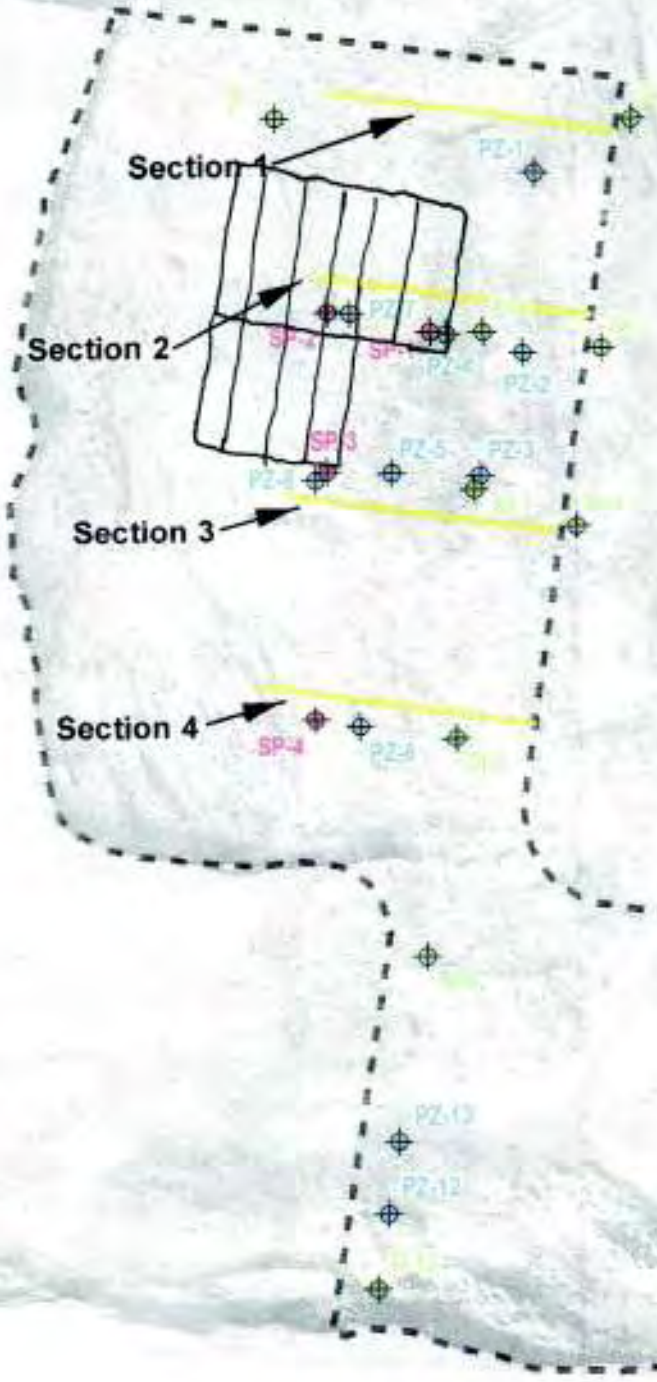
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:30 p.m.

7:00 AM – 3:00 PM Observed Construction of Test Embankment
3:30 PM – 4:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/21/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/26/10



Area of Fill Placement

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

3-21-10

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MED | PROJECT NO. | DATE

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 199	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/22/10	Day of the Week: Monday	
	Weather: Partly Sunny/Rainy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Additional testing will be required prior to placement of any future materials.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 199	Date: 3/22/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that Civil Projects would not be hauling material to the test embankment due to wet material.

On this date, Civil Projects did not perform any work on the test embankment area.

Mr. Clark assisted Mr. Meyers, a technician with Stantec, with instrumentation monitoring.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:30 p.m.

7:00 AM – 3:00 PM Observed Construction of Test Embankment
3:30 PM – 4:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/22/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manger	**Date** 3/26/10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 200	Page No: 1 of 5
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/23/10	Day of the Week: Tuesday	
	Weather: Partly Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (1) Cat Dozer, (8) Articulated	3440	Troxler	29
Dump Trucks, (1) Smooth Drum Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 5
Stantec Field Representative: Ryan Clark	Report No: 200	Date: 3/23/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the test embankment area. Mr. Andrew and Mr. Layton informed Mr. Clark that Civil Projects would be hauling material to the test embankment from the relic area and east embayment.

Mr. Clark and Mr. Crouch, technician with Stantec performed field nuclear density tests on the northwestern area of the test embankment area prior to the placement of fly ash. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and test location).

Civil Projects utilized 12 articulated dump trucks to place fly ash in the northwestern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southwest to northwest. This material was hauled to the test embankment from the relic area and the east embayment. The material fly ash from the east embayment was lime treated. The area of placement was approximately 50' x 250' and 100' x 150'. Civil Projects utilized a smooth drum compactor to seal this area.

On this date, Civil Projects placed 123 loads of fly ash from the relic area utilizing five articulated dump trucks.

On this date, Civil Projects placed 58 loads of fly ash from the east embayment utilizing three articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30 p.m.

7:00 AM – 4:30 PM Observed Construction of Test Embankment
8:30 AM – 9:30 AM Field Density Testing
4:30 PM – 6:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/23/10
[ ] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By**	**Date**

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

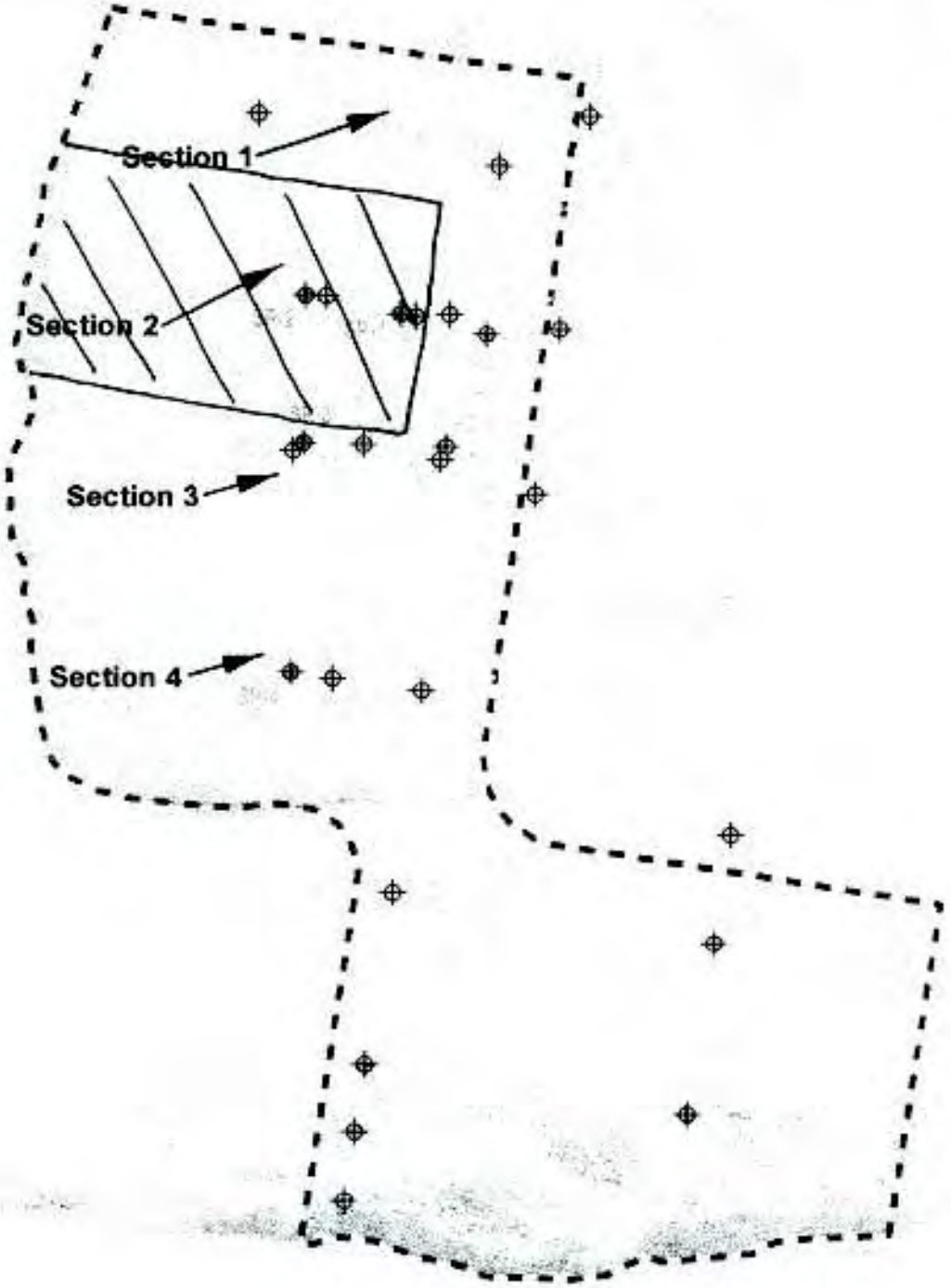
On-Site Daily Field Report
Density Testing and Observations

Name of Project: Tva-Kingston Test Emb Program Location or Address: Kingston, TN Project No.: 175669015 Report No: 200 Date: 3-23-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass or Fail
1	N35°54.630', W084° 30.810'	83.7	29.4		89.7	23.0	93.3	90.0	
2	635', 819'	90.5	28.8				100.9		
3	640', 827'	84.5	31.7				94.3		
4	647', 838'	91.6	26.4				102.1		
5	656', 846'	86.3	29.7				96.2		
6	668', 841'	81.9	33.9				91.3		
7	661', 830'	85.3	30.5				95.0		
8	655', 822'	88.1	27.4				98.3		
9	648', 810'	84.4	32.1				94.1		
10	642', 801'	87.0	30.5				96.9		
11	668', 816'	88.0	29.3				98.1		
12	671', 827'	82.6	30.7				92.1		
13	684', 825'	83.8	29.9				93.4		
14	676', 813'	86.5	30.5				96.4		
15	683', 807'	81.6	29.6				90.9		
16	690', 814'	84.5	31.6				94.3		

Comments:



Location of Density Tests

Legend

Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

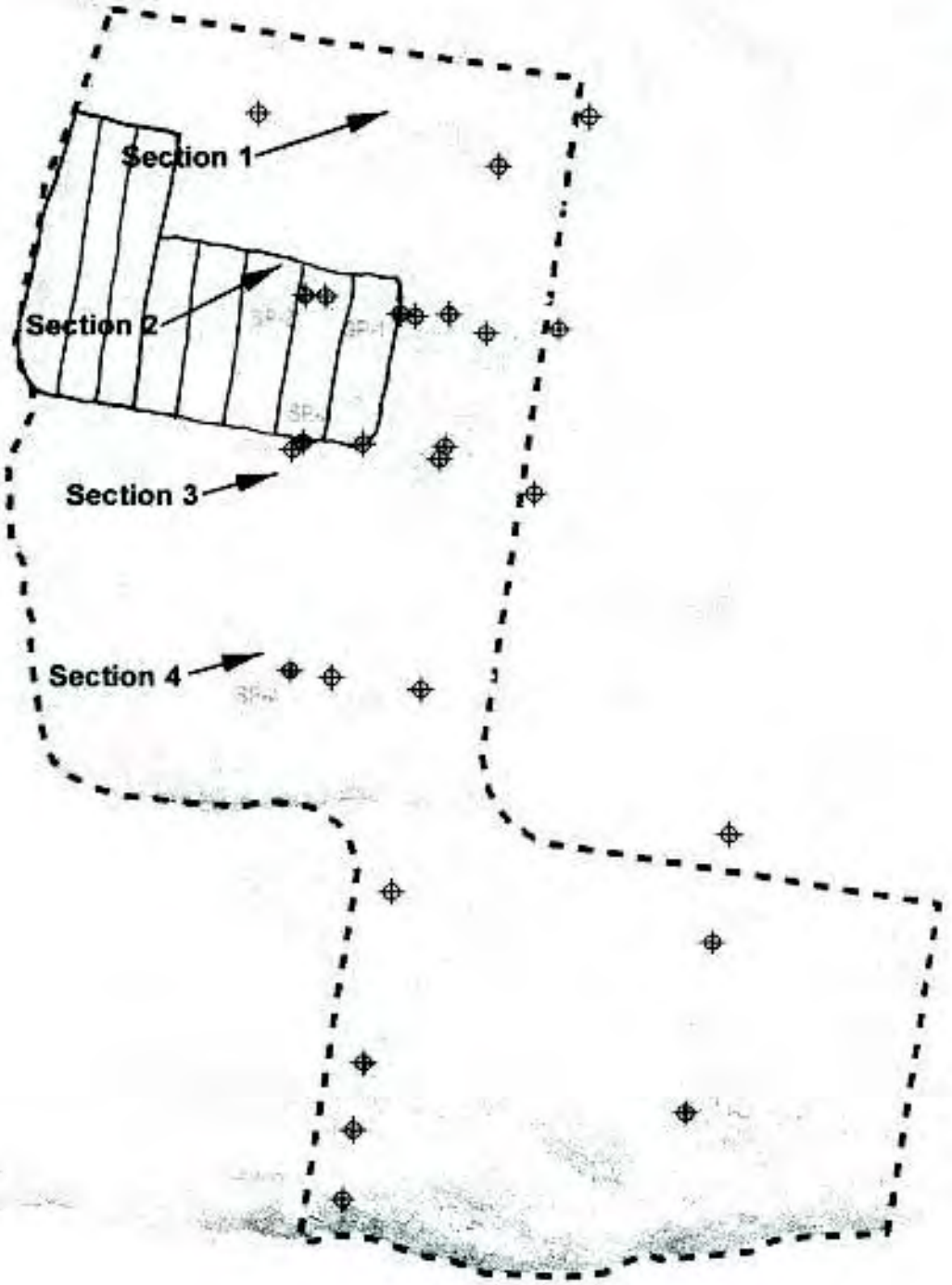
3-23-10

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 3702

DRAWN BY: | PROJECT NO. | DATE



Area of Fill Placement

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

3-23-10

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Brentwood, TN 37027

DRAWN BY: | PROJECT NO. | DATE:

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 201	Page No: 1 of 5
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/24/10	Day of the Week: Wednesday	
	Weather: Partly Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (1) Cat Dozer, (13) Articulated	3440	Troxler	29
Dump Trucks, (1) Smooth Drum Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 5
Stantec Field Representative: Ryan Clark	Report No: 201	Date: 3/24/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec to discuss the Test Embankment area. Mr. Andrew informed Mr. Clark that Civil Projects would be hauling material to the Test Embankment from the Relic Area and East Embayment.

Mr. Clark and Mr. Crouch, technician with Stantec performed field nuclear density tests on the northwestern area of the Test Embankment. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and test location).

Civil Projects utilized 13 articulated dump trucks to place fly ash in the northwestern section of the Test Embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 10" to 12" lift from southwest to northwest. This material was hauled to the Test Embankment from the Relic Area and the East Embayment. The fly ash material from the East Embayment was lime modified. The area of placement was approximately 75' x 250' and 75' x 100'. Civil Projects utilized a smooth drum compactor to seal this area.

At approximately 2:00 PM, Civil Projects shut off the East Embayment trucks for approximately one hour due to wet material.

On this date, Civil Projects placed 131 loads of fly ash from the relic area utilizing six articulated dump trucks.

On this date, Civil Projects placed 54 loads of fly ash from the east embayment utilizing seven articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:30 p.m.

7:00 AM – 4:30 PM Observed Construction of Test Embankment
3:00 PM – 4:00 PM Field Density Testing
4:30 PM – 6:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/24/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/26/10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

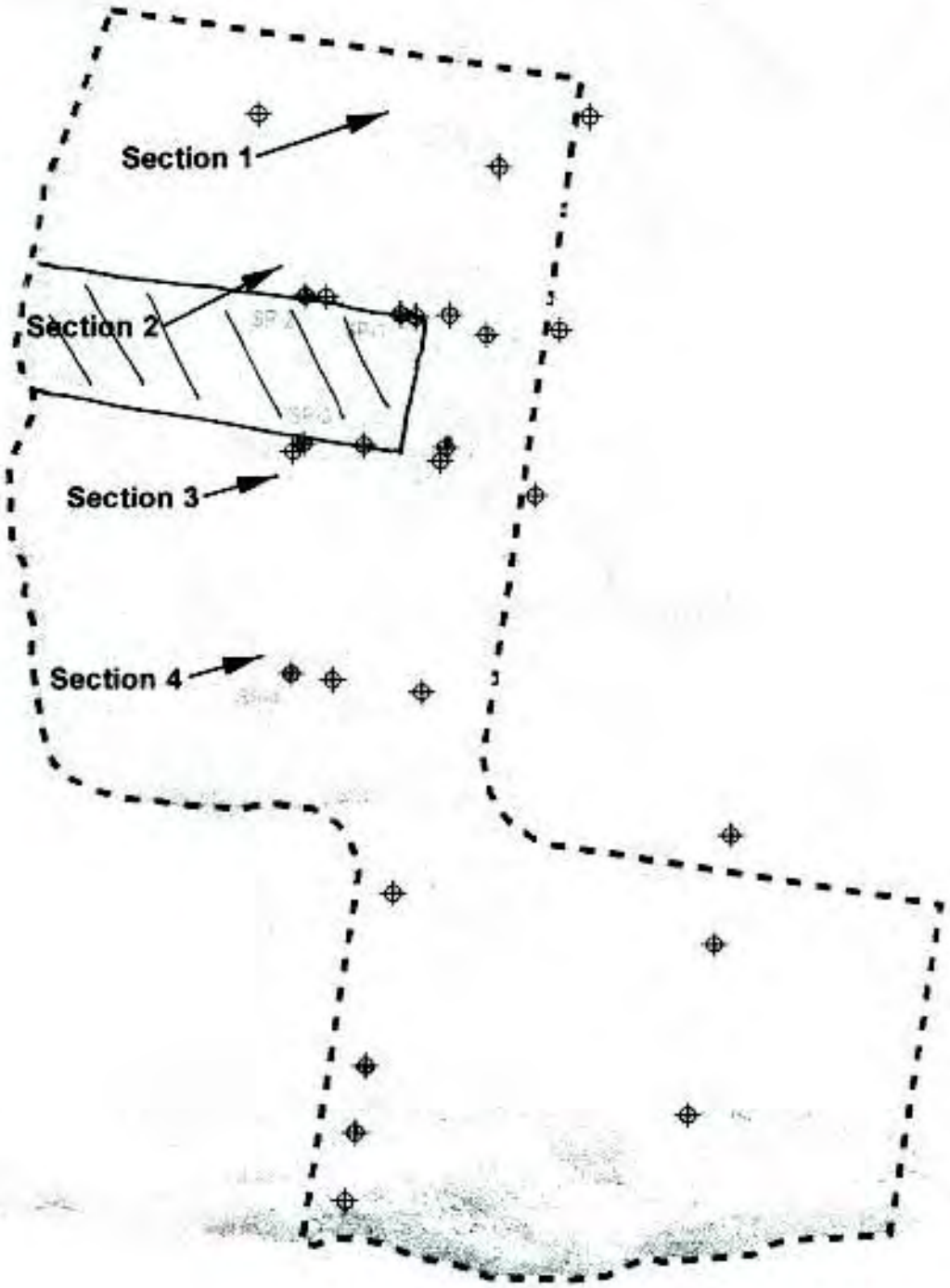
On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA - Kingston Test Emb Program Location or Address: Kingston, TN Project No: 175669015 Report No: 201 Date: 3-24-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass or Fail
1	N35°54.629', W084°30.808'	85.3	27.4		89.7	23.0	95.1	90.0	
2	637' / 803'	83.8	28.2				93.4		
3	646' / 797'	82.2	29.0				91.6		
4	654' / 790'	83.9	28.1				93.5		
5	663' / 783'	79.8	26.8		82.8	24.9	96.4		
6	669' / 792'	78.4	24.6				94.6		
7	661' / 799'	81.1	25.3				97.9		
8	653' / 806'	83.0	28.7				100.2		
9	644' / 813'	83.5	30.9				100.9		
10	636' / 820'	79.7	27.6				96.4		
11	639' / 833'	83.6	27.9		89.7	23.0	93.2		
12	648' / 825'	82.2	30.7				91.6		
13	656' / 818'	82.2	28.0				91.6		
14	663' / 811'	80.9	28.5				90.2		
15	672' / 802'	82.8	25.0				92.3		

Comments:



Location of Density Tests

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

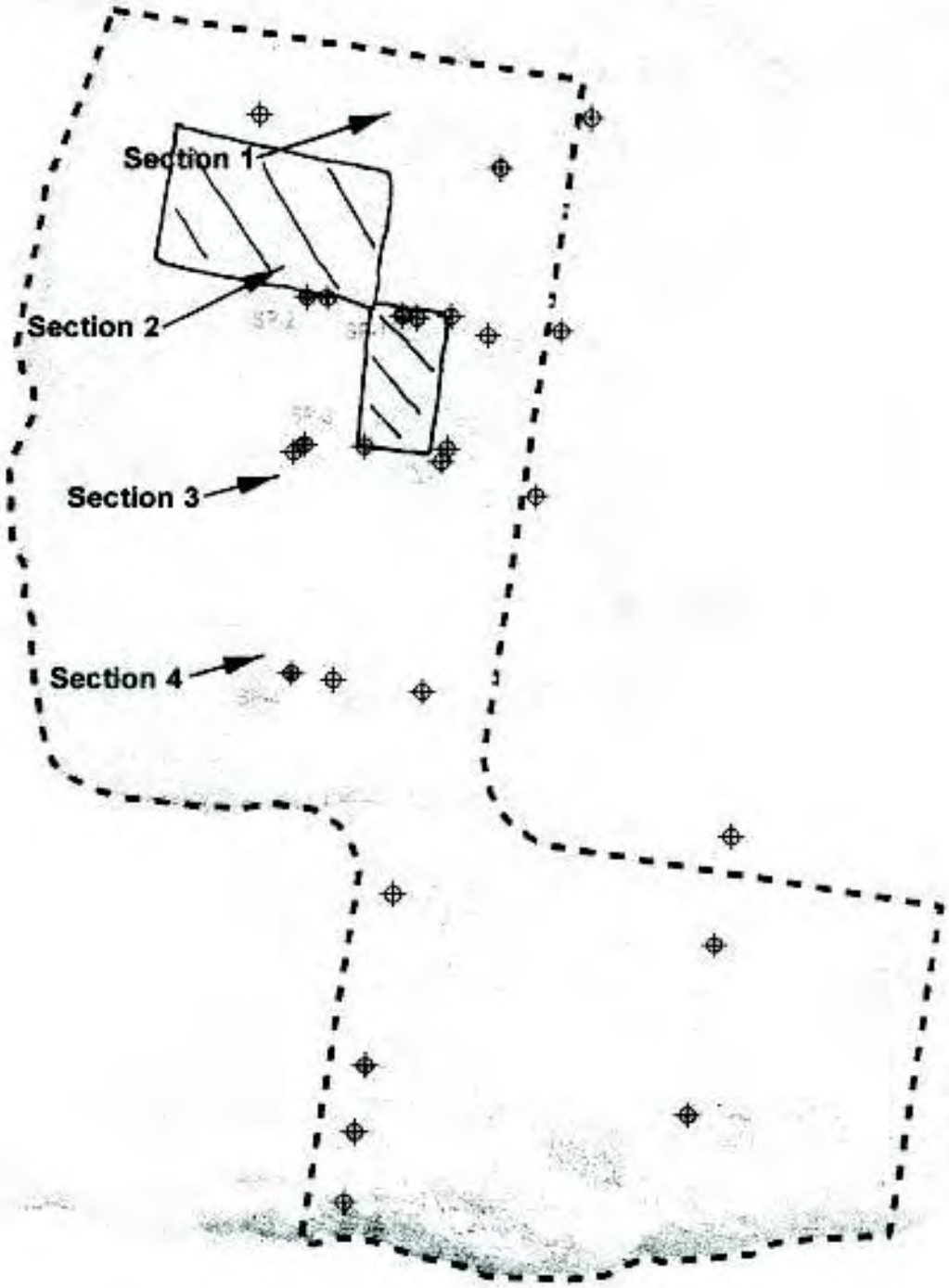
3-24-10

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY | PROJECT NO. | DATE



Area of Fill Placement

Legend

Cross Section
Piezometer (PZ)
Slope Inclinometer (SI)

3-24-10

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MFP | PROJECT NO. | DATE

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 202	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/25/10	Day of the Week: Thursday	
	Weather: Cloudy/Rainy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials after the rainfall.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 202	Date: 3/25/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec to discuss the Test Embankment area. Mr. Andrew informed Mr. Clark that Civil Projects would not be hauling material to the Test Embankment due to rainy conditions.

Due to a safety stand down ordered by TVA at approximately 9:45 AM, no work was performed. Stantec employees conducted a safety audit during this period.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	11:00 a.m.

7:00 AM – 8:00 AM Observed Construction of Test Embankment
10:00 PM – 11:00 AM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/25/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/26/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 203	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/26/10	Day of the Week: Friday	
	Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials after the rainfall.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Mike Crouch	Report No: 203	Date: 3/26/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Crouch, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec to discuss the Test Embankment area. Mr. Andrew informed Mr. Crouch that Civil Projects would not be hauling material to the Test Embankment due to rainy conditions and a saturated subgrade.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:30 a.m.

7:00 AM – 7:30 AM Briefing for the Test Embankment
5:00 PM – 5:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch	**Date** 3/26/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/27/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 204	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/27/10	Day of the Week: Saturday	
	Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the eastern half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials after the rainfall.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Mike Crouch	Report No: 204	Date: 3/27/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Layton, Assist. QC Manager with Stantec to discuss the Test Embankment area. Mr. Layton informed Mr. Crouch that Civil Projects would not be hauling material to the Test Embankment due to a saturated subgrade.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:30 a.m.

7:00 AM – 7:30 AM Observed Briefing for Test Embankment
5:00 PM – 5:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch	**Date** 3/27/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/29/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 205	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program (KIF-FR)		
	Location or Address: Kingston, Tennessee		
	Date: 3/29/10	Day of the Week: Monday	
	Weather: Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (1) Cat D6N Dozer,			
(1) Cat Excavator			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ X No ☐ Yes

Did you observe everything you expected to? ☐ No ☐ X Yes

Did you observe anything unexpected? ☐ X No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☐ X No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Additional testing will be required prior to placement of any future materials at each lift.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 205	Date: 3/29/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the Test Embankment Area. Mr. Andrew and Mr. Layton informed Mr. Clark that Civil Projects would not be hauling material to the Test Embankment due to wet conditions.

Civil Projects utilized two dozers to repair shallow washouts on the northwestern section of the Test Embankment Area. The dozers bladed the material into the washouts and tracked in the material to provide compaction. Civil Projects also utilized an excavator to repair deeper washouts in the drainage ditch on the northern section of the Test Embankment Area. The excavator placed material in the washouts and utilized the bucket to provide compaction..

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:30 a.m.

7:00 AM – 7:30 AM Briefing for Test Embankment
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/29/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/30/10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 206	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program (KIF-FR)		
	Location or Address: Kingston, Tennessee		
	Date: 3/30/10	Day of the Week: Tuesday	
	Weather: Partly Cloudy/Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (1) Cat D6N Dozer,			
(12) Articulated Dump Trucks			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ X No ☐ Yes

Did you observe everything you expected to? ☐ No ☐ X Yes

Did you observe anything unexpected? ☐ X No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☐ X No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the western half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No: 206	Date: 3/30/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the Test Embankment Area. Mr. Andrew and Mr. Layton informed Mr. Clark that Civil Projects would be hauling material to the Test Embankment Area from the Relic Area and the East Embayment Area.

Civil Projects utilized 12 articulated dump trucks to place fly ash in the northwestern section of the Test Embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 16" to 18" lift from southwest to northwest. This material was hauled to the test embankment from the Relic Area and the East Embayment. The fly ash material from the East Embayment was lime treated. The two areas of placement were approximately 150' x 150' and 150' x 50'.

On this date, Civil Projects placed 143 loads of fly ash from the Relic Area utilizing five articulated dump trucks.

On this date, Civil Projects placed 77 loads of fly ash from the East Embayment utilizing seven articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 4:30 PM Observed Construction of Test Embankment
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/30/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-1-10

Area of Fill Placement

3-30-10

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

DRAWN BY: MRP | PROJECT NO. 175680016 | DATE:

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 207	Page No: 1 of 6
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 3/31/10	Day of the Week: Wednesday	
	Weather: Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark / Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (1) Cat D6N Dozer,	3440	Troxler	29
(12) Articulated Dump Trucks, (1) Cat Smooth Drum			
Compactor			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the western half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials. Review the finish grading of slopes and benches.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 6
Stantec Field Representative: Ryan Clark / Mike Crouch	Report No: 207	Date: 3/31/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the Test Embankment Area. Mr. Andrew and Mr. Layton informed Mr. Clark that Civil Projects would be hauling material to the Test Embankment Area from the Relic Area and the East Embayment area.

Mr. Clark and Mr. Crouch, technicians with Stantec, performed field nuclear density tests on the northwestern area of the Test Embankment prior to the placement of fly ash. Field density test results indicated the compaction of the fly ash fill material met the project requirements (see attached test results and locations).

Civil Projects utilized 12 articulated dump trucks to place fly ash in the northwestern section of the Test Embankment. The dump trucks end dumped the fly ash near the area of placement and the dozer operators bladed it into an approximate 16" to 18" lift from southwest to northwest. This material was hauled to the Test Embankment from the Relic Area and the East Embayment. The fly ash material from the East Embayment was lime treated. The area of placement was approximately 250' x 150'.

On this date, Civil Projects placed 151 loads of fly ash from the Relic Area utilizing five articulated dump trucks.

On this date, Civil Projects placed 77 loads of fly ash from the East Embayment utilizing seven articulated dump trucks.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00 AM – 4:30 PM Observed Construction of Test Embankment
9:30 AM – 10:30 AM Field Density Testing
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 3/31/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-1-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA - Kingston Test Emb Program Location or Address: Kingston, TN Project No.: 175669015 Report No: 207 Date: 3-31-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
1	N35° 54. 650', W084° 30. 850'	86.2	29.0		89.7	23.0	96.1	90.0	
2	656', 844'	85.7	31.5				95.5		
3	665', 838'	80.7	32.3				90.0		
4	672', 831'	83.3	29.4				92.9		
5	678', 824'	83.9	27.9				93.5		
6	688', 816'	81.3	29.3				90.6		
7	683', 804'	85.0	32.8				94.7		
8	675', 811'	91.0	29.8				101.4		
9	668', 816'	86.8	30.8				96.7		
10	661', 823'	85.7	32.3				95.5		
11	653', 829'	85.1	33.1				94.9		
12	645', 836'	84.0	27.3				93.7		
13	647', 812'	85.0	30.9				94.8		
14	658', 804'	83.9	30.7				93.5		
15	665', 798'	82.0	28.9				91.4		
16	672', 792'	86.1	28.8				96.1		
17	666', 783'	80.7	29.8				90.0		
18	659', 789'	82.2	30.2				91.7		

Comments:

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

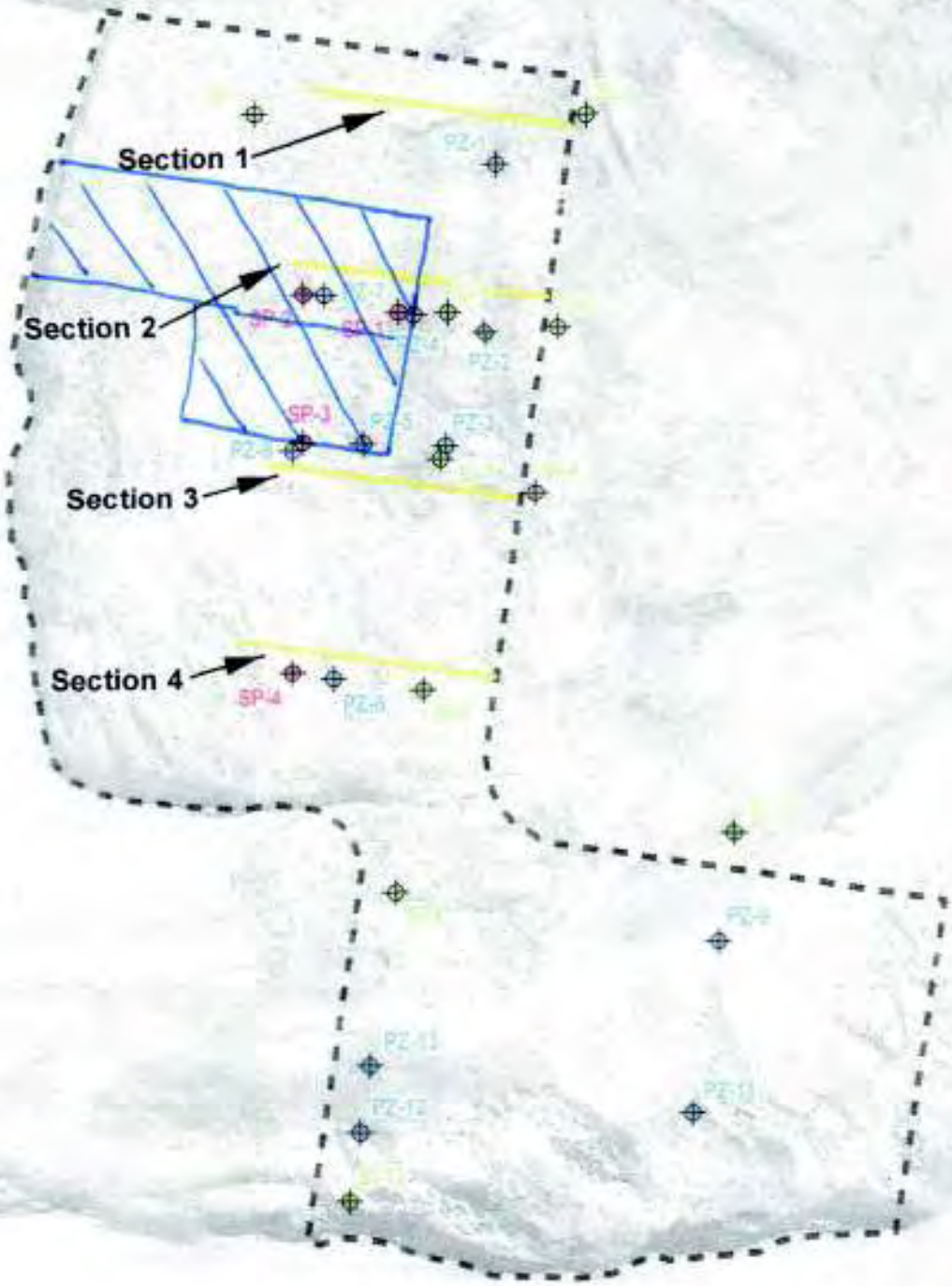
On-Site Daily Field Report
Density Testing and Observations

Name of Project: TVA- Kingston Test Emb Program Location or Address: Kingston, TN Project No. 175669015 Report No. 207 Date 3-31-10

Soil Density Tests *(Continued)*

Test No.	Test Location	Dry Density (pcf)	Moisture (%)	MC Requirement	Proctor Density (pcf)	Optimum Moisture (%)	Compacted (%)	Required Compaction (%)	Pass Or Fail
19	N35°54.652', W084°30.794'	88.9	28.2		89.7	23.0	99.1	90.0	
20	" 642', " 802'	82.7	31.1		"	"	92.2	"	

Comments:



Location of Density Tests

3-31-10

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 3702

DRAWN BY: MCP | PROJECT NO. 176660/16 | DATE

Area of Fill Placement

~~Location of Density Tests~~

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

3-31-10

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Brentwood, TN 37027

DRAWN BY: MCD | PROJECT NO. | DATE:

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 208	Page No: 1 of 3
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 4/01/10	Day of the Week: Thursday	
	Weather: Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (1) Cat D6N Dozer,			
(11) Articulated Dump Trucks, (1) Cat Smooth Drum			
Compactor, (1) Cat Dozer, (1) John Deere Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
Verify dozers are tracking the western half of the test embankment to provide additional compaction and remove moisture.
Additional testing will be required prior to placement of any future materials.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 3
Stantec Field Representative: Ryan Clark	Report No: 208	Date: 4/01/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the Test Embankment Area. Mr. Andrew and Mr. Layton informed Mr. Clark that Civil Projects would be hauling material to the Test Embankment Area from the Relic Area and the East Embayment.

Civil Projects utilized 11 articulated dump trucks to place fly ash in the northwestern section of the test embankment area. The dump trucks end dumped the fly ash near the area of placement and the dozers bladed it into an approximate 18" to 24" lift from southwest to northwest. This material was hauled to the test embankment from the Relic Area and the East Embayment. The fly ash material from the East Embayment was lime treated. The area of placement was approximately 250' x 200'. Civil Projects sealed the area utilizing a smooth drum compactor.

Civil Projects utilized two dozers to dress the slopes on the northeast and northwest section of the Test Embankment. The dozers were also utilized to dress the first bench on the Test Embankment.

On this date, Civil Projects placed 208 loads of fly ash from the relic area utilizing five articulated dump trucks.

On this date, Civil Projects placed 67 loads of fly ash from the east embayment utilizing six articulated dump trucks.

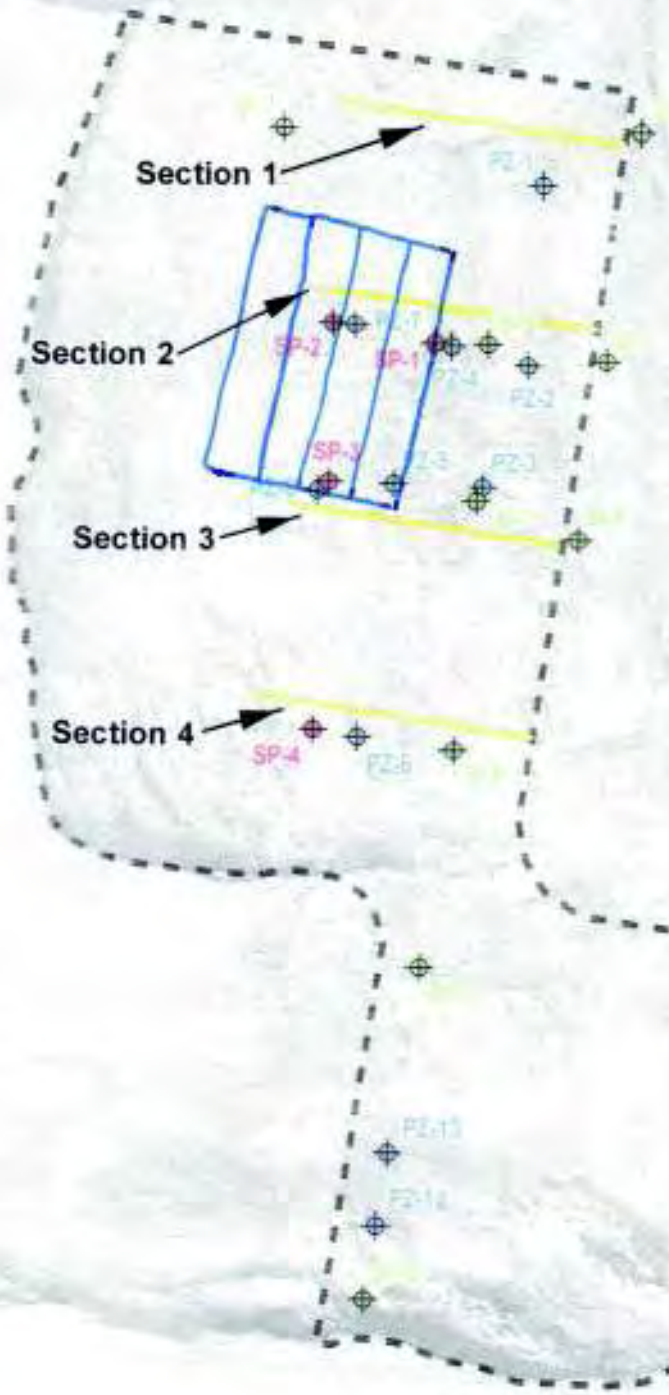
Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:00 p.m.

7:00 AM – 7:00 PM Observed Construction of Test Embankment
7:00 PM – 7:30 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 4/01/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-2-10



Area of Fill Placement

~~Location of Density Tests~~

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

9-1-10

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Brentwood, TN 37027

DRAWN BY: MDP | PROJECT NO. | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 209	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program (KIF-FR)		
	Location or Address: Kingston, Tennessee		
	Date: 4/02/10	Day of the Week: Friday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(1) John Deere 750J Dozer, (1) Cat D6N Dozer,			
(4) Articulated Dump Trucks, (1) Cat Dozer,			
(1) John Deere Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Final grading and compaction of the Test Embankment. Density testing is required on the western top of the Test Embankment.

.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 209	Date: 4/02/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the Test Embankment Area. Mr. Andrew and Mr. Layton informed Mr. Clark that Civil Projects would be hauling material to the Test Embankment Area from the 'B' Berm Area.

Civil Projects utilized four articulated dump trucks to place fly ash in the northwestern section of the Test Embankment Area. The dump trucks stockpiled the material on the northwestern section of the Test Embankment. This material was hauled to the Test Embankment Area from the 'B' Berm Area. The material will be utilized as fill for final grade on the Test Embankment.

Civil Projects utilized four dozers to dress the slopes on the northeast and northwest section of the Test Embankment. The dozers were also utilized to dress the first and second benches on the Test Embankment.

On this date, Civil Projects placed 16 loads of fly ash from the 'B' Berm area utilizing four articulated dump trucks.

Gibbons Farms were on site to hydro-seed the completed slopes on the western section of the Test Embankment Area. In the process of hydro-seeding, SI-1 was damaged/broken by their activities. Repairs will be performed by Stantec.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	7:00 p.m.

7:00 AM – 4:30 PM Observed Construction of Test Embankment
9:30 AM – 10:30 AM Field Density Testing
6:00 PM – 7:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 4/02/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-3-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 210	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program (KIF-FR)		
	Location or Address: Kingston, Tennessee		
	Date: 4/03/10	Day of the Week: Saturday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Chris Meyers / Liam MacPhee

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
(3) Cat D6 Dozer,			
(1) Smooth Drum Roller			
(2) John Deere Dozer			

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Density testing is required on the western top of the Test Embankment.

.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers / Liam MacPhee	Report No: 210	Date: 4/03/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Meyers and Mr. MacPhee, technicians with Stantec Consulting, met with Mr. Layton, Assistant QC Manager with Stantec to discuss the Test Embankment Area. Mr. Layton informed Mr. Meyers and Mr. MacPhee that Civil Projects had completed the filling operations on the Test Embankment and would be performing the final grading operations.

Civil Projects utilized five dozers to dress the slopes and the benches on the north and east sides of the Test Embankment. The dozers were also utilized to dress the top of the pad on the Test Embankment. A smooth drum roller was utilized to seal the entire surface.

Gibbons Farms were on site at approx. 9:00 AM to hydro-seed the completed slopes, benches and top of the Test Embankment Area. They stopped their operations while the finish work was being performed by CP and resumed their hydo-seeding late in the afternoon.

SI-1 was repaired after the damage that occurred on 4-2-10

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:30 p.m.

7:00 AM – 4:30 PM Observed Construction of Test Embankment
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 4/03/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-3-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 211	Page No: 1 of 8
Distribution:	Project Name: TVA Kingston – Test Embankment Program (KIF-FR)		
	Location or Address: Kingston, Tennessee		
	Date: 4/05/10	Day of the Week: Monday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	3440	Troxler	29

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Review the general area for maintenance issues. Observe the installation of final drainage improvements under the maintenance phase of this project. Observe the final round of geotechnical testing and assist drillers as required.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 8
Stantec Field Representative: Ryan Clark	Report No: 211	Date: 4/05/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the Test Embankment Area. Mr. Layton informed Mr. Clark that since fill placement and grading were complete, final field nuclear density tests would be required on this date.

Mr. Clark and Mr. Crouch, technicians with Stantec, performed final field nuclear density tests on the entire Test Embankment Area. Field density test results indicated the compaction of the fly ash fill material met project requirements (see attached test results and test location).

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:30 p.m.

7:00 AM – 4:30 PM Observed Construction of Test Embankment
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 4/05/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-5-10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA-Kingston Test Embankment Project	Project No: 175669015	Page No: 3	of 8
Field Representative: Ryan Clark	Report No: 211	Date: 4-27-10	

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
1	N35°59.647', W084°30.848'	89.2	27.6	89.7	23.0	99.5	90.0	
2	654', 842'	85.1	29.0			94.9		
3	662', 835'	90.1	29.2			100.5		
4	670', 829'	86.1	27.2			96.0		
5	676', 823'	85.2	25.1			95.0		
6	683', 816'	82.4	26.5			91.8		
7	677', 806'	85.2	22.8			94.9		
8	670', 814'	81.5	28.0			90.8		
9	662', 819'	83.1	27.9			92.6		
10	655', 824'	86.1	30.6			96.0		
11	648', 830'	84.9	30.3			94.6		
12	641', 836'	86.8	24.9			96.8		

Remarks:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA - Kingston Test Embankment Project	Project No: 175669015	Page No: 4 of 8
Field Representative: Ryan Clark	Report No: 211	Date: 4-5-10

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
13	N35°54.635', W084°30.825'	87.8	25.0	89.7	23.0	97.9	90.0	
14	642', 818'	84.8	29.3			94.6		
15	649', 810'	81.6	29.7			91.0		
16	657', 803'	82.9	26.8			92.4		
17	663', 798'	83.1	28.9			92.6		
18	668', 790'	86.7	27.8			96.7		
19	663', 782'	84.3	27.1			94.0		
20	656', 789'	84.0	23.7			93.7		
21	649', 796'	83.5	27.1			93.1		
22	642', 803'	85.4	29.4			95.2		
23	635', 810'	83.0	29.5			92.6		
24	628', 816'	86.7	21.8			96.7		

Remarks:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA - Kingston Test Embankment Project	Project No: 175669015	Page No: 5 of 8
Field Representative: Ryan Clark	Report No: 211	Date: 4-5-10

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
25	N35°54.622', W084°30.804'	84.3	27.6	89.7	23.0	94.0	90.0	
26	630', 796'	86.4	27.9			96.3		
27	637', 789'	82.6	31.3			92.0		
28	644', 782'	84.6	28.4			94.3		
29	650', 775'	83.4	26.4			93.0		
30	657', 768'	84.9	25.7			94.7		
31	650', 761'	81.2	28.3			90.6		
32	643', 768'	87.0	27.6			96.9		
33	636', 775'	85.1	29.3			94.8		
34	628', 782'	85.5	27.2			95.3		
35	621', 789'	82.2	26.9			91.6		
36	614', 794'	84.0	27.2			93.7		

Remarks:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: Tva. Kingston Test Embankment Project	Project No: 175669015	Page No: 6 of 8
Field Representative: Ryan Clark	Report No: 211	Date: 4-5-10

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
37	N35°54.611', W084°30.783'	88.2	26.8	89.7	23.0	98.4	90.0	
38	617', 776'	83.4	29.1			93.0		
39	624', 770'	86.5	27.6			96.5		
40	632', 763'	86.5	28.3			96.4		
41	638', 756'	83.2	27.3			92.8		
42	643', 748'	81.7	24.3			91.1		
43	637', 739'	82.6	23.2			92.1		
44	631', 746'	84.3	21.2			94.0		
45	624', 752'	84.6	27.5			94.3		
46	616', 759'	91.4	26.3			101.9		
47	609', 765'	83.7	30.2			93.3		
48	605', 754'	89.5	24.6			99.8		

Remarks:

Stantec

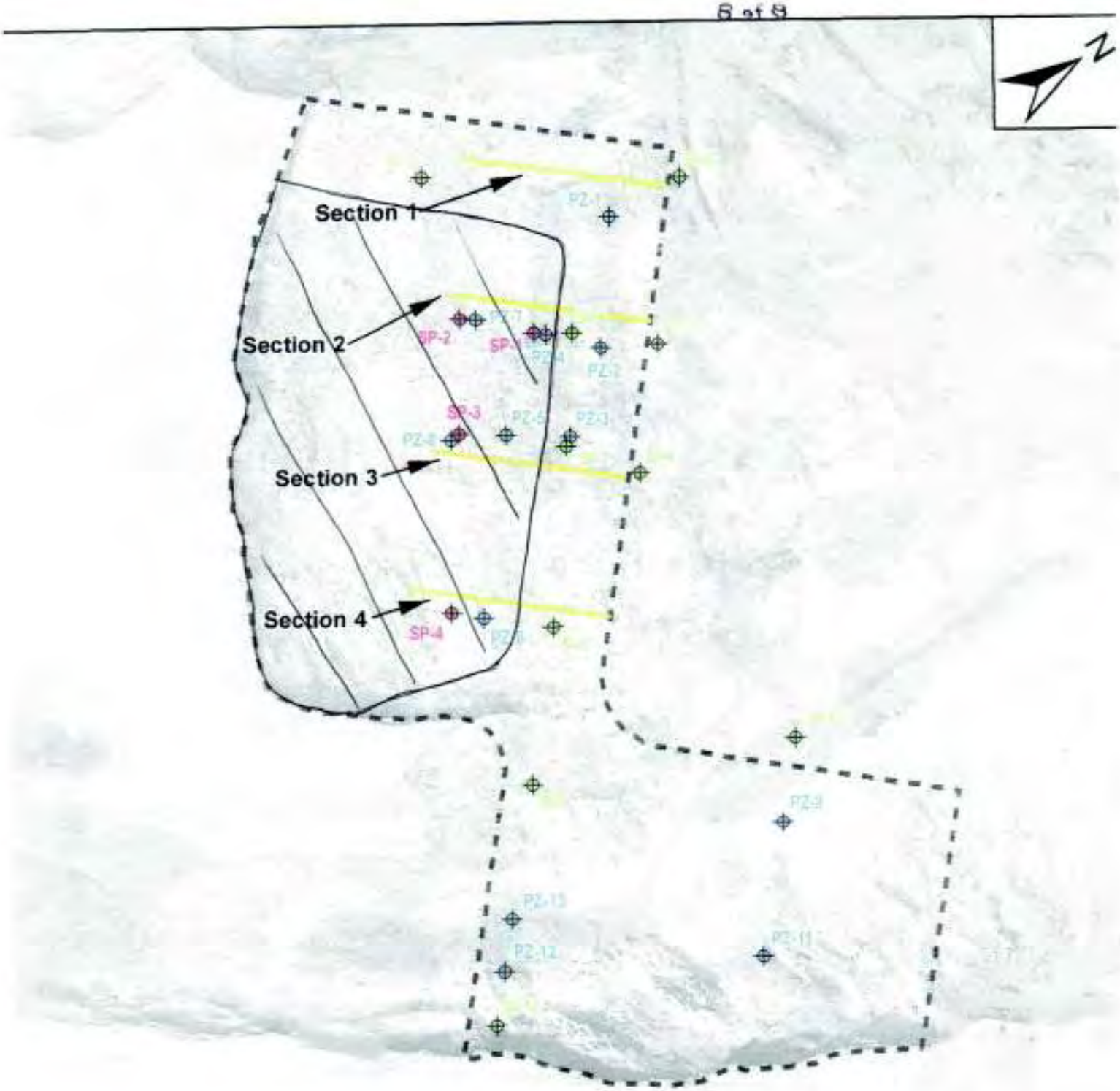
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Field Density Test

Project Name: TVA - Kingston Test Embankment Project	Project No: 175669015	Page No: 7 of 8
Field Representative: Ryan Clark	Report No: 211	Date: 4-5-10

Test No.	Test Location Provided By:	Dry Density (pcf)	Moisture (%)	Proctor Density (pcf)	Optimum Moisture (%)	Compaction (%)	Required Compaction (%)	Pass or Fail
49	N35°54.613', W084°30.746'	90.7	28.2	89.7	23.0	101.1	90.0	
50	620', 740'	87.0	25.6			97.0		
51	626', 735'	82.4	24.0			91.8		
52	631', 730'	83.6	24.5			93.2		
53	626', 722'	82.7	23.1			92.2		
54	618', 726'	81.8	25.1			91.2		
55	610', 730'	83.9	25.3			93.5		
56	603', 734'	87.1	23.4			97.1		

Remarks:



Location of Density Tests

4-5-10

Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 3702

DRAWN BY: MFP | PROJECT NO. 175580014 | DATE:

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 212	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program (KIF-FR)		
	Location or Address: Kingston, Tennessee		
	Date: 4/06/10	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observed maintenance of the test pad.
Assist drillers with logistical issues.
.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 212	Date: 4/06/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the Test Embankment Area. Mr. Layton informed Mr. Clark that Stantec drilling crew would be on site on this date.

Stantec's drilling crew was on site this date to perform the final round of CPT's on the Test Embankment. CPT's 1 and 3 were performed on this day.

Civil Projects did not perform any work on the Test Embankment on this date.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:30 p.m.

7:00 AM – 4:30 PM Stantec Drilling
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 4/06/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-7-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 213	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program (KIF-FR)		
	Location or Address: Kingston, Tennessee		
	Date: 4/07/10	Day of the Week: Wednesday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Ricky Lynn/Jim Kilby	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Observed maintenance of the test pad.

.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 213	Date: 4/07/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Clark, technician with Stantec Consulting, met with Mr. Andrew, QC Manager with Stantec and Mr. Layton, Assistant QC Manager with Stantec to discuss the Test Embankment Area. Mr. Layton informed Mr. Clark that Stantec drilling crew would be on site on this date.

Stantec's drilling crew was on site this date to perform the final round of CPT's on the Test Embankment. CPT's 2, 4 and 5 were performed on this day. All testing was completed and the Stantec drill crew demobilized and left the site.

Civil Projects did not perform any work on the Test Embankment on this date.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	4:30 p.m.

7:00 AM – 4:30 PM Stantec Drilling
5:00 PM – 6:00 PM Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, op to now erations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 4/07/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-8-10

Appendix E

Daily Instrumentation Field Reports

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 1	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-10-09	Day of the Week: Monday	
	Weather: Partly Cloudy	Temperature: 87° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, continue instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 1	Date 08-10-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman performed instrumentation monitoring in the test embankment area throughout the day. The instrumentation monitored included slope inclinometers and vibrating wire piezometers.

The slope inclinometers monitored were: SI-1, SI-2 and SI-3. Ms. Berryman was unable to obtain slope inclinometer readings from SI-4 and SI-5, due to the movement of heavy equipment in the test embankment area.

The vibrating wire PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Stantec Field Representative's Activities

Arrive	07:00
Depart	20:00

07:00 to 08:00 reporting
08:00 to 16:00 field work
16:00 to 20:00 reporting, lab setup

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-10-09
[x] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-12-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 2	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-11-09	Day of the Week: Tuesday	
	Weather: Overcast, rain, T-storms	Temperature: 87° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported
By: Jim Andrew
On: 08-09-09

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 1

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, weekly instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 2	Date 08-11-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4 and SI-5.

Ms. Berryman obtained readings from the vibrating wire Piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Stantec Field Representative's Activities

Arrive	07:00
Depart	20:00

07:00 to 08:00 reporting
08:00 to 16:00 field work
16:00 to 20:00 reporting, lab setup

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-11-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-12-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 3	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-12-09	Day of the Week: Wednesday	
	Weather: Mostly Cloudy	Temperature: 86° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 2

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, weekly instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 3	Date 08-12-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4 and SI-5.

Ms. Berryman obtained readings from the vibrating wire Piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Stantec Field Representative's Activities

Arrive	07:00
Depart	20:00

07:00 to 08:00 reporting
08:00 to 16:00 field work
16:00 to 20:00 reporting, lab setup

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-12-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-12-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 4	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-13-09	Day of the Week: Thursday	
	Weather: Clear / Sunny	Temperature: 87° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 3

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, weekly instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 4	Date 08-13-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4 and SI-5.

Ms. Berryman obtained readings from the vibrating wire Piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Ms. Berryman noticed the wheels on the slope inclinometer probe appeared to be sticking, making it difficult to obtain readings. Ms. Berryman alerted Mr. Skip Layton, of Stantec Consulting, of this problem. Mr. Layton made arrangements to have the probe repaired, and a rental probe sent in its place.

Stantec Field Representative's Activities

Arrive	07:00
Depart	21:00

07:00 to 08:00 reporting
08:00 to 16:00 field work
16:00 to 21:00 reporting, lab setup

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-13-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-14-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 5	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-14-09	Day of the Week: Friday	
	Weather: Clear / Sunny	Temperature: 87° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP03030008
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 4

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, weekly instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 5	Date 08-14-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4 and SI-5.

Ms. Berryman obtained readings from the vibrating wire Piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

The slope inclinometer used was a rental unit.

Stantec Field Representative's Activities

Arrive	07:00
Depart	20:00

07:00 to 08:00 reporting
08:00 to 16:00 field work
16:00 to 20:00 reporting, lab setup

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-14-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-14-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 6	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-15-09	Day of the Week: Saturday	
	Weather: Mostly Sunny	Temperature: 87° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP03030008
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 5

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, weekly instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 6	Date 08-15-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Andrew and Mr. Mehnert obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4 and SI-5.

Mr. Andrew and Mr. Mehnert obtained readings from the vibrating wire Piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:30

07:00 to 08:00 reporting
08:00 to 16:00 field work
16:00 to 19:30 reporting, lab setup

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 08-15-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-17-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 7	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-17-09	Day of the Week: Monday	
	Weather: Partly Cloudy	Temperature: 87° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP03030008
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 6

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman/ Skip Layton	Report No: 7	Date 08-17-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4 and SI-5.

Ms. Berryman and Mr. Layton also obtained readings from the vibrating wire Piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 16:00 field work
16:00 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-17-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-18-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 8	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-18-09	Day of the Week: Tuesday	
	Weather: Overcast, rain	Temperature: 87° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman / Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported
By: Jim Andrew
On: 08-09-09

Contractor's Personnel Present/Equipment Observed in Use:

Stantec Equipment Used:

Type/Model	Manufacturer	Ser. No./ID No.
Digital Inclinometer	RST Instruments	DP03030008
VW PZ Reader	Durham Geo	32890
Water-Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 7

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D Berryman / R Mehnert	Report No: 8	Date 08-18-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4 and SI-5.

Ms. Berryman also obtained water-level readings from the following PZs located on Dike C: STN-14, STN-26, STN-48(A1), STN-48(A-2) and STN-48(B).

Mr. Mehnert obtained readings from the vibrating wire piezometers in the test embankment area. The wire PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 16:00 field work
16:00 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-18-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-20-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 9	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-19-09	Day of the Week: Wednesday	
	Weather: Overcast, rain	Temperature: Mid 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pressure Indicator	Durham Geo	22073
	Water-level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 8

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 9	Date 08-19-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Layton and Ms. Berryman, Stantec representatives, obtained water-level readings from the following piezometers located on Dike C: STN-2, STN-3(A1), STN-3(A2), STN-3B, STN-15(A1), STN15(A2), STN-15B, STN-36, STN-37(A1), STN-37(A2), STN-37B, STN-47, STN-27(A1), STN-27(A2) and STN-27B

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from AECOM PZs 211, 211(A) and 211(B), located on Dike C.

Ms. Berryman and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4 and SI-5.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire Piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Ms. Berryman obtained two sets of readings from SI-69 and SI-71, using both the rental probe and the repaired probe. Ms Berryman emailed the data to Jim Andrew, Stantec QC Manager, for correlation of rental and repaired Slope Inclinometer probes.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 17:00 field work
17:00 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-19-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-20-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 10	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-20-09	Day of the Week: Thursday	
	Weather: Overcast, rain	Temperature: Mid 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pressure Indicator	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 9

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 10	Date 08-20-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Layton and Ms. Berryman, Stantec representatives, performed instrumentation monitoring on the AECOM pneumatic Piezometers in the AM hours. The AECOM PZs monitored were: 101, 102, 103, 106, 109, 303, 404, 408, 500, 502, 503, 600, 603, 604 and 605.

Mr. Mehnert, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Mehnert and Ms. Berryman obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2 and SI-5. Mr. Mehnert and Ms. Berryman did not obtain readings from SI-3 and SI-4, due to inclement weather.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 17:00 field work
17:00 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-20-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-20-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 11	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-21-09	Day of the Week: Friday	
	Weather: Overcast, light rain	Temperature: Mid 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 10

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 11	Date 08-21-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

In the morning hours, Mr. Mehnert and Mr. Clark, Stantec representatives, obtained readings from slope inclinometers SI-3 and SI-4, which were unable to be read on 08-20-09.

Ms. Berryman obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Ms. Berryman and Mr. Andrew obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4 and SI-5.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-21-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-21-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 12	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-22-09	Day of the Week: Saturday	
	Weather: Mostly sunny	Temperature: Mid 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 11

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, monitor AECOM slope inclinometers

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 12	Date 08-22-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Andrew, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Andrew obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1 PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Stantec Field Representative's Activities

Arrive	07:45
Depart	18:30

07:45 to 08:00 reporting
08:00 to 16:00 field work
16:00 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-22-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-22-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 13	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-24-09	Day of the Week: Monday	
	Weather: Clear / Sunny	Temperature: 85° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 12

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, monitor AECOM slope inclinometers

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 13	Date 08-24-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman obtained readings from the vibrating wire Piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Ms. Berryman performed instrumentation monitoring on Dike D.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-24-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-26-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 14	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-25-09	Day of the Week: Tuesday	
	Weather: Hazy / Sunny	Temperature: 85° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 13

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, monitor AECOM slope inclinometers

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 14	Date 08-25-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained readings from the following AECOM slope inclinometers located on Dike D and on the Relic Structure: 101, 102, 103, 106, 109, 211, 211E, 301E, 303, 404, 408, 502, 503, 602, 603 and 900SH2.

Ms. Berryman and Mr. Andrew, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Mehnert and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 17:00 field work
17:00 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-25-09
[x] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-26-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 15	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-26-09	Day of the Week: Wednesday	
	Weather: Hazy / Partly cloudy	Temperature: 90° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 14

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, monitor Stantec and AECOM slope inclinometers

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 15	Date 08-26-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman obtained readings from the vibrating wire Piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Ms. Berryman and Mr. Layton, Stantec Assistant QC Manager, obtained readings from the AECOM slope inclinometers located to the north of the failed dredge cell area and to the west of the test embankment area.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-26-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-27-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 16	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-27-09	Day of the Week: Thursday	
	Weather: Overcast, some rain	Temperature: Mid 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 15

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 16	Date 08-27-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-27-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-27-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 17	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-28-09	Day of the Week: Friday	
	Weather: Rain / Sun	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 16

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dike C.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 17	Date 08-28-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Layton and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 08-28-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-31-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 18	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 08-29-09	Day of the Week: Saturday	
	Weather: Rain / Sun	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Ryan Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: [X] Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 17

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 18	Date 08-29-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark, Stantec representative, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Mr. Clark obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 08-29-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-31-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 19	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 8/31/09	Day of the Week: Monday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller/Mike Steele/Jim Andrew
General Contractor: Civil Projects Group	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Ryan Clark/Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported
By: Jim Andrew
On: 08/09/09

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 18

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation readings in test embankment Area.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark/Russell Mehnert	Report No:	Date: 8/31/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Andrew, Stantec QC Manager, read PZ-1 through PZ-8. The data was sent via e-mail to Stantec in Nashville for analysis.

Mr. Mehnert, Mr. Clark and Mr. Andrew, Stantec representatives, read all Slope Inclinometers within the test embankment (SI-1, SI-2, SI-3, SI-4, SI-5, and SI-9). After the readings were completed, the data was sent via e-mail to Stantec in Nashville for analysis.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00p.m.

7:00AM-8:00AM
Reporting

8:00AM-4:30PM
Instrumentation readings

4:30PM-6:00PM
Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark/Russell Mehnert	**Date** 8/31/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 8-31-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 20	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-01-09	Day of the Week: Tuesday	
	Weather: Mostly cloudy	Temperature: Mid 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 19

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dike C.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 20	Date 09-01-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Ms. Berryman and Mr. Mehnert obtained readings from the following slope inclinometers located on Dike C: STN-71, STN-69 and STN-34.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-01-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-2-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 21	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 09-02-09	Day of the Week: Wednesday
	Weather: Overcast, rain	Temperature: 80° F

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water-level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 20

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 21	Date 09-02-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Andrew, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the following slope inclinometers located on Dikes C and D: STN-64, STN-18 and STN-08, B-3 and B-4.

Ms. Berryman and Mr. Mehnert obtained water-level readings from the PZ wells located on Dike C.

The slope inclinometers located in the test embankment area were not read due to inclement weather.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-02-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-2-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 22	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 09-03-09	Day of the Week: Thursday
	Weather: Partly sunny	Temperature: 80° F

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: [X] Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use: Civil Projects: (1) Operator, (1) Laborer, (1) Foreman	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
325 C CAT Excavator	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 21

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 22	Date 09-03-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Clark and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman observed a Civil Projects work-crew moving a pre-cast concentric manhole cone surrounding Instrument B-2 on Dike D. This instrument was damaged, presumably by heavy equipment, and has not been monitored since 7-31-09. The well-tube casing was bent to approximately a 45° angle. The casing was moved upright by the excavator. Ms. Berryman was unable to insert the inclinometer probe into the well below ground-level. It appears further repairs will be necessary before instrument B-2 can be monitored again.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-03-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-4-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 23	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-04-09	Day of the Week: Friday	
	Weather: Sunny	Temperature: 81° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: [X] Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 22

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 23	Date 09-04-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Clark, Stantec representative, and Mr. Mehnert obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-04-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-4-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 24	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-08-09	Day of the Week: Tuesday	
	Weather: Overcast	Temperature: 77° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 23

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 24	Date 09-08-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Clark, Stantec representative, and Mr. Mehnert obtained readings from four of the six slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-4, SI-5 and SI-9.
SI-2 and SI-3 could not be monitored due to wet and possibly hazardous footing conditions.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-08-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-8-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 25	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 09-09-09	Day of the Week: Wednesday
	Weather: Mostly sunny	Temperature: 82° F

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pressure Indicator	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 24

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, AECOM instrumentation monitoring in the failed dredge cell area.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 25	Date 09-09-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and the area to the east of the test embankment area, formerly known as Area "B." The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM piezometers located on Dike D: 211, 600, 603, 604 and 605.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM slope inclinometers: 211, 602, 603 and 605.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-09-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-10-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 26	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-10-09	Day of the Week: Thursday	
	Weather: Mostly cloudy	Temperature: 85° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pressure Indicator	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 25

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, AECOM instrumentation monitoring.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 26	Date 09-10-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and the area to the east of the test embankment area, formerly known as Area "B." The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, PZ-12 and PZ-13.

Mr. Mehnert obtained readings from the following AECOM pneumatic piezometers: 101, 102, 103, 303, 404, 408 and 503.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM slope inclinometers: 101, 102, 103, 301, 303, 404, 408, 500, 503 and 900SH2.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-10-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-11-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 27	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-11-09	Day of the Week: Friday	
	Weather: Overcast, some rain	Temperature: 81° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pressure Indicator	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 26

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 27	Date 09-11-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire PZs located in the test embankment area and the area to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8 and PZ-13. PZ-12 was not monitored, as the bin containing it was buried in fly ash.

Mr. Clark and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Mr. Mehnert obtained readings from AECOM slope inclinometer 502.

Mr. Mehnert obtained readings from the following AECOM pneumatic PZs: 106, 109, 500 and 502.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-11-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-14-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 28	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 09-12-09	Day of the Week: Saturday
	Weather: Sunny	Temperature: 80's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 27

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dike C.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 28	Date 09-12-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Clark obtained readings from the following AECOM slope inclinometers: 106, 109 and 211E.

Ms. Berryman obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-12-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-14-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 29	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-14-09	Day of the Week: Monday	
	Weather: Partly sunny	Temperature: 83° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 28

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dike C.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 29	Date 09-14-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained two sets of readings (AM and PM) from the vibrating wire piezometers located in the test embankment area and the area to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, PZ-12 and PZ-13.

Mr. Clark and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The inclinometers monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:00

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 19:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-14-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-15-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 30	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-15-09	Day of the Week: Tuesday	
	Weather: Overcast, rain	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 29

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dike C.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 30	Date 09-15-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and the area to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-1, PZ-2, PZ-3,PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, PZ-12 and PZ-13.

Mr. Clark and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The slope inclinometers monitored were: SI-1, SI-2, SI-4 and SI-9.

SI-3 and SI-5 were not monitored today, due to wet and possibly hazardous footing conditions in the test embankment area.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:00

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 19:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-15-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-16-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 31	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-16-09	Day of the Week: Wednesday	
	Weather: Overcast	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 30

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dike C.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 31	Date 09-16-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from the vibrating wire piezometers located in the the test embankment area and the area to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, PZ-12 and PZ-13.

Due to the wet weather conditions, Ms. Berryman and Mr. Clark were unable to obtain slope inclinometer readings from the test embankment area and instrumentation readings from Dike C.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-16-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-17-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 32	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-17-09	Day of the Week: Thursday	
	Weather: Overcast	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 31

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 32	Date 09-17-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and the area to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, PZ-12 and PZ-13.

Ms. Berryman and Mr. Clark obtained readings from slope inclinometers SI-1, SI-2, SI-3, SI-5 and SI-9, all located in the test embankment area.

SI-4 was not monitored due to the wet and possibly hazardous terrain surrounding it.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-17-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-18-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 33	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-18-09	Day of the Week: Friday	
	Weather: Partly sunny	Temperature: 80° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 32

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 33	Date 09-18-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained water-level readings on the pizometers located on Dike C, specifically: STN-2, STN-3(A1), STN-3(A2), STN-3B, STN-14, STN-15(A1), STN15(A2), STN-15B, STN-26, STN-36, STN-37(A1), STN-37(A2), STN-37B, STN48(A1), STN-48(A2), STN-48B, STN-47, STN-27(A1), STN-27(A2) and STN-27B.

Ms. Berryman and Mr. Clark obtained readings from the Stantec slope inclinometers located on Dike C and Dike D. The inclinometers monitored were: B-1, B-3, B-4, STN-08, STN-34, STN-18, STN-64, STN-69 and STN-71.

Mr. Layton, Stantec Assistant QC Manager, obtained readings from the vibrating wire piezometers located in the the test embankment area and the area to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, PZ-12 and PZ-13.

Ms. Berryman and Mr. Layton obtained readings from slope inclinometers SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9, all located in the test embankment area.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-18-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-21-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 34	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-19-09	Day of the Week: Saturday	
	Weather: Overcast	Temperature: 75° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 33

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation Monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 34	Date 09-19-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained slope inclinometer readings from instrument B-2, located on Dike D.

Mr. Layton, Stantec Assistant QC Manager, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment area, formerly known as Area "B." The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, PZ-12 and PZ-13.

Ms. Berryman and Mr. Layton obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-19-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-21-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 35	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-21-09	Day of the Week: Monday	
	Weather: Overcast, raining	Temperature: 75° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 34

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation Monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 35	Date 09-21-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The slope inclinometers monitored were: SI-1, SI-2, SI-3, SI-5 and SI-9. SI-4 could not be monitored due to damage, presumably by heavy equipment. It appears repairs will be necessary before this instrument can be monitored again.

Ms. Berryman and Mr. Mehnert obtained readings from the vibrating wire Piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from AECOM slope inclinometer 500.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-21-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-22-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 36	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-22-09	Day of the Week: Tuesday	
	Weather: Rain (AM), Sun (PM)	Temperature: 92° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pressure Indicator	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 35

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation Monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 36	Date 09-22-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The slope inclinometers monitored were: SI-1, SI-2, SI-3, SI-5 and SI-9. SI-4 needs repaired and could not be monitored.

Ms. Berryman and Mr. Clark obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, PZ-12 and PZ-13.

Ms. Berryman and Mr. Clark obtained readings from AECOM slope inclinometers 603 and 605.

Ms. Berryman and Mr. Clark obtained readings from the following AECOM pneumatic piezometers: 600, 603 and 605.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-22-09
[ ] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-22-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 37	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-23-09	Day of the Week: Wednesday	
	Weather: Partly cloudy	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pressure Indicator	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 36

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation Monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 37	Date 09-23-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Layton, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The slope inclinometers monitored were: SI-1, SI-2, SI-3, SI-5 and SI-9. SI-4 needs repaired and could not be monitored.

Mr. Clark and Mr. Layton obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, PZ-12 and PZ-13.

Mr. Clark and Mr. Layton obtained readings from the following AECOM slope inclinometers: 301E, 303, 404, 408, 503 and 602.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 09-23-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-25-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 38	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-24-09	Day of the Week: Thursday	
	Weather: Cloudy(AM),Sunny(PM)	Temperature: 90's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used:		
	Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 37

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation Monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark	Report No: 38	Date 09-24-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Layton obtained readings from the slope inclinometers located in the test embankment area. The slope inclinometers monitored were: SI-1, SI-2, SI-3, SI-5 and SI-9. SI-4 needs repaired and could not be monitored.

Mr. Clark and Mr. Layton obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.
PZ-1 and PZ-8 were automated by Mr. Andrew and Mr. Crace, both of Stantec Consulting, and were not monitored.

Mr. Clark and Mr. Layton obtained readings from AECOM slope inclinometer 109.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 09-24-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-25-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 39	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-25-09	Day of the Week: Friday	
	Weather: Overcast	Temperature: 85° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pressure Indicator	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 38

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 39	Date 09-25-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Ms. Berryman, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The slope inclinometers monitored were: SI-1, SI-2, SI-3, SI-5 and SI-9. SI-4 needs repaired and could not be monitored.

Mr. Andrew and Mr. Layton, Stantec QC Manager and Assistant QC Manager, obtained readings from AECOM pneumatic PZs PZ-600, PZ-604 and PZ-303 PZ-603 and PZ-605.

Mr. Layton obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Clark obtained readings from the following AECOM slope indicators: 101, 102, 103, 106, 211, 211E, 502 and 900SH2.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-25-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-25-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 40	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-26-09	Day of the Week: Saturday	
	Weather: Overcast, rain	Temperature: 71° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: [X] Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 39

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 40	Date 09-26-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Andrew and Ms. Berryman, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Slope inclinometer readings from the test embankment area were unable to be obtained due to inclement weather.

Stantec Field Representative's Activities

Arrive	07:00
Depart	15:00

07:00 to 08:00 reporting
08:00 to 14:00 field work
14:00 to 15:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-26-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-26-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 41	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-28-09	Day of the Week: Monday	
	Weather: Mostly sunny	Temperature: 75° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 40

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dike C.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 41	Date 09-28-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

*PZ-3 was buried by fly ash in a washout ditch, and had to be unearthed by Ms. Berryman and Mr. Clark.

Ms. Berryman and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-5 and SI-9.

*SI-4 is undergoing repairs and was not monitored today.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-28-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-29-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 42	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-29-09	Day of the Week: Tuesday	
	Weather: Clear / sunny	Temperature: 75° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water-level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 41

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dike C.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 42	Date 09-29-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Mr. Clark and Mr. Mehnert obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman, Stantec representative, and Mr. Mehnert obtained readings from slope inclinometer instruments STN-69 and STN-71, located on Dike C.

Ms. Berryman and Mr. Mehnert took water-level readings from piezometers STN-47A, STN-48A, STN-48B, STN-37A, STN-37B, STN-36A, STN-26A, STN-27A, and STN-27B, located on Dike C.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-29-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-29-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 43	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 09-30-09	Day of the Week: Wednesday	
	Weather: Clear / sunny	Temperature: 70° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water-level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 42

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 43	Date 09-30-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman, Stantec representative, and Mr. Mehnert obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from piezometers STN-14A, STN-15A, STN-15B, STN-2A, STN-3A, and STN-3B, located on Dike C.

Ms. Berryman and Mr. Mehnert obtained readings from the following slope inclinometers located on Dike C: STN-08, STN-18, STN-34 and STN-64.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:00

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 19:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 09-30-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 9-30-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 44	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-01-09	Day of the Week: Thursday	
	Weather: Clear / sunny	Temperature: 72° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water-level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 43

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 44	Date 10-01-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Layton obtained a set of baseline readings from SI-12, located on Dike D.

Mr. Mehnert obtained water-level readings from the piezometers located on the west side of Dike D. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Mehnert obtained readings from the following slope inclinometers located on Dikes C and D: B-1, B-2, B-3 and B-4.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-01-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-2-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 45	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-02-09	Day of the Week: Friday	
	Weather: Overcast, rain	Temperature: 62° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 44

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 45	Date 10-02-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman, Mr. Mehnert and Mr. Clark, Stantec representative, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-02-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-5-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 46	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-03-09	Day of the Week: Saturday	
	Weather: Fog (AM), Sunny (PM)	Temperature: 72° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 45

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 46	Date 10-03-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained readings from the following slope inclinometers located on Dikes C and D: B-2, B-3 and B-4.

Ms. Berryman and Mr. Clark, Stantec representative, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Mr. Layton obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-03-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-5-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 47	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 10-05-09	Day of the Week: Monday
	Weather: Overcast	Temperature: 68° F

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Indicator	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 46

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 47	Date 10-05-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM slope inclinometers: 500, 211, 211E, 301 and 303.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM pneumatic piezometers: 500, 303, 211, 211(A) and 211(B).

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 17:00 field work
17:00 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-05-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-6-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 48	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-06-09	Day of the Week: Tuesday	
	Weather: Overcast, some rain	Temperature: 70° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Indicator	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 47

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 48	Date 10-06-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM slope inclinometers: 101, 102, 103 and 900SH2, all located in the failed dredge cell.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM pneumatic piezometers: 101, 102 and 103, all located in the failed dredge cell.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-06-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-7-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 49	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-07-09	Day of the Week: Wednesday	
	Weather: Mostly sunny	Temperature: 70° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Indicator	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 48

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 49	Date 10-07-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM pneumatic piezometers: 503, 605, 109, 404, 408 and 106.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM slope inclinometers: 503, 605, 109, 404, 408 and 106.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-07-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-8-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 50	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-08-09	Day of the Week: Thursday	
	Weather: Partly cloudy	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Indicator	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 49

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 50	Date 10-08-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM slope inclinometers: 502, 602 and 603.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM pneumatic piezometers: 502, 600, 603 and 604.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:00

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 19:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-08-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-9-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 51	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-09-09	Day of the Week: Friday	
	Weather: Mostly cloudy, light rain	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 50

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 51	Date 10-09-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-09-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-12-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 52	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-10-09	Day of the Week: Saturday	
	Weather: Overcast	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 51

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dike C.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 52	Date 10-10-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Layton obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-10-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-12-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 53	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-12-09	Day of the Week: Monday	
	Weather: Overcast, rain	Temperature: 70° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 52

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dike C.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 53	Date 10-12-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Layton obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Layton obtained a set of baseline readings from SI-10, located in the failed dredge cell.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-12-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-13-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 54	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-13-09	Day of the Week: Tuesday	
	Weather: Partly cloudy, some rain	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 53

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dike C.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 54	Date 10-13-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Layton obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Layton obtained readings from the following slope inclinometers located on Dike C: STN-71, STN-69, STN-64, STN-34 and B-3.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-13-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-14-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 55	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-14-09	Day of the Week: Wednesday	
	Weather: Overcast, rain	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 54

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dike C.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 55	Date 10-14-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Andrew, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Andrew obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-14-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-14-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 56	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-15-09	Day of the Week: Thursday	
	Weather: Overcast, rain	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 55

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 56	Date 10-15-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Andrew, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Andrew obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Andrew obtained readings from the following slope inclinometers located on Dike D: B-1, B-2, SI-11 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-15-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-15-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 57	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-16-09	Day of the Week: Friday	
	Weather: Mostly cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 56

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 57	Date 10-16-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Andrew, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Andrew obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Andrew obtained readings from the following slope inclinometers located on Dike C: STN-08, STN-18 and B-4.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-16-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-16-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 58	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-17-09	Day of the Week: Saturday	
	Weather: Mostly cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 57

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 58	Date 10-17-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Andrew, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Andrew obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	15:30

07:00 to 08:00 reporting
08:00 to 14:30 field work
14:30 to 15:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-17-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-17-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 59	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 10-18-09	Day of the Week: Monday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 58

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Test Embankment instrumentation monitoring, AECOM instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 59	Date 10-19-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Andrew, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Andrew obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Ms. Berryman and Mr. Andrew obtained readings from AECOM slope inclinometer 500.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10-19-09
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-19-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 60	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/20/09	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Russell Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number: 59

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring within the test embankment and AECOM instrumentation monitoring.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert	Report No: 60	Date: 10/20/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert, technician with Stantec, took slope inclinometer readings within the test embankment. Slope inclinometers that were read are as follows; SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9.

Mr. Andrew, QC manager with Stantec, assisted Mr. Mehnert with piezometer readings. Piezometers that were read are as follows; PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13. The collected data was sent to the Stantec office in Nashville, Tennessee, via e-mail, for analysis.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 10/20/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-20-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 61	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/21/09	Day of the Week: Wednesday	
	Weather: Mostly sunny	Temperature: 71° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pressure Indicator	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number: 60

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring within the test embankment and AECOM instrumentation monitoring.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 61	Date: 10/21/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM slope inclinometers: 103, 106, 109, 211, 211E, 404, 408, 503 and 900SH2.

Mr. Layton, Stantec Assistant QC Manager, obtained readings from the AECOM pneumatic piezometers: 09-101, 09-102, 09-103, 09-106, 09-109, 09-211, 09-303, 09-404, 09-408, 09-500, 09-502, 09-503, 09-600, 09-603, 09-604, and 09-605. .

Stantec Field Representative's Activities

Arrive	7:00
Depart	19:00

7:00 - 8:00 Reporting
8:00 – 17:30 Field work
17:30 –19:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/21/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-26-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 62	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/22/09	Day of the Week: Thursday	
	Weather: Mostly sunny	Temperature: 71° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number: 61

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring in the Test Embankment area

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 62	Date: 10/22/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the AECOM slope inclinometers located in the failed dredge cell area, the relic area and on Dike D. The SIs monitored were: 101, 102, 301, 303, 502, 602, 603 and 605.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/22/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-26-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 63	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/23/09	Day of the Week: Friday	
	Weather: Overcast, rain	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number: 62

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring in the Test Embankment area

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 63	Date: 10/23/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/23/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 10-26-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 64	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/24/09	Day of the Week: Saturday	
	Weather: Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ S. Layton/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring on Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/S. Layton/ R. Mehnert	Report No: 64	Date: 10/24/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/24/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 65	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/26/09	Day of the Week: Monday	
	Weather: Mostly Cloudy	Temperature: 71° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring on Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert	Report No: 65	Date: 10/26/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from the following Slope Inclinometers located on Dike C: STN-34, STN-69, and STN-71.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/26/09
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 66	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/27/09	Day of the Week: Tuesday	
	Weather: Overcast / Rain	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported
By: Jim Andrew
On: 08/09/09

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring on the Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert	Report No: 66	Date: 10/27/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Mr. Mehnert, and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/26/09
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 67	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/28/09	Day of the Week: Wednesday	
	Weather: Mostly Sunny	Temperature: 69° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring on the Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert	Report No: 67	Date: 10/28/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Mehnert and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the following Slope Inclinometers located on Dike C: B-1, B-2, B-3, B-4, STN-8, STN-18, and STN-64.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/28/09
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 68	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/29/09	Day of the Week: Thursday	
	Weather: Partly Cloudy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring on Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert	Report No: 68	Date: 10/29/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Mehnert and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained water level readings from the PZs located on Dike C. PZs monitored were: STN-2, STN-3A1, STN-3A2, STN-3B, STN-14, STN-15A1, STN-15A2, STN-15B, STN-26, STN-36, STN-37A1, STN-37A2, STN-37B, STN-48A1, STN-48A2, STN-48B, STN-47, STN-27A1, STN-27A2 and STN-27B.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/29/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 69	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/30/09	Day of the Week: Friday	
	Weather: Partly Cloudy	Temperature: 70° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported
By: Jim Andrew
On: 08/09/09

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring on Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert	Report No: 69	Date: 10/30/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Mehnert and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 10/30/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones. Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 70	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 10/31/09	Day of the Week: Saturday	
	Weather: Rain / Clouds	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: S. Layton/ R. Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Bi Weekly AECOM Instrumentation Monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: S. Layton / R. Clark	Report No: 70	Date: 10/31/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Layton and Mr. Clark, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Layton and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Mr. Layton and Mr. Clark obtained readings from the AECOM Pneumatic Piezometers. The PZs monitored were: PZ-103, PZ-106, PZ-105, PZ-303, PZ-404, PZ-408, PZ-500, PZ-502, PZ-600, PZ-603, PZ-604, and PZ-605.

Stantec Field Representative's Activities

Arrive	7:00
Depart	16:00

7:00 – 8:00 Reporting
8:00 – 14:30 Field work
14:30 –16:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 10/31/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 71	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/02/09	Day of the Week: Monday	
	Weather: Mostly Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation on Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert	Report No: 71	Date: 11/02/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the following slope inclinometers: STN-10, STN-11 AECOM 109, AECOM 500, and AECOM 502.

Mr. Clark and Mr. Mehnert obtained readings from the following slope inclinometers: STN-12, and AECOM 303.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/02/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 72	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/03/09	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 70° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert/S. Layton

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitor instrumentation on Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert/ S. Layton	Report No: 72	Date: 11/03/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Clark and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained readings from the following AECOM pneumatic piezometers: 101, 102, 103, 106, 109, 211, 303, 400, 404, 408, 500, 502, 503, 600, 603, 604, and 605.

Mr. Clark and Mr. Mehnert obtained readings from the following slope inclinometers: STN-12, and AECOM 303.

Mr. Clark and Mr. Mehnert obtained readings from the AECOM slope inclinometers. The SIs monitored were: 211, 211E, 101, 103, 106, 301, 404, 503, and 900SH2.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/03/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 73	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/04/09	Day of the Week: Wednesday	
	Weather: Partly Cloudy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitor instrumentation on Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert	Report No: 73	Date: 11/04/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Clark and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Mr. Mehnert obtained readings from the following AECOM SIs: 602, 603, and 605.

Mr. Mehnert obtained a second set of readings from selected vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, and PZ-7.

Stantec Field Representative's Activities

Arrive	7:00
Depart	19:00

7:00 – 8:00 Reporting
8:00 – 17:30 Field work
17:30 –19:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/04/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 74	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/05/09	Day of the Week: Thursday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported
By: Jim Andrew
On: 08/09/09

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitor instrumentation of Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert	Report No: 74	Date: 11/05/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Clark and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Mr. Mehnert obtained a second set of readings from selected vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, and PZ-7.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/05/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 75	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/06/09	Day of the Week: Friday	
	Weather: Sunny	Temperature: Low 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert/ S. Layton

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported
By: Jim Andrew
On: 08/09/09

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitor instrumentation on Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert/ S. Layton	Report No: 75	Date: 11/06/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Clark and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained a second set of readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, and PZ-7.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/06/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 76	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/07/09	Day of the Week: Saturday	
	Weather: Cloudy	Temperature: 50° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ S. Layton

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
AECOM PZ's on Dikes C and D

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman /S. Layton	Report No: 76	Date: 11/07/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained AM readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Ms. Berryman and Mr. Layton obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Layton obtained a set of PM readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, and PZ-7.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/07/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 77	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/09/09	Day of the Week: Monday	
	Weather: Mostly cloudy	Temperature: High 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported
By: Jim Andrew
On: 08/09/09

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert	Report No: 77	Date: 11/09/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Mehnert and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained a set of PM readings from selected vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, and PZ-7.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM pneumatic Piezometers located in the failed dredge cell, the relic and on Dike D: 101, 102, 103, 106, 109, 211, 303, 600, 603, 604, and 605.

Stantec Field Representative's Activities

Arrive	7:00
Depart	19:00

7:00 – 8:00 Reporting
8:00 – 17:30 Field work
17:30 –19:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/09/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 78	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/10/09	Day of the Week: Tuesday	
	Weather: Overcast, raining	Temperature: 60° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported
By: Jim Andrew
On: 08/09/09

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert	Report No: 78	Date: 11/10/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Mehnert and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained a set of PM readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, and PZ-7.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/10/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 79	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/11/09	Day of the Week: Wednesday	
	Weather: Mostly cloudy	Temperature: 61° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/R. Clark/ R. Mehnert	Report No: 79	Date: 11/11/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the following Stantec Slope Inclinometers located on Dike C: STN-69, STN-71, STN-34, STN-64, STN-18, STN-8, and STN-B4.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from the following Stantec Slope Inclinometers located on Dike D: STN-12, STN-B1, STN-B2, and STN-B3.

Ms. Berryman and Mr. Clark obtained readings from the Stantec Slope Inclinometer STN-11 located in the failed dredge cell.

Ms. Berryman and Mr. Mehnert obtained water level readings from the PZs located on Dike C. The PZs read were: STN-2, STN-3A1, STN-3A2, STN-3B, STN-14, STN-15A1, STN-15A2, STN-15B, STN-26, STN-36, STN-37A1, STN-37A2, STN-37B, STN-48A1, STN-48A2, STN-48B, STN-47, STN-27A1, STN-27A2, and STN-27B

Mr. Mehnert obtained water level readings from the PZs located on Dike D. The PZs read were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Due to the wet and possibly hazardous conditions of the Test Embankment Pad, readings from the PZs and Slope Inclinometers in that location were not obtained.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:45

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:45 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/11/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 80	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/12/09	Day of the Week: Thursday	
	Weather: Mostly sunny	Temperature: 62° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported
By: Jim Andrew
On: 08/09/09

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Clark/ R. Mehnert	Report No: 80	Date: 11/12/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Mr. Mehnert, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/12/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 81	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/13/09	Day of the Week: Friday	
	Weather: Clear and Sunny	Temperature: Mid 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Mehnert

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: [X] Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number:

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Mehnert	Report No: 81	Date: 11/13/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13

Ms. Berryman and Mr. Mehnert obtained readings from SI-10, located in the failed dredge cell.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/13/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 82	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/14/09	Day of the Week: Saturday	
	Weather: Clear and Sunny	Temperature: 69° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ S. Layton

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?
AECOM Instrumentation monitoring

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ S. Layton	Report No: 82	Date: 11/14/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Layton obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Stantec Field Representative's Activities

Arrive	7:00
Depart	16:00

7:00 - 8:00 Reporting
8:00 – 15:00 Field work
15:00 –16:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/14/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 83	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/16/09	Day of the Week: Monday	
	Weather: Mostly sunny	Temperature: 70° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Mehnert	Report No: 83	Date: 11/16/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from AECOM Slope Inclinometer 500.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/16/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 84	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/17/09	Day of the Week: Tuesday	
	Weather: Overcast	Temperature: Low 60s	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/R. Mehnert	Report No: 84	Date: 11/17/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM Slope Inclinometers: 404, 408, 503, 900SH2, 102, 103, 101, 10, 109, 211, 211E, 303, and 301.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/17/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 85	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/18/09	Day of the Week: Wednesday	
	Weather: Overcast	Temperature: 57° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Mehnert

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported
By: Jim Andrew
On: 08/09/09

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Pressure Indic	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Mehnert	Report No: 85	Date: 11/18/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Mehnert, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Mehnert obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM Slope Inclinometers located on Dike D: 602, 603, and 605.

Ms. Berryman and Mr. Mehnert obtained readings from the following AECOM Pneumatic PZs : 101, 102, 103, 106, 109, 211, 303, 600, 603, 604, and 605.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:30

7:00 - 8:00 Reporting
8:00 – 17:00 Field work
17:00 –18:30 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/18/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 86	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/19/09	Day of the Week: Thursday	
	Weather: Mostly Sunny	Temperature: 56° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ R. Mehnert/ R. Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Pressure Indic	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Mehnert/ R. Clark	Report No: 86	Date: 11/19/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert, a Stantec representative, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman, a Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Clark, a Stantec representative, and Mr. Mehnert obtained readings from AECOM Slope Inclinometer 502.

Mr. Mehnert obtained readings from the following AECOM Pneumatic PZs: 404, 408, 500, 502, and 503.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 11/19/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 87	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 11/20/09	Day of the Week: Friday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Russell Mehnert / Chris Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 138

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring,
.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Russell Mehnert / Chris Meyers	Report No: 87	Date 11/20/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Meyers, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Mehnert and Mr. Meyers also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, and PZ-13.

Mr. Mehnert and Mr. Meyers obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4, SI-5, SI-6, SI-7 and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 11/20/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11-21-09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 88	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 11/21/09	Day of the Week: Saturday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Russell Mehnert / Chris Meyers

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 151

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring,

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert / Chris Meyers	Report No: 88	Date 11/21/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mehnert and Mr. Meyers, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Mehnert and Mr. Meyers also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, and PZ-13.

Mr. Mehnert and Mr. Meyers obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4, SI-5, SI-6, SI-7 and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	15:00

07:00 to 08:00 reporting
08:00 to 15:00 field work
19:00 to 21:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 11/21/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11/23/09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 89	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/23/09	Day of the Week: Monday	
	Weather: Cloudy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert/Chris Meyers/Skip Layton

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW Data Recorder	Slope Indicator	32890/52613500
	Digital MEMS		75081/DR1013/
	Inclinometer System	RST	DP0463

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring within the test embankment and Stantec instrumentation monitoring.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert/Chris Meyers/Skip Layton	Report No: 89	Date: 11/23/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Meyers, technicians with Stantec, took slope inclinometer readings within the test embankment. Slope inclinometers that were read are as follows; SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9. Mr. Meyers also assisted Mr. Mehnert with piezometer readings. Piezometer that were read are as follows; PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Mehnert and Mr. Meyers read Stantec slope inclinometers along Dike C/D and are as follows; STN-10, STN-12, STN-11, B-2, B-1, STN-71, STN-69, STN-34, STN-64, STN-8, and STN-18.

Mr. Layton, assistant QC Manager with Stantec, read all AECOM pneumatic piezometers on site.

The collected data was sent to the Stantec office in Nashville, Tennessee, via e-mail, for analysis.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Instrumentation readings

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 11/23/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11-24-09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 90	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/24/09	Day of the Week: Tuesday	
	Weather: Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert/Chris Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW Data Recorder	Slope Indicator	32890/52613500
	Digital MEMS		75081/DR1013/
	Inclinometer System	RST	DP0463

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ X ☐ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring within the test embankment.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert/Chris Meyers	Report No: 90	Date: 11/24/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Meyers, technicians with Stantec, took slope inclinometer readings within the test embankment. Slope inclinometers that were read are as follows; SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9. Mr. Meyers also assisted Mr. Mehnert with piezometer readings. Piezometer that were read are as follows; PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Mehnert and Mr. Meyers read Stantec slope inclinometers along Dike C/D and are as follows; B-3 and B-4.

Mr. Mehnert and Mr. Meyers read all Stantec water level indicators on Dike C.

The collected data was sent to the Stantec office in Nashville, Tennessee, via e-mail, for analysis.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

7:00AM-6:00PM
Instrumentation readings

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert	**Date** 11/24/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11-25-09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 91	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 11/25/09	Day of the Week: Wednesday	
	Weather: Partly Cloudy to Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Russell Mehnert/Chris Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW Data Recorder	Slope Indicator	32890/52613500
	Digital MEMS		75081/DR1013/
	Inclinometer System	RST	DP0463

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Instrumentation monitoring within the test Embankment and Aecom instrumentation

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Russell Mehnert/Chris Meyers	Report No: 91	Date: 11/25/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

On this date, Mr. Mehnert and Mr. Meyers, technicians with Stantec, took slope inclinometer readings within the test embankment. Slope inclinometers that were read are as follows; SI-1, SI-2, SI-3, SI-4, SI-5 and SI-9. Mr. Meyers also assisted Mr. Mehnert with piezometer readings. Piezometer that were read are as follows; PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

The collected data was sent to the Stantec office in Nashville, Tennessee, via e-mail, for analysis.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	1:00 p.m.

7:00AM-1:00PM
Instrumentation readings

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Russell Mehnert/Chris Meyers	**Date** 11/25/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 11-25-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 92	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 11/30/09	Day of the Week: Monday	
	Weather: Overcast/Rain	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Ryan Clark / Chris Meyers

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: [X] Previously Reported By: Jim Andrew On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 134

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, AECOM Instrumentation monitoring.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark / Chris Meyers	Report No: 92	Date 11/30/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Meyers, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Clark and Mr. Meyers also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, and PZ-13.

Mr. Clark and Mr. Meyers obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4, SI-5, SI-6, SI-7 and SI-9.

Mr. Clark and Mr. Meyers obtained readings from the AECOM Pneumatic PZ's 603 and 605.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:30 reporting
08:30 to 17:00 field work
17:00 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 11/30/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 12-1-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 93	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 12/01/09	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers / Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 134

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, and the remaining AECOM Instrumentation monitoring.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers / Ryan Clark	Report No: 93	Date 12/01/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Meyers and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. Clark also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, and PZ-13.

Mr. Meyers and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4, SI-5, SI-6, SI-7 and SI-9.

Mr. Meyers and Mr. Clark obtained readings PZ 500.

Mr. Meyers and Mr. Clark obtained readings from the AECOM SI-500

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 12/01/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 12-2-09

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 94	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 12/02/09	Day of the Week: Wednesday	
	Weather: Rain/Overcast	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers / Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 134

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, and the remaining AECOM Instrumentation monitoring.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers / Ryan Clark	Report No: 94	Date 12/02/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Meyers and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. Clark also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, and PZ-13.

Mr. Meyers and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Meyers and Mr. Clark obtained readings from the AECOM SI-503, SI-404, SI-101, SI-102, and SI-408

Mr. Meyers and Mr. Clark obtained readings from the AECOM PZ-503, PZ-404, PZ-101, PZ-102, and PZ-408

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:00

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 19:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 12/02/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 12-3-09

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 95	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/03/09	Day of the Week: Thursday	
	Weather: Mostly Sunny	Temperature: 53° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ C. Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other

Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported
By: Jim Andrew
On: 08/09/09

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Pressure Indic	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ C. Meyers	Report No: 95	Date: 12/03/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Meyers, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Meyers obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Ms. Berryman and Mr. Meyers obtained readings from the following AECOM Pneumatic PZs: 303, 408, 500, 503, 600, 603, 604, and 605.

Stantec Field Representative's Activities

Arrive	7:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/03/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 96	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/04/09	Day of the Week: Friday	
	Weather: Overcast	Temperature: Mid 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ C. Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Pressure Indic	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ C. Meyers	Report No: 96	Date: 12/04/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Meyers, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Meyers obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Ms. Berryman and Mr. Meyers obtained readings from the following AECOM Pneumatic PZs: 101, 102, 103,106, 109, 211, 404, and 502.

Stantec Field Representative's Activities

Arrive	7:00
Depart	19:00

7:00 - 8:00 Reporting
8:00 – 17:30 Field work
17:30 –19:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/04/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 97	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/05/09	Day of the Week: Saturday	
	Weather: Overcast, Some Snow	Temperature: 40° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ C. Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Pressure Indic	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ C. Meyers	Report No: 97	Date: 12/05/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Meyers, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Meyers obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Stantec Field Representative's Activities

Arrive	7:00
Depart	19:00

7:00 - 8:00 Reporting
8:00 – 17:30 Field work
17:30 –19:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/05/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 98	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/07/09	Day of the Week: Monday	
	Weather: Overcast	Temperature: 40° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ C. Meyers/ R. Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Pressure Indic	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ C. Meyers/ R. Clark	Report No: 98	Date: 12/07/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Meyers, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman, a Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Stantec Field Representative's Activities

Arrive	7:00
Depart	21:00

7:00 – 8:00 Reporting
8:00 – 19:30 Field work
19:30 –21:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/07/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 99	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/08/09	Day of the Week: Tuesday	
	Weather: Overcast, Rain	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/C. Meyers/R. Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Pressure Indic	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ C. Meyers/ R. Clark	Report No: 99	Date: 12/08/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Meyers, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Stantec Field Representative's Activities

Arrive	7:00
Depart	19:30

7:00 - 8:00 Reporting
8:00 – 18:00 Field work
18:00 –19:30 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/08/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 100	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/09/09	Day of the Week: Wednesday	
	Weather: Sunny, Windy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ C. Meyers/ R. Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Pressure Indic	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ C. Meyers/ R. Clark	Report No: 100	Date: 12/09/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Meyers, Stantec representatives, began obtaining readings from the slope inclinometers located in the test embankment area.

Ms. Berryman, a Stantec representative, began obtaining readings from the vibrating wire piezometers located to the east of the test embankment, formerly known as Area "B."

Mr. Layton (Assistant QC Manager) contacted Ms. Berryman, Mr. Clark, and Mr. Meyers to inform them that the entire Kingston site was to be shut down by TVA due to the high water level of the Emory River. Work was stopped for the day.

Stantec Field Representative's Activities

Arrive	7:00
Depart	12:00

7:00 - 8:00 Reporting
8:00 – 11:30 Field work
11:30 –12:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/09/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 101	Page No: 1 of 2
Distribution:	Project Name: TVA Kingston – Test Embankment Program		
	Location or Address: Kingston, Tennessee		
	Date: 12/10/09	Day of the Week: Thursday	
	Weather: Mostly Sunny	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Robinson	Stantec Field Representative: D. Berryman/ C. Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 08/09/09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	256 Pneumatic Pressure Indic	Durham Geo	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number:

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: TVA Kingston – Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ C. Meyers	Report No: 101	Date: 12/10/09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Meyers, Stantec representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area and to the east of the Test Embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Meyers obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4, SI-5, and SI-9.

Mr. Berryman and Mr. Meyers obtained readings from the following AECOM piezometers located on Dike D: 211, 600, 603, 604, and 605.

Stantec Field Representative's Activities

Arrive	08:00
Depart	20:00

8:00 – 9:00 Reporting
9:00 – 18:30 Field work
18:30 –12:00 Reporting

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/10/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/23/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 102	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 12-11-09	Day of the Week: Friday	
	Weather: Partly Sunny	Temperature: 44° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Digital Inclinometer	RST Instruments	DP0436

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman	Report No: 102	Date: 12-11-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 - 8:00 Reporting
8:00 – 18:00 Field work
18:00 –19:30 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/11/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 103	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Dates: 12-12-09 to 12-13-09	Days of the Week: Saturday & Sunday
	Weather: Mostly Cloudy/Light rain, fog	Temperature: 37° to 46° F

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: J. Andrew/ S. Layton

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Digital Inclinometer	RST Instruments	DP0463

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: J. Andrew/ S. Layton	Report No: 103	Dates: 12-12-09/12-13-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Saturday 12/12/09
Mr. Andrew and Mr. Layton, Stantec representatives, obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were: SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Mr. Andrew and Mr. Layton obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Sunday 12/13/09
Mr. Andrew and Mr. Layton obtained water level readings from the PZs located on Dike C. Mr. Andrew and Mr. Layton also obtained slope inclinometer readings from the SIs located on Dikes C and D.

Stantec Field Representative's Activities

Arrive	06:00/18:00
Depart	06:00/15:00

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Jim Andrew	**Date** 12/13/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/11/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 104	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-14-09	Day of the Week: Monday	
	Weather: Overcast, Foggy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ R. Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman / R. Clark	Report No: 104	Dates: 12-14-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12 and PZ-13.

Slope inclinometer readings were unattainable due to very slick and possibly hazardous footing conditions on the Test Embankment.

Stantec Field Representative's Activities

Arrive	07:00
Depart	20:00

7:00 – 8:00 Reporting
8:00 – 18:30 Field work
18:30 –20:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/14/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/16/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 105	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-15-09	Day of the Week: Tuesday	
	Weather: Partially Cloudy	Temperature: Upper 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman / R. Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman / R. Clark	Report No: 105	Dates: 12-15-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Clark, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Clark obtained slope inclinometer readings from the test embankment area. The SIs monitored were: SI-1, SI- 2, SI-3, SI-4A, SI-5, and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	20:00

7:00 – 8:00 Reporting
8:00 – 18:30 Field work
18:30 –20:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/15/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/16/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 106	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-16-09	Day of the Week: Wednesday	
	Weather: Partially Cloudy	Temperature: Low 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman / A. Morgan

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	256 Pneumatic Pressure Indicator	Durham Geo	22073
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman / A. Morgan	Report No: 106	Dates: 12-16-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Morgan, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Morgan obtained slope inclinometer readings from the test embankment area. The SIs monitored were: SI-1, SI- 2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Morgan obtained water level readings from the following instruments on Dike C: STN-2; and on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Ms. Berryman and Mr. Morgan obtained pneumatic PZ readings from AECOM instruments 603 and 605. Slope inclinometer readings were obtained from AECOM SI-500.

Stantec Field Representative's Activities

Arrive	07:00
Depart	20:00

7:00 – 8:00 Reporting
8:00 – 18:30 Field work
18:30 –20:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/16/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/16/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 107	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-17-09	Day of the Week: Thursday	
	Weather: Mostly Sunny	Temperature: Upper 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman / A. Morgan / R. Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	256 Pneumatic Pressure Indicator	Durham Geo	22073
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman / A. Morgan / R. Clark	Report No: 107	Dates: 12-17-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Morgan, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Mr. Clark and Mr. Morgan obtained slope inclinometer readings from the test embankment area. The SIs monitored were: SI-1, SI- 2, SI-3, SI-4A, SI-5, and SI-9.

Mr. Clark and Mr. Morgan obtained water level readings from the following instruments on Dike C: STN-2; and on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Ms. Berryman and Mr. Morgan obtained PZ readings from the following AECOM instruments located on Dike D: 211, 211(A), 211(B), 600, 600(A), 603, 603(A), 603(B), 605(28 ft), 605(42 ft), 605(49 ft), and 605(76 ft).

Stantec Field Representative's Activities

Arrive	07:00
Depart	20:00

7:00 – 8:00 Reporting
8:00 – 18:30 Field work
18:30 –20:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/17/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/16/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 108	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-18-09	Day of the Week: Thursday	
	Weather: Cloudy, Rain	Temperature: 40° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ A. Morgan/ R. Clark/ L. Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	256 Pneumatic Pressure Indicator	Durham Geo	22073
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ A. Morgan/ R. Clark/ L. Booth	Report No: 108	Dates: 12-18-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman, Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-9, PZ-11, PZ-12, and PZ-13. PZs 2, 3, 4, 5, 6, and 7 were inaccessible to monitoring due to very wet and slick conditions on the Test Embankment.

Mr. Booth and Mr. Morgan obtained readings from the following AECOM slope inclinometers: 211, 211E, 109, and 605.

Mr. Clark and Mr. Morgan obtained water level readings from the following instruments on Dike C: STN-2; and on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Ms. Berryman and Mr. Clark obtained PZ readings from the following AECOM pneumatic PZs: 603 (daily readings), 605 (daily readings), and 604

Stantec Field Representative's Activities

Arrive	07:00
Depart	20:00

7:00 – 8:00 Reporting
8:00 – 18:30 Field work
18:30 –20:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/18/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/16/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 109	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-19-09	Day of the Week: Saturday	
	Weather: Mostly Cloudy, Some Rain	Temperature: Upper 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ A. Morgan/ S. Layton/ L. Booth

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	256 Pneumatic Pressure Indicator	Durham Geo	22073
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/A. Morgan/S. Layton/L. Booth	Report No: 109	Dates: 12-19-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Layton obtained readings from the following AECOM pneumatic PZs: 101, 102, 103, 106, 109, 303, 404, 408, 500, 502, and 503. Daily readings from AECOM instruments 603 and 605 were also obtained.

Ms. Berryman and Mr. Layton obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Mr. Morgan and Mr. Booth obtained readings from the following slope inclinometers in the test embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Mr. Morgan and Mr. Booth obtained readings from the following AECOM slope inclinometers: 101, 102, 103, 106, 301, 303, 404, 408, 502, 503, 602, 603, 900SH2.

Stantec Field Representative's Activities

Arrive	07:00
Depart	20:00

7:00 – 8:00 Reporting
8:00 – 18:30 Field work
18:30 –20:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/19/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/16/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 110	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-21-09	Day of the Week: Monday	
	Weather: Mostly Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ R. Meyers / L. Booth

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	256 Pneumatic Pressure Indicator	Durham Geo	22073
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ R. Meyers / L. Booth	Report No: 110	Dates: 12-21-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Meyers, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Meyers obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike C: STN-2, STN-3(U), STN-3(L), STN-3B, STN-14, STN-15A1, STN-15A2, STN-15B, STN-26, STN-27A1, STN-27A2, STN-27B, STN-36, STN-37A1, STN-37A2, STN-37B, STN-47, STN-48A1, STN-48A2, STN-48B; and on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Ms. Berryman and Mr. Booth obtained readings from AECOM pneumatic piezometers 603 and 605.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/21/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/16/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 111	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-22-09	Day of the Week: Tuesday	
	Weather: Mostly Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	256 Pneumatic Pressure Indicator	Durham Geo	22073
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth	Report No: 111	Dates: 12-22-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Booth, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Booth obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Ms. Berryman and Mr. Booth obtained slope inclinometer readings from the following Stantec instruments: B-1, B-2, B-3, B-4, STN-8, STN-10, STN-11, STN-12, STN-18, STN-34, STN-64, STN-69, and STN-71.

Ms. Berryman and Mr. Booth obtained PZ readings from the following AECOM instruments: 603 and 605.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:00

7:00 – 8:00 Reporting
8:00 – 17:30 Field work
17:30 –19:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/22/09
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/22/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 112	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-23-09	Day of the Week: Wednesday	
	Weather: Mostly Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth/ R. Clark/ C. Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	256 Pneumatic Pressure Indicator	Durham Geo	22073
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth/ R. Clark/ C. Meyers	Report No: 112	Dates: 12-23-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Meyers, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Mr. Clark and Mr. Meyers obtained slope readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Ms. Berryman and Mr. Booth obtained pneumatic piezometer readings from the following AECOM instruments: 101, 102, 103, 106, 109, 211, 303, 404, 408, 500, 502, 503, 600, 603, 604, and 605.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 14:30 Field work
14:30 –16:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/23/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/22/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 113	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-28-09	Day of the Week: Monday	
	Weather: Partly Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth/ R.Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	256 Pneumatic Pressure Indicator	Durham Geo	22073
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth/ R. Clark	Report No: 113	Dates: 12-28-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Booth, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Clark obtained slope readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained a set of readings from AECOM slope inclinometer 500 located in the failed dredge cell.

Ms. Berryman and Mr. Clark obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Ms. Berryman and Mr. Booth obtained pneumatic piezometer readings from the following AECOM instruments located on Dike D: 603 and 605.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 14:30 Field work
14:30 –16:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/28/09
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/22/2010

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 114	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-29-09	Day of the Week: Tuesday	
	Weather: Partly Cloudy	Temperature: 40° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	256 Pneumatic Pressure Indicator	Durham Geo	22073
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth	Report No: 114	Date: 12-29-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Booth, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Booth obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Ms. Berryman and Mr. Booth obtained pneumatic piezometer readings from the following AECOM instruments located on Dike D: 603 and 605.

Ms. Berryman and Mr. Booth obtained slope inclinometer readings from the following AECOM instruments: 211, 211E, 301E, 303, and 502.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:30

7:00 – 8:00 Reporting
8:00 – 18:00 Field work
18:00 –19:30 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/29/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/22/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 115	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-30-09	Day of the Week: Wednesday	
	Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth/ R. Clark/ C. Meyers

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	256 Pneumatic Pressure Indicator	Durham Geo	22073
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth/ R. Clark/ C. Meyers	Report No: 115	Date: 12-30-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Booth, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Mr. Clark and Mr. Meyers obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Ms. Berryman and Mr. Booth obtained pneumatic piezometer readings from AECOM instrument 303 located on the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/30/09
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/22/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 116	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 12-31-09	Day of the Week: Thursday	
	Weather: Overcast, Fog, Light Rain	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth/ R. Clark/ C. Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	51421-A Pressure Indicator	SINCO Slope Indicator Company	3850
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth/ R. Clark/ C. Meyers	Report No: 116	Date: 12-31-09

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Booth, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Mr. Clark and Mr. Meyers obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Mr. Clark and Mr. Meyers also obtained readings from the following AECOM slope inclinometers: 101, 102, 102, 106, 109, 404, 408, 503, 603, 605, and 900SH2

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Ms. Berryman and Mr. Booth obtained pneumatic piezometer readings from the following AECOM instruments: 101, 102, 103, 106, 109, 211, 404, 408, 500, 502, 503, 600, 603, 604, and 605.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 12/31/09
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/22/2010

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 117	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 1-04-10	Day of the Week: Monday	
	Weather: Mostly Cloudy to Overcast	Temperature: 30° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	51421-A Pressure Indicator	SINCO Slope Indicator Company	3850
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth	Report No: 117	Date: 1-04-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Booth, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Booth obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Ms. Berryman and Mr. Booth obtained pneumatic piezometer readings from the following AECOM instruments: 603 and 605.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 1/04/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/22/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 118	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 1-05-10	Day of the Week: Tuesday	
	Weather: Partly Cloudy	Temperature: 28° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	51421-A Pressure Indicator	SINCO Slope Indicator Company	3850
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth	Report No: 118	Date: 1-05-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Booth, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Booth obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained pneumatic piezometer readings from the following AECOM instruments located on Dike D: 603 and 605.

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Ms. Berryman and Mr. Booth obtained readings from slope inclinometer STN-11 located in the failed dredge cell, as well as B-1 and B-3 located on Dike D.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 1/05/10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/23/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 119	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 1-06-10	Day of the Week: Wednesday	
	Weather: Mostly Sunny	Temperature: 33° F	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	51421-A Pressure Indicator	SINCO Slope Indicator Comapny	3850
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth	Report No: 119	Date: 1-06-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Booth, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Booth obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Ms. Berryman and Mr. Booth obtained pneumatic piezometer readings from the following AECOM instruments located on Dike D: 603 and 605.

Ms. Berryman and Mr. Booth obtained readings from the following Stantec instruments: SI-12, STN-71, STN-69, STN-34, and STN-64. Readings were unable to be obtained from SI-10 due to ice that had formed in the inclinometer casing.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 1/06/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/23/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 120	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 1-07-10	Day of the Week: Thursday	
	Weather: Overcast	Temperature: 20's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	51421-A Pressure Indicator	SINCO Slope Indcator Company	3850
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth	Report No: 120	Date: 1-07-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Booth, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Booth obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained pneumatic piezometer readings from the following AECOM instruments located on Dike D: 603 and 605.

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike C: STN-2, STN-3(U), STN-3(L), STN-3B, STN-14, STN-15A1, STN-15A2, STN-15B, STN-26, STN-27A1, STN-27A2, STN-27B, STN-36, STN-37A1, STN-37A2, STN-37B, STN-47, STN-48A1, STN-48A2, STN-48B; and on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Ms. Berryman and Mr. Booth obtained readings from the following slope inclinometers: STN-8, STN-18, B-2, and B-4.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

7:00 – 8:00 Reporting
8:00 – 17:00 Field work
17:00 –18:30 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 1/07/10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/23/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 121	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 1-08-10	Day of the Week: Friday	
	Weather: Partly Sunny	Temperature: 20's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ S. Layton/ C. Meyers

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ S. Layton/ C. Meyers	Report No: 121	Date: 1-08-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Layton, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Meyers obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Meyers obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Ms. Berryman and Mr. Meyers obtained readings from AECOM piezometers 603 and 605 located on Dike D.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

7:00 – 8:00 Reporting
8:00 – 17:00 Field work
17:00 –18:30 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 1/08/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/23/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 122	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 1-09-10	Day of the Week: Saturday	
	Weather: Mostly Cloudy	Temperature: 20's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth/ C. Meyers

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	Water Level Indicator	Durham Geo	33293
	51421-A Pressure Indicator	SINCO Slope Indicator Company	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth/ C. Meyers	Report No: 122	Date: 1-08-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Meyers, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Meyers obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Mr. Booth obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Mr. Booth obtained readings from AECOM pneumatic piezometers 603 and 605 located on Dike D.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 1/09/10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/23/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 123	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 1-11-10	Day of the Week: Monday	
	Weather: Overcast	Temperature: 20's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	Water Level Indicator	Durham Geo	33293
	51421-A Pressure Indicator	SINCO Slope Indicator Company	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth/	Report No: 123	Date: 1-11-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Booth, Stantec representatives, obtained readings from the vibrating wire piezometers located in the test embankment area and to the east of the test embankment, formerly known as Area "B." The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Booth obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained readings from AECOM slope inclinometers 500 and 502.

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Ms. Berryman and Mr. Booth obtained readings from AECOM pneumatic piezometers 603 and 605 located on Dike D.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 1/11/10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/23/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 124	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 1-12-10	Day of the Week: Tuesday	
	Weather: Mostly Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth/ R. Clark/ C. Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	Water Level Indicator	Durham Geo	33293
	51421-A Pressure Indicator	SINCO Slope Indicator Company	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth/ R. Clark/ C. Meyers	Report No: 124	Date: 1-12-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Meyers, Stantec representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7. Ms. Berryman and Mr. Booth obtained readings from the vibrating wire piezometers located to the east of the Test Embankment, formerly known as "Area B." The PZs monitored in this area were: PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Booth obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained readings from the following AECOM pneumatic piezometers: 211, 211(A), 211(B), 303, 404, 408, 500, 502, 503, 600, 603 (daily readings also), 604, and 605 (daily readings also).

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 1/12/10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/23/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 125	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Dates: 1-13-10	Day of the Week: Wednesday	
	Weather: Mostly Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: D. Berryman/ L. Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Digital Inclinometer	RST Instruments	DP0463
	Water Level Indicator	Durham Geo	33293
	51421-A Pressure Indicator	SINCO Slope Indicator Company	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Monitoring instrumentation for Test Embankment and Dikes C and D.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: D. Berryman/ L. Booth	Report No: 125	Date: 1-13-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Booth, Stantec representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area to the east of the Test Embankment, formerly known as "Area B.". The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-11, PZ-12, and PZ-13.

Ms. Berryman and Mr. Booth obtained readings from the following slope inclinometers located in the Test Embankment area: SI-1, SI-2, SI-3, SI-4A, SI-5, and SI-9.

Ms. Berryman and Mr. Booth obtained water level readings from the following instruments on Dike D: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8; and on Dike C: STN-2.

Ms. Berryman and Mr. Booth obtained readings from AECOM pneumatic piezometers 603 and 605 located on Dike D. Readings were also obtained from AECOM slope inclinometers 502, 603, and 605.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

7:00 – 8:00 Reporting
8:00 – 16:30 Field work
16:30 –18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 1/13/10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** Mark Jones, Project Engineer	**Date** 3/23/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: Tennessee Valley Authority	
Distribution: TVA	

Project No.: 175669015	Rep No.: 126	Page No: 1 of 2
Project Name: Kingston – KIF, Test Embankment Program		
Location or Address: 1134 Swan Pond Road, Harriman, TN 37748		
Date: 01/14/10	Day of the Week: Thursday	
Weather: Mostly Sunny	Temperature: 48°F	

Client: Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: CP	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Darlene Berryman

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By:	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 8-9-09	Source of Fill

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421-A Pressure Indicator	SINCO Pressure Indicator Company	3850

Visitor's Name	Representing	Arrive	Depart
N/A			

Follow-up from prior report? ☐ No ☒ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Continue AECOM instrumentation monitoring, test embankment instrumentation monitoring, daily water-levels, daily pneumatic PZs.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Darlene Berryman	Report No: 126	Date: 01/14/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Berryman and Mr. Booth obtained readings from the vibrating wire piezometers located in the test embankment area. The PZs monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7. Ms. Berryman and Mr. Booth also obtained readings from the vibrating wire PZs located in former Area "B". The PZs monitored in that location were: PZ-9, PZ-11, PZ-12 and PZ-13.

Ms. Berryman and Mr. Booth obtained readings from the slope inclinometers located in the test embankment area. The SIs monitored were SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Ms. Berryman and Mr. Booth obtained readings from AECOM PZs 603, 605 (both daily readings) 101, 102, 103, 106 and 109.

Ms. Berryman and Mr. Booth obtained readings from the following AECOM slope inclinometers: 101, 102, 103, 106, 109 and 900SH2.

Ms. Berryman and Mr. Booth obtained water-level readings from the PZs located on Dike D. The PZs monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Ms. Berryman and Mr. Booth also obtained a water-level reading from STN-2, located on Dike C.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Darlene Berryman	**Date** 01/14/10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton, Jr. Assist. QC Manager	**Date** 01/15/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Plan View Drawing

Owner: Tennessee Valley Authority	Project No.: 175669015	Rep No.: 127	Page No: 1 of 2
Distribution: TVA	Project Name: Kingston – KIF, Test Embankment Program	
	Location or Address: 1134 Swan Pond Road, Harriman, TN 37748	
	Date: 01/15/10	Day of the Week: Friday
	Weather: Mostly Sunny	Temperature: 50ºF

Client: Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: CP	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Leo Booth/Chris Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By:	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 8-9-09	Source of Fill

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421-A Pressure Indicator	SINCO Pressure Indicator Company	3850

Visitor's Name	Representing	Arrive	Depart
N/A			

Follow-up from prior report? ☐ No ☒ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Continue AECOM instrumentation monitoring, test embankment instrumentation monitoring, daily water-levels, daily pneumatic PZs.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Plan View Drawing

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth/Chris Meyers	Report No: 127	Date: 01/15/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Meyers obtained readings from the vibrating wire piezometers located in the test embankment area. They were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Meyers also obtained readings from the vibrating wire PZ's located in the former Area "B". The PZ's monitored in that location were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. Meyers obtained readings from the slope inclinometers located in the test embankment area; the SI's monitored were SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Mr. Booth and Mr. Meyers obtained readings from AECOM PZ's 603 and 605 daily readings.

Mr. Booth and Mr. Meyers obtained readings from the following AECOM slope inclinometers 404, 408, 503, 303, 301, 211, 211E and 602.

Mr. Booth and Mr. Meyers obtained water level readings from the PZ's located on Dike D. The PZ's monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Meyers also obtained a water level reading from STN-2 located on Dike C.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] This Field Report is Preliminary A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	Stantec Field Representative Leo Booth	Date 01/15/10
[X] This Field Report is Final A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	Reviewed By G.A. Skip Layton, Jr. Assist. QC Manager	Date 01/18/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Plan View Drawing

Owner: Tennessee Valley Authority	Project No.: 175669015	Rep No.: 128 Page No: 1 of 2
Distribution: TVA	Project Name: Kingston – KIF, Test Embankment Program	
	Location or Address: 1134 Swan Pond Road, Harriman, TN 37748	
	Date: 01/16/10	Day of the Week: Saturday
	Weather: Mostly Sunny	Temperature: 40°F

Client: Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: CP	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Leo Booth/Chris Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By:	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 8-9-09	Source of Fill

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421-A Pressure Indicator	SINCO Pressure Indicator Company	3850

Visitor's Name	Representing	Arrive	Depart
N/A			

Follow-up from prior report? ☐ No ☒ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Continue AECOM instrumentation monitoring, test embankment instrumentation monitoring, daily water-levels, daily pneumatic PZs.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Plan View Drawing

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth/Ryan Clark	Report No: 128	Date: 01/16/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives obtained readings from the slope inclinometers located in the test embankment SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Mr. Booth and Mr. Clark, Stantec Representatives obtained readings from AECOM PZ's 603 and 605 (both daily readings).

Mr. Booth and Mr. Clark, Stantec Representatives obtained water level readings from PZ's located on Dike "D". The PZ's monitored were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Clark, Stantec Representatives obtained a water level from STN-2 located on Dike C.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth / Ryan Clark	**Date** 01/16/10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James W. Andrew QC Manager	**Date** 01/18/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Plan View Drawing

Owner: Tennessee Valley Authority	Project No.: 175669015	Rep No.: 129 Page No: 1 of 2
Distribution: TVA	Project Name: Kingston – KIF, Test Embankment Program	
	Location or Address: 1134 Swan Pond Road, Harriman, TN 37748	
	Date: 01/18/10	Day of the Week: Monday
	Weather: Clear	Temperature: 50ºF

Client: Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: CP	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Leo Booth/Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By:	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 8-9-09	Source of Fill

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421-A Pressure Indicator	SINCO Pressure Indicator Company	3850

Visitor's Name	Representing	Arrive	Depart
N/A			

Follow-up from prior report? ☐ No ☒ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Continue monitoring Stantec instruments, test embankment instrumentation monitoring, daily water-levels, daily pneumatic PZ's.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Plan View Drawing

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth/Ryan Clark	Report No: 129	Date: 01/18/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives obtained readings from the vibrating wire piezometers located in the test embankment area. The PZ's monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark also obtained readings from the vibrating wire PZ's located in former Area "B". The PZ's monitored in that location were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored were SI-1, SI-2, SI-3, SI-4A, SI-5 and SI-9.

Mr. Booth and Mr. Clark obtained readings from AECOM PZ's 603 and 605 (daily readings).

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X This Field Report is Preliminary A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	Stantec Field Representative Leo Booth / Chris Meyers	Date 01/18/10
X This Field Report is Final A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	Reviewed By James W. Andrew QC Manager	Date 01/19/10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Plan View Drawing

Owner: Tennessee Valley Authority	
Distribution: TVA	

Project No.: 175669015	Rep No.: 130	Page No: 1 of 2
Project Name: Kingston – KIF, Test Embankment Program		
Location or Address: 1134 Swan Pond Road, Harriman, TN 37748		
Date: 01/19/10	Day of the Week: Tuesday	
Weather: Sunny/Cloudy	Temperature: 50°F	

Client: Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: CP	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Leo Booth/Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By:	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 8-9-09	Source of Fill

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421-A Pressure Indicator	SINCO Pressure Indicator Company	3850

Visitor's Name	Representing	Arrive	Depart
N/A			

Follow-up from prior report? ☐ No ☒ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings, Stantec SI and water level readings.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Plan View Drawing

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2	
Stantec Field Representative: Leo Booth/Ryan Clark	Report No: 130	Date: 01/19/10	

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives obtained readings from the vibrating wire piezometers located in the test embankment area. The PZ's monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark also obtained readings from the vibrating wire PZ's located in former Area "B". The PZ's monitored in that location were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored were SI-1, SI-2, SI-3, SI-4A, SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from AECOM PZ's 603 and 605 (daily readings).

Mr. Booth and Mr. Clark obtained water level readings from the PZ's located on Dike D. The PZ's monitored in this area were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, STN-2, STN-3A1, STN-3A2 and STN-3B.

Mr. Booth and Mr. Clark obtained readings from slope inclinometer STN-71 located in Dike C.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 01/20/10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton Assist. QC Manager	**Date** 01/21/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Plan View Drawing

Owner: Tennessee Valley Authority	
Distribution: TVA	

Project No.: 175669015	Rep No.: 131	Page No: 1 of 2
Project Name: Kingston – KIF, Test Embankment Program		
Location or Address: 1134 Swan Pond Road, Harriman, TN 37748		
Date: 01/20/10	Day of the Week: Wednesday	
Weather: Rain	Temperature: 50°F	

Client: Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: CP	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Leo Booth/Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By:	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 8-9-09	Source of Fill

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421-A Pressure Indicator	SINCO Pressure Indicator Company	3850

Visitor's Name	Representing	Arrive	Depart
N/A			

Follow-up from prior report? ☐ No ☒ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings, Stantec SI and water level readings.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Plan View Drawing

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth/Ryan Clark	Report No: 131	Date: 01/20/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives obtained readings from the vibrating wire piezometers located in the test embankment area. The PZ's monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark also obtained readings from the vibrating wire PZ's located in former Area "B". The PZ's monitored in that location were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored were SI-1, SI-2, SI-3, SI-4A, SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from AECOM pneumatic PZ's (daily readings). The PZ's monitored were 603 and 605.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's located on Dike D. The PZ's monitored in this area were: PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, STN-2, STN-3A1, STN-3A2 and STN-3B.

Mr. Booth and Mr. Clark obtained readings from slope inclinometers located on Dike D. SI's monitored were: B-1 and B-2.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 01/21/10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. Skip Layton Assist. QC Manager	**Date** 01/21/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Plan View Drawing

Owner: Tennessee Valley Authority	
Distribution: TVA	

Project No.: 175669015	Rep No.: 132	Page No: 1 of 2
Project Name: Kingston – KIF, Test Embankment Program		
Location or Address: 1134 Swan Pond Road, Harriman, TN 37748		
Date: 01/21/10	Day of the Week: Thursday	
Weather: Rain	Temperature: 50°F	

Client: Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: CP	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Reggie Norfleet/Jim Kilby	Stantec Field Representative: Leo Booth/Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By:	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 8-9-09	Source of Fill

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421-A Pressure Indicator	SINCO Pressure Indicator Company	3850

Visitor's Name	Representing	Arrive	Depart
N/A			

Follow-up from prior report? ☐ No ☒ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings, Stantec SI and water level readings.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Plan View Drawing

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth/Ryan Clark/C. Meyers	Report No: 132	Date: 01/21/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Meyers, Stantec Representatives obtained readings from the slope inclinometers located in the test embankment Area. The SI's monitored were: SI-1, SI-2, SI-3, SI-5, SI-6, SI-7 and SI-9. SI-4(a) was not monitored because it was not accessible.

Mr. Clark, a Stantec representative, obtained readings from the vibrating wire piezometers located in the test embankment area. The PZ's monitored were: PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7. Mr. Clark also obtained readings from the vibrating wire piezometers located in former Area "B". The PZ's monitored were: PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth obtained readings from AECOM PZ's 603 and 605.

Mr. Booth also obtained readings (water level) from STN-2, STN-3A1, STN-3A2 and STN-3B located on Dike C.

Mr. Clark and Mr. Meyers obtained reading form Stantec slope inclinometers. The SI's monitored were: SI-12, B-3, B-4, STN-8, STN-18, STN-64 and STN-69.

Stantec Field Representative's Activities

Arrive	7:00 a.m.
Depart	6:00 p.m.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 01/22/10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew QC Manager	**Date** 01/22/10

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 133	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 01-22-10	Day of the Week: Friday	
	Weather: Overcast	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	322890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes _____
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes _____

Did you observe anything unexpected? ☒ No ☐ Yes _____

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes _____

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth	Report No: 133	Date 01-22-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained readings from the Vibrating Wire Piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark also obtained readings from the Vibrating Wire Piezometers located in the former Area "B". The PZ's monitored in that area were PZ-12, PZ-13, PZ-9, and PZ-11.

Mr. Booth and Mr. Clark obtained readings from the Slope Inclinometers located in the Test Embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7, and SI-9.

Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ's 603 and 605.

Mr. Booth and Mr. Clark obtained readings from the Stantec Slope Inclinometers SI-10 and SI-11.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike D. The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike C. The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 09:30 reporting
09:30 to 16:30 field work
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 01-22-10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 1-25-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 134	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 01-23-10	Day of the Week: Saturday	
	Weather: Sun and cloud	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Skip Layton

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☐ Previously Reported By: On:	Source of Fill: On-site stockpiles

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	322890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 133

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings and AECOM Instrument monitoring.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Skip Layton	Report No: 134	Date 01-23-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Layton, Stantec Representatives, obtained readings from the Vibrating Wire Piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.
Mr. Booth and Mr. Layton also obtained readings from the Vibrating Wire Piezometers located in the former Area "B". The PZ's monitored in that area were PZ-12, PZ-13, PZ-9, and PZ-11.

Mr. Booth and Mr. Layton obtained readings from the Slope Inclinometers located in the Test Embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7, and SI-9.

Mr. Booth and Mr. Layton obtained readings from the AECOM Pneumatic PZ's 603 and 605.

Mr. Booth and Mr. Layton obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.
Mr. Booth and Mr. Layton obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Stantec Field Representative's Activities

Arrive	07:00
Depart	15:00

07:00 to 08:30 reporting
08:30 to 12:30 field work
12:30 to 15:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 01-23-10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 1-25-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 135	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 01-25-10	Day of the Week: Monday	
	Weather: Overcast	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Chris Meyers

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: [X] Previously Reported By: Jim Andrew On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 134

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings, AECOM Instrumentation monitoring.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Chris Meyers	Report No: 135	Date 01-25-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Meyers, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-5, PZ-6 and PZ-7. PZ-4 was not monitored due to unsafe conditions.
Mr. Booth and Mr. Meyers also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Meyers obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Meyers obtained readings from the AECOM Pneumatic PZ's 603 and 605.

Mr. Booth and Mr. Meyers obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.
Mr. Booth and Mr. Meyers obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:30 reporting
08:30 to 17:00 field work
17:00 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 01-25-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-25-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 136	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 01-26-10	Day of the Week: Tuesday	
	Weather: Overcast	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: ☒ Previously Reported By: Jim Andrew On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 134

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings, remaining AECOM Instrumentation monitoring.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Ryan Clark	Report No: 136	Date 01-26-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.
Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings) and PZ 500.

Mr. Booth and Mr. Clark obtained readings from the AECOM SI-500

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.
Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

An attempt to read SI STN- 34 was made, however Sevenson equipment operating in the area prevented this from occurring. Another attempt will be made tomorrow.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[x] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 01-26-10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-27-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 137	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 01-27-10	Day of the Week: Wednesday	
	Weather: Overcast	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Ryan Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: [X] Previously Reported By: Jim Andrew On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 134

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings, remaining AECOM Instrumentation monitoring.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Ryan Clark	Report No: 137	Date 01-27-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.
Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Clark obtained readings from the AECOM SI-503, SI-404, SI-101, SI-102, and SI-408
Mr. Booth and Mr. Clark obtained readings from the AECOM PZ-503, PZ-404, PZ-101, PZ-102, and PZ-408

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.
Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Clark obtained readings from the SI STN- 34.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:00

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 19:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 01-27-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-28-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 138	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 01-28-10	Day of the Week: Thursday	
	Weather: Overcast	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Ryan Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: [X] Previously Reported By: Jim Andrew On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 134

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings, remaining AECOM Instrumentation monitoring.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Ryan Clark	Report No: 138	Date 01-28-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.
Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Clark obtained readings from the AECOM SI-103, SI-106, SI-109, SI-211, SI 502, SI-900SH2, and SI-211E
Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ-103, PZ-106, PZ-109, PZ-211, and PZ-502

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.
Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Clark also obtained initial readings from the vibrating wire piezometers PZ-R3 located west of the Test Embankment and PZ-R1 located west of the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 01-28-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-29=10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 139	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 01-29-10	Day of the Week: Friday	
	Weather: Snow	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Ryan Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:
Plans and Specifications: By: Stantec Consulting Services	Date: June 3, 2009
Project Briefing: [X] Previously Reported By: Jim Andrew On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 138

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Ryan Clark	Report No: 139	Date 01-29-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.
Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, and PZ-13.

Mr. Booth and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Clark obtained readings from the AECOM SI-603, SI-602, SI-605, SI-303, and SI 301E.
Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ-600, PZ-604 and PZ-303.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.
Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers PZ-R3 located west of the Test Embankment and PZ-R1 located west of the Relic Area (note: previous report from 1-28-10 referred to PZ-R3 as **east** of the Test Embankment, and PZ-R! as **east** of the Relic Area, which was incorrect).

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 16:30 field work
16:30 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 01-29-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 1-30-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 140	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 01-30-10	Day of the Week: Saturday	
	Weather: Snow/sleet	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 139

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings. Stantec instrumentation monitoring.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Ryan Clark	Report No: 140	Date 01-30-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

No activities today due to inclement weather

Stantec Field Representative's Activities

Arrive	08:00
Depart	09:00

08:00 to 09:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 01-30-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-1-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 141	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-01-10	Day of the Week: Monday	
	Weather: Sun / Cloud	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Ryan Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 140

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings. Stantec instrumentation monitoring.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Ryan Clark	Report No: 141	Date 02-01-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers PZ-R3 located west of the Test Embankment and PZ-R1 located west of the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:00 reporting
08:00 to 17:00 field work
17:00 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-01-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-3-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 142	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-02-10	Day of the Week: Tuesday	
	Weather: Rain, fog	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Ryan Clark / Chris Meyers

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 141

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings. Remaining Stantec instrumentation monitoring.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Ryan Clark /Chris Meyers	Report No: 142	Date 02-02-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth, Chris Meyers and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth, Chris Meyers and Mr. Clark also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth, Chris Meyers and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth, Chris Meyers and Mr. Clark obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth, Chris Meyers and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth, Chris Meyers and Mr. Clark also obtained readings from the vibrating wire piezometers PZ-R3 located west of the Test Embankment and PZ-R1 located west of the Relic Area.

Mr. Booth and Mr. Clark obtained readings from the Stantec Slope Inclinometers SI-12, SI-10, SI-11, STN-B1, STN-B3.

Mr. Booth, Chris Meyers and Mr. Clark obtained readings from the Stantec Piezometers STN-14, STN-26,STN-36, STN-37A1, STN-37A2, STN-B, STN-48A1, STN-48A2, STN-48B, STN-47, STN-27A1, STN-27A2, STN-27B.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 09:00 reporting
09:00 to 17:00 field work
17:00 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-02-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-3-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 143	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-03-10	Day of the Week: Wednesday	
	Weather: Cloud and sun	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 142

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings. Remaining Stantec instrumentation monitoring.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Ryan Clark	Report No: 143	Date 02-03-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, STN-3B, STN-15A2 and STN-15A3.

Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers PZ-R3 located west of the Test Embankment and PZ-R1 located west of the Relic Area.

Mr. Booth and Mr. Clark obtained readings from the Stantec Slope Inclinometers STN-34, STN-69, and STN-71.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:00

07:00 to 08:30 reporting
08:30 to 17:30 field work
17:30 to 19:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-03-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-3-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 144	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-04-10	Day of the Week: Thursday	
	Weather: Cloud and rain showers	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth /Ryan Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 143

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Ryan Clark	Report No: 144	Date 02-04-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, STN-3B (daily readings) and STN-5A1.

Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers PZ-R3 and PZ-R1 designated as the Relic Area.

Mr. Booth and Mr. Clark obtained readings from the Stantec Slope Inclinometers STN-08 STN-18, STN-B2, and STN-B4.

Slope Inclinometer STN-64 scheduled to be read this week was not read due to damage at ground elevation. Repair action has been initiated by Mr. Layton, Stantec Assistant QC Manager.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:15 reporting
08:15 to 17:00 field work
17:00 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-04-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-4-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 145	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-0510	Day of the Week: Friday	
	Weather: Rain	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth /Ryan Clark/Chris Meyers

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 144

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Ryan Clark/ Chris Meyers	Report No: 145	Date 02-05-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Meyers, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark , Stantec Representatives, obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Meyers and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Meyers obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers PZ-R3 and PZ-R1 designated "The Relic Area".

Stantec Field Representative's Activities

Arrive	07:00
Depart	16:00

07:00 to 08:00 reporting
08:00 to 14:30 field work
14:30 to 16:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-05-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-6-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 146	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-06-10	Day of the Week: Saturday	
	Weather: Overcast	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Chris Meyers / Skip Layton

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 145

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings. AECOM instrument Monitoring.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Chris Meyers /Skip Layton	Report No: 146	Date 02-06-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Layton, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7. Mr. Layton also wired the new piezometer installation, PZ-R2, on the Relic Area that was installed by Mactec. This PZ installation had data collected on this date for the first time.

Mr. Booth and Mr. Clark also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Meyers, Stantec Representatives, obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Meyers obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Meyers obtained readings from the AECOM SI-603, SI-602, SI-605, SI-303, and SI 301E.

Mr. Booth and Mr. Meyers obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Meyers obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Layton also obtained readings from the vibrating wire piezometers PZ-R3 and PZ-R1 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00
Depart	15:00

07:00 to 08:00 reporting
08:00 to 14:00 field work
14:00 to 15:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-06-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-8-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 147	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-08-10	Day of the Week: Monday	
	Weather: Overcast	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Jim Andrew

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 146

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings. AECOM instrument Monitoring and daily Relic area PZ readings.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Jim Andrew	Report No: 147	Date 02-08-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Andrew, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Andrew also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Andrew obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Andrew obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Andrew obtained readings from the AECOM SI-500, and SI-502.

Mr. Booth and Mr. Andrew obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Andrew obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Andrew also obtained readings from the vibrating wire piezometers PZ-R3 PZ-R2 and PZ-R1 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 17:00 field work
17:00 to 19:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-08-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-9-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 148	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-09-10	Day of the Week: Tuesday	
	Weather: Rain	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Chris Meyers

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 147

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings. Continue AECOM instrument data collection.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Chris Meyers	Report No: 148	Date 02-09-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Meyers, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Meyers also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Meyers obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Meyers obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Meyers obtained readings from the AECOM SI-101, SI-102, SI-103, SI-408, SI-503, and SI 900SH2. SI-502 was read again today due to an error in yesterday's collection.

Mr. Booth and Mr. Meyers obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Meyers obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Meyers also obtained readings from the vibrating wire piezometers PZ-R3, PZ R-2 and PZ-R1 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 19:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-09-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-10-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 149	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-10-10	Day of the Week: Wednesday	
	Weather: Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Mike Crouch/Chris Meyers

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 148

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings. Continue collection of AECOM data.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Mike Crouch/Chris Meyers	Report No: 149	Date 02-10-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Crouch, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Crouch also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Crouch obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Crouch obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Meyers, Stantec Representative, and Mr. Crouch obtained readings from the AECOM SI-106, SI-109, and SI 404.

Mr. Booth and Mr. Crouch obtained readings from the AECOM Pneumatic PZ-101, PZ-102 PZ- 408 PZ-503, and PZ-103.

Mr. Booth and Mr. Crouch obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Crouch obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Crouch also obtained readings from the vibrating wire piezometers PZ-R3, PZ-R2, PZ-R4 and PZ-R1 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 19:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-10-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-11-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 150	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-11-10	Day of the Week: Thursday	
	Weather: Cloudy then Clearing	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☐ No ☒ Yes
Follow-up from report number 149

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings. Continue collection of AECOM data.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Mike Crouch	Report No: 150	Date 02-11-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Layton, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Layton also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Crouch, also a Stantec Representative, obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Crouch obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Crouch obtained readings from the AECOM SI-303, SI-301E, SI-602, and SI- 211.

Mr. Booth and Mr. Crouch obtained readings from the AECOM Pneumatic PZ-502, PZ-211 and PZ-303.

Mr. Booth and Mr. Crouch obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Crouch obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Crouch also obtained readings from the vibrating wire piezometers PZ-R3 ,PZ-R2, PZ-R4 and PZ-R1 located in the Relic Area.

Mr. Booth and Mr. Crouch obtained readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 18:00 field work
18:00 to 19:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-11-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-12-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 151	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-12-10	Day of the Week: Friday	
	Weather: Overcast	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [ ] No [X] Yes
Follow-up from report number 150

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Mike Crouch	Report No: 151	Date 02-12-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Crouch, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Crouch also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Crouch obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Crouch obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Crouch obtained readings from the AECOM SI-603, and SI-605.

Mr. Booth and Mr. Crouch obtained readings from the AECOM Pneumatic PZ-602, PZ-404, PZ-106, PZ-500, PZ-600, PZ-604, and PZ-109.

Mr. Booth and Mr. Crouch obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Crouch obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Crouch also obtained readings from the vibrating wire piezometers PZ-R3, PZ-R2, PZ-R4, PZ-R5 and PZ-R1 in the Relic Area.

Mr. Booth and Mr. Crouch obtained readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:00

07:00 to 08:30 reporting
08:00 to 17:30 field work
17:30 to 19:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-12-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-15-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 152	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-13-10	Day of the Week: Saturday	
	Weather: Mix of sun and cloud	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [X] Yes

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings. Stantec instrument monitoring.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Mike Crouch	Report No: 152	Date 02-13-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Crouch, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Crouch also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Crouch obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Crouch obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Booth and Mr. Crouch obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Crouch obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Crouch also obtained readings from the vibrating wire piezometers PZ-R3, PZ-R2, PZ-R4, PZ-R5 and PZ-R1 located in the Relic Area.

Mr. Booth and Mr. Crouch obtained readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	15:00

07:00 to 08:00 reporting
08:00 to 15:00 field work
19:00 to 21:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-13-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-15-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 153	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-14-10	Day of the Week: Sunday	
	Weather: Mix of sun and cloud	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth / Skip Layton

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings, daily pneumatic PZ readings. Stantec instrument monitoring.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Leo Booth / Skip Layton	Report No: 153	Date 02-14-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Layton, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Layton also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Booth and Mr. Layton obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Layton also obtained readings from the vibrating wire piezometers PZ-R3 located PZ-R2, PZ-R4, PZ-R5 and PZ-R1 located in the Relic Area.

Mr. Booth and Mr. Layton obtained readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	13:00

07:00 to 08:00 reporting
08:00 to 13:00 field work
13:00 to 13:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-14-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-15-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175660005	Rep No.: 154	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-15-10	Day of the Week: Monday	
	Weather: Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: L Booth / M Crouch/ R Clark/ C Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Check if SI-STN-64 has been reinstated.
Check if SI AECOM-211E has been reinstated.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175660005	Page No: 2 of 2
Stantec Field Representative: L Booth / M Crouch/ R Clark/ C Meyers	Report No: 154	Date 02-15-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Crouch, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Crouch also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Clark and Mr. Meyers, Stantec Representatives, obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Crouch obtained readings from the vibrating wire piezometers PZ-R3 located PZ-R2, PZ-R4, PZ-R5 and PZ-R1 located in the Relic Area.

Mr. Clark and Mr. Meyers obtained readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Mr. Booth and Mr. Crouch obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Crouch obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Crouch obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Stantec Field Representative's Activities

Arrive	07:00
Depart	17:00

07:00 to 08:00 reporting
08:00 to 15:00 field work
15:00 to 17:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-15-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-16-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 155	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-16-10	Day of the Week: Tuesday	
	Weather: Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: L Booth / M Crouch/ R Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: X Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? X No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No X Yes

Did you observe anything unexpected? X No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? X No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Check if SI-STN-64 has been reinstated.
Check if SI AECOM-211E has been reinstated.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth / M Crouch/ R Clark/	Report No: 155	Date 02-16-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Crouch, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Clark and Mr. Booth obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Crouch obtained readings from the vibrating wire piezometers PZ-R3 located PZ-R2, PZ-R4, PZ-R5 and PZ-R1 located in the Relic Area.

Mr. Clark and Mr. Booth obtained readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Crouch obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Clark and Mr. Booth obtained readings from the Stantec slope inclinometers SI-11, SI-B1, SI-B2, and SI-B3.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:00

07:00 to 08:00 reporting
08:00 to 17:00 field work
17:00 to 19:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-16-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-17-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 156	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-17-10	Day of the Week: Wednesday	
	Weather: Cloudy	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: L Booth / C Meyers/ R Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Check if SI-STN-64 has been reinstated.
Check if SI AECOM-211E has been reinstated.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth / C Meyers/ R Clark	Report No: 156	Date 02-17-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Meyers, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Meyers and Mr. Booth obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Meyers obtained readings from the vibrating wire piezometers PZ-R3, PZ-R2, PZ-R4, PZ-R5 and PZ-R1 located in the Relic Area.

Mr. Clark and Mr. Booth obtained readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Crouch obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Clark and Mr. Booth obtained readings from the Stantec slope inclinometers SI-34, SI-69, and SI-71

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-14, STN-26, STN-36, STN- 48A1, STN- 48A2, STN- 48B, and STN-47.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 08:00 reporting
08:00 to 17:00 field work
17:00 to 18:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-17-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-18-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 157	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-18-10	Day of the Week: Thursday	
	Weather: Sun	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: L Booth / R Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Check if SI-STN-64 has been reinstated.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth / R Clark	Report No: 157	Date 02-18-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark, obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Clark and Mr. Booth obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from the vibrating wire piezometers PZ-R3 located PZ-R2, PZ-R4, PZ-R5, PZ-R6 and PZ-R1 located in the Relic Area.

Mr. Clark and Mr. Booth obtained readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Clark and Mr. Booth obtained readings from the Stantec slope inclinometers SI-B4, SI-STN-8, and SI STN-18.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-15A1, STN-15A2, STN-15B, STN-37A1, STN-37A2, STN-37B 1, STN-27A1, STN-27A2, and STN-27B.

AECOM SI-211E has been repaired it will be renamed AECOM SI-211E(1)and will be read tomorrow.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:30

07:00 to 08:00 reporting
08:00 to 17:30 field work
17:30 to 19:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-18-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-20-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 158	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-19-10	Day of the Week: Friday	
	Weather: Sun	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele/Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: L Booth / R Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	51421 Pressure Indicator	Sinco Pressure Indicator Co.	3850

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit?

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth / R Clark	Report No: 158	Date 02-19-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark, obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, PZ-13.

Mr. Clark and Mr. Booth obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained readings from the vibrating wire piezometers PZ-R3 located PZ-R2, PZ-R4, PZ-R5, PZ-R6 and PZ-R1 located in the Relic Area.

Mr. Clark and Mr. Booth obtained readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7 and PZ-8.

Mr. Booth and Mr. Clark obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. Clark obtained readings from the AECOM Pneumatic PZ's 603 and 605 (Daily readings).

Mr. Clark and Mr. Booth obtained readings from the Stantec slope inclinometers SI-STN-64(A), and SI AECOM-211E(1).

Stantec Field Representative's Activities

Arrive	07:00
Depart	14:30

07:00 to 08:00 reporting
08:00 to 13:30 field work
13:30 to 14:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

x **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-20-10
x **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-20-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 159	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-20-10	Day of the Week: Saturday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Kilby / Ricky Lynn	Stantec Field Representative: Ryan Clark / Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	Digital Inclinometer	RST Instruments	DP0463
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings on Dikes "C" & "D", daily pneumatic PZ readings at the Lateral Expansion. Stantec instrument monitoring.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Ryan Clark / Mike Crouch	Report No: 159	Date 02-20-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Crouch, Stantec Technicians, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7. Currently PZ-1 and PZ-8 are automated and data is collected continuously at these two locations. (Daily readings for the Test Embankment)

Mr. Clark and Mr. Crouch also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, and PZ-12. PZ-13 was not accessible due to material being placed in the washes and rills of the Valley Area collecting moisture from the ash processing area directly south of this PZ location. (Daily Readings for the Valley Area / Test Embankment)

Mr. Clark and Mr. Crouch obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9. (Daily readings for the Test Embankment)

Mr. Clark and Mr. Crouch obtained readings from the Stantec Slope Inclinometers SI-10 and SI-12. These SI's are located in the former Area "B". (Daily Readings for the Valley Area / Test Embankment)

Mr. Clark and Mr. Crouch obtained readings from the AECOM Pneumatic PZ's 603 and 605. (Daily readings for the Lateral Expansion).

Mr. Clark and Mr. Crouch obtained water level readings from the PZ's on Dike "D". The PZ's monitored in that area were PZ-D1, PZ-D2, PZ-D3, PZ-D4, PZ-D5, PZ-D6, PZ-D7 and PZ-D8. (Daily readings for Dike "D")

Mr. Clark and Mr. Crouch obtained water level readings from the PZ's on Dike "C". The PZ's monitored in that area were STN-2, STN-3A1, STN-3A2, and STN-3B. (Daily readings for the Dike "C" Buttressing)

Mr. Clark and Mr. Crouch also obtained readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area. (Daily readings for the Relic Area / Test Embankment)

Stantec Field Representative's Activities

Arrive	08:00
Depart	15:00

07:00 to 08:00 safety/planning
08:00 to 15:00 data collection
15:00 to 16:30 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Ryan Clark	**Date** 02-20-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-21-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 160	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-21-10	Day of the Week: Sunday	
	Weather: Sunny	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Kilby / Ricky Lynn	Stantec Field Representative: Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings on Dikes "C" & "D", daily pneumatic PZ readings at the Lateral Expansion. Stantec instrument monitoring.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Mike Crouch	Report No: 160	Date 02-21-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Crouch, a Stantec Technician, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7. Currently PZ-1 and PZ-8 are automated and data is collected continuously at these two locations. (Daily readings for the Test Embankment)

Mr. Crouch also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, and PZ-13. PZ-13 was inaccessible yesterday and this installation was read early today to take advantage of ground freezing to obtain access. (Daily Readings for the Valley Area / Test Embankment)

Mr. Crouch also obtained readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area. (Daily readings for the Relic Area / Test Embankment)

Stantec Field Representative's Activities

Arrive	07:00
Depart	8:30

07:00 to 09:00 data collection
09:00 to 11:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch	**Date** 02-21-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-22-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 161	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 02-22-10	Day of the Week: Monday
	Weather: Cloudy	Temperature: 40's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.: Jim Kilby / Ricky Lynn	Stantec Field Representative: Mike Crouch/Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Test Embankment instrumentation monitoring, Daily water level readings on Dikes "C" & "D", daily pneumatic PZ readings at the Lateral Expansion. Stantec instrument monitoring. Begin the biweekly collection of data from pneumatic piezometers and slope inclinometers, AECOM, installed within the failed Dredge Cell.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Mike Crouch	Report No: 161	Date: 02-22-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Crouch and Mr. Clark, Stantec Technicians, obtained readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7. Currently PZ-1 and PZ-8 are automated and data is collected continuously at these two locations. (Daily readings for the Test Embankment)

Mr. Crouch and Mr. Clark also obtained readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12, and PZ-13. (Daily Readings for the Valley Area / Test Embankment)

Mr. Crouch and Mr. Clark also obtained readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area. (Daily readings for the Relic Area / Test Embankment)

Mr. Clark also obtained readings from the water levels STN-2, STN-3A1, STN-3A2, STN-3B, PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8. (Daily water levels)

Mr. Crouch also obtained readings from the AECOM pneumatic PZ's. The PZ's monitored were AECOM 603 and AECOM 605. (Daily Pneumatic PZ's)

Mr. Crouch and Mr. Clark also obtained readings from the AECOM pneumatic PZ's 303 and 500. AECOM slope inclinometers 303, 301E, and 500 were also read on this date.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 16:30 data collection
16:30 to 18:00 reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch/Ryan Clark	**Date** 02-22-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-23-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 162	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-23-10	Day of the Week: Tuesday	
	Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/Mike Crouch/Ryan Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit?

Continue biweekly collection of data from AECOM pneumatic piezometers and slope inclinometers installed in the failed Dredge Cell.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/M Crouch/R Clark	Report No: 162	Date: 02-23-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Crouch and Mr. Clark, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, and PZ-12. PZ-13 was not monitored due to soft ash which presented unsafe conditions.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr Booth and Mr. Clark, Stantec Representatives, obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr Booth and Mr. Clark obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, STN-3B

Mr Booth and Mr. Clark obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Booth and Mr. Clark obtained readings from the AECOM pneumatic PZ's 602, 404, 408, 101, 102, 600, and 503 and AECOM slope inclinometers 900SH2, 103, 404, 101, 102, 103, 404, 503, and 408.

Mr. Clark and Mr. Booth obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	17:30

07:00 to 08:30 Reporting
08:30 to 17:30 Field Work
17:30 to 19:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-23-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-24-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 163	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-24-10	Day of the Week: Wednesday	
	Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/Mike Crouch/Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes

Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?

Continue biweekly collection of data from AECOM slope inclinometers.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/M Crouch/R Clark	Report No: 163	Date: 02-24-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Crouch and Mr. Clark, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr Booth and Mr. Clark, Stantec Representatives, obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr Booth and Mr. Crouch obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, STN-3B

Mr Booth and Mr. Clark obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Booth and Mr. Crouch obtained readings from the AECOM pneumatic PZ's 103, 106, 109, 211, and 502.

Mr. Crouch and Mr. Clark obtained readings from AECOM slope inclinometer 502.

Mr. Clark and Mr. Booth obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 08:30 Reporting
08:30 to 17:00 Field Work
17:00 to 18:30 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-24-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-25-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 164	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-25-10	Day of the Week: Thursday	
	Weather: Mostly cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/Mike Crouch/Ryan Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit?

Continue biweekly collection of data from AECOM slope inclinometers.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/M Crouch/R Clark	Report No: 164	Date: 02-25-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Crouch and Mr. Clark, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr Booth and Mr. Clark, Stantec Representatives, obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr Booth and Mr. Crouch obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, STN-3B

Mr Booth and Mr. Clark obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Clark and Mr. Booth obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Mr. Booth and Mr. Crouch, Stantec Representatives, obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 07:30 Reporting
07:30 to 17:00 Field Work
17:00 to 18:30 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-25-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-26-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 165	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-26-10	Day of the Week: Friday	
	Weather: Sun	Temperature: 30's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/Mike Crouch/Ryan Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit?

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/M Crouch/R Clark	Report No: 165	Date: 02-26-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr Booth and Mr. Clark, Stantec Representatives, obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr Booth and Mr. Clark obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, STN-3B

Mr Booth and Mr. Clark obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Clark and Mr. Booth obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Mr. Booth and Mr. Crouch obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Crouch and Mr. Clark, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Booth and Mr. Clark obtained readings from AECOM slope Inclinometers 602, 603, 605, 211, 211E(1), 106, and 109

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 07:30 Reporting
07:30 to 17:30 Field Work
17:30 to 18:30 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

[X] **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-26-10
[X] **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-27-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 166	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-27-10	Day of the Week: Saturday	
	Weather: Sun and cloud	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/M Crouch/R Clark	Report No: 166	Date: 02-27-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, STN-3B

Mr. Booth and Mr. Clark obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Booth and Mr. Clark obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Clark and Mr. Booth obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Mr. Booth and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Booth and Mr. Clark obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 07:30 Reporting
07:30 to 16:30 Field Work
16:30 to 18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-27-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 2-28-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 167	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 02-28-10	Day of the Week: Sunday	
	Weather: Sun and cloud	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/Ryan Clark

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/R Clark	Report No: 167	Date: 02-28-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, STN-3B

Mr. Booth and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00
Depart	13:00

07:00 to 07:30 Reporting
07:30 to 12:30 Field Work
12:30 to 13:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 02-28-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-1-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 168	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-01-10	Day of the Week: Monday	
	Weather: Overcast	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/Ryan Clark/Chris Meyers

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Biweekly monitoring of Stantec instruments this Week.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/C Meyers/R Clark	Report No: 168	Date: 03-01-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Booth and Mr. Clark obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Clark and Mr. Meyers, Stantec Representatives obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Mr. Booth and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Booth and Mr. Meyers obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Due to inconsistent readings in the data obtained from SI-603, Mr. Booth reviewed the instrument location to check for anomalies and/or disturbance. It was observed that a dredge line that was within 10' of this instrument had been removed and either a dozer or an excavator had tracked within 6" of the riser that protects the SI. The ground around the riser had stress cracking but there were no obvious signs that the riser had been hit by any of these activities. A general review of the slopes adjacent to SI-603 showed no visible signs of instability or damage.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 07:30 Reporting
07:30 to 17:00 Field Work
17:00 to 18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 03-01-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-2-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 169	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-02-10	Day of the Week: Tuesday	
	Weather: Snow	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/Ryan Clark/Chris Meyers

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit?

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/C Meyers/R Clark	Report No: 169	Date: 03-02-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Clark obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Booth and Mr. Clark obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Booth and Mr. Clark obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Booth and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Booth and Mr. Meyers obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Clark and Mr. Meyers, Stantec Representatives obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:00

07:00 to 07:30 Reporting
07:30 to 17:30 Field Work
17:30 to 19:30 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 03-02-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-3-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 170	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-03-10	Day of the Week: Wednesday	
	Weather: Sunny	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit?

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth	Report No: 170	Date: 03-03-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Due to a site wide safety stand down there was not any instrumentation data collection today.

Stantec Field Representative's Activities

Arrive	07:00
Depart	11:00

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 03-03-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3-4-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 171	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-04-10	Day of the Week: Thursday	
	Weather: Sun	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/Ryan Clark/Chris Meyers/Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/C Meyers/R Clark/ M Crouch	Report No: 171	Date: 03-04-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Safety "Stand Down" lifted at 12:30 PM today and work resumed at that time.

Mr. Crouch and Mr. Clark, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Meyers Stantec Representatives obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Crouch and Mr. Clark obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Crouch and Mr. Clark obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Crouch and Mr. Clark obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Booth and Mr. Meyers obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Mr. Booth and Mr. Meyers obtained readings from the Stantec Slope Inclinometers STN-71, STN-69, and STN-64(A).

Mr. Layton Assistant QC Manager, a Stantec Representative, arranged to have an excavator and D6 dozer from Civil Projects to lower the ash elevation at SI-301 and PZ 301 to enable safer access for technicians obtaining readings at this location. Mr. Booth monitored this task and the ash was lowered and leveled to match surrounding terrain.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 07:30 Reporting
07:30 to 17:30 Field Work
17:30 to 19:30 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 03-04-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-5-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 172	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-05-10	Day of the Week: Friday	
	Weather: Sun	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/Chris Meyers

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit?

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/C Meyers/R Clark/ M Crouch	Report No: 172	Date: 03-05-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Meyers, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Meyers obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Crouch and Mr. Clark obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Booth and Mr. Meyers obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Crouch and Mr. Clark obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Booth and Mr. Meyers obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. Meyers obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Booth and Mr. Meyers obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Mr. Booth and Mr. Meyers obtained readings from the Stantec Slope Inclinometers B-2, B-4, STN-34, STN-08, SI-11 and STN-18.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 07:30 Reporting
07:30 to 18:00 Field Work
18:00 to 19:30 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 03-05-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-6-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 173	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-06-10	Day of the Week: Saturday	
	Weather: Sun	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/R. Clark/M. Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/R Clark/ M Crouch	Report No: 173	Date: 03-06-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. Clark, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. Crouch a Stantec representative obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7 and SI-9.

Mr. Booth and Mr. Clark obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Booth and Mr. Clark obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Booth and Mr. Clark obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Booth and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Booth and Mr. Clark obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 07:30 Reporting
07:30 to 16:30 Field Work
16:30 to 18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 03-07-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-8-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 174	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-07-10	Day of the Week: Sunday	
	Weather: Sun	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: S. Layton/M. Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit?

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: S Layton/ M Crouch	Report No: 174	Date: 03-07-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Layton and Mr. Crouch, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Layton and Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Layton and Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 07:30 Reporting
07:30 to 16:30 Field Work
16:30 to 18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch	**Date** 03-08-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-9-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 175	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/08/10	Day of the Week: Monday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/Ryan Clark/Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and continuing AECOM instrumentation.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/R Clark/M Crouch	Report No: 175	Date: 03/08/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Ryan Clark, technicians with Stantec obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Meyers and Mr. Clark obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Meyers and Mr. Clark obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. Clark obtained bi-weekly readings from AECOM Slope Inclinometers. The SI's monitored were SI-101, SI-102, SI-103, SI-404, SI-408, SI-500, SI-503, SI-106, SI-109, SI-211, SI-211E, SI-502, and SI-900SH2.

Mr. Mike Crouch, technician with Stantec, obtained daily readings from the AECOM pneumatic PZ's 603 and 605. Also, Mr. Crouch obtained bi-weekly readings from AECOM pneumatic PZ's 500, 502, 408, 404, and 503.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	6:00 p.m.

7:00 a.m. – 6:00 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03/08/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-9-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 176	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/09/10	Day of the Week: Tuesday	
	Weather: Partly Cloudy	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/Ryan Clark/Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/R Clark/M Crouch	Report No: 176	Date: 03/09/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Ryan Clark, technicians with Stantec obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Meyers and Mr. Clark obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Meyers and Mr. Clark obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. Clark obtained bi-weekly readings from AECOM Slope Inclinometers. The SI's monitored were SI-301E, SI-303, SI-602, SI-603, and SI-605.

Mr. Meyers and Mr. Clark obtained daily readings from the AECOM pneumatic PZ's 603 and 605. Also, Mr. Crouch obtained bi-weekly readings from AECOM pneumatic PZ's 101, 102, 103, 106, 109, 211, 303, 600, 603, 604, and 605.

Mr. Mike Crouch, technician with Stantec, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	6:00 p.m.

7:00 a.m. – 6:00 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03/09/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-10-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 177	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/10/10	Day of the Week: Wednesday	
	Weather: Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/M Crouch	Report No: 177	Date: 03/10/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Mike Crouch, technicians with Stantec obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Meyers and Mr. Crouch obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. Crouch obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Meyers and Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Meyers and Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	6:00 p.m.

7:00 a.m. – 6:00 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03/10/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-11-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 178	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/10/10	Day of the Week: Thursday	
	Weather: Cloudy/Rain	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/M Crouch	Report No: 178	Date: 03/11/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers, technicians with Stantec obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Meyers obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. Mike Crouch, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	6:00 p.m.

7:00 a.m. – 6:00 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03/11/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-13-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 179	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/12/10	Day of the Week: Friday	
	Weather: Cloudy/Rain	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/Mike Crouch

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/M Crouch	Report No: 179	Date: 03/12/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Mike Crouch, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Meyers and Mr. Crouch obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. Crouch obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. Crouch obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Meyers and Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Meyers and Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	2:00 p.m.

7:00 a.m. – 2:00 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03/12/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-13-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 180	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/13/10	Day of the Week: Saturday	
	Weather: Cloudy/Rain	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Mike Crouch/Skip Layton

Specialty Contractor: ☐ Earthwork ☐ Concrete ☐ Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: ☒ Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? ☒ No ☐ Yes
Follow-up from report number

Did you observe everything you expected to? ☐ No ☒ Yes

Did you observe anything unexpected? ☒ No ☐ Yes

Did you see, hear, smell, or touch anything unusual or unexplained? ☒ No ☐ Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and Stantec Instrumentation

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: M Crouch/S Layton	Report No: 180	Date: 03/13/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mike Crouch, technician with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Crouch obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Skip Layton, Assistant QC Manger with Stantec, and Mr. Crouch obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Crouch obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	4:30 p.m.

7:00 a.m. – 4:30 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Mike Crouch	**Date** 03/13/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3-15-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 181	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/15/10	Day of the Week: Monday	
	Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/Ryan Clark/Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and Stantec Instrumentation

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/R Clark/M Crouch	Report No: 181	Date: 03/15/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mike Crouch, technician with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Crouch obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Chris Meyers and Mr. Ryan Clark obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Crouch obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Meyers, Mr. Clark, and Mr. Crouch raised PZ-12, PZ-13, and settlement plate 5 in the former Area "B".

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	6:00 p.m.

7:00 a.m. –6:00 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03/15/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-16-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 182	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/16/10	Day of the Week: Tuesday	
	Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/Ryan Clark/Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and Stantec Instrumentation

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/R Clark/M Crouch	Report No: 182	Date: 03/16/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mike Crouch, technician with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Crouch obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Chris Meyers and Mr. Ryan Clark obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. Clark obtained bi-weekly readings from Stantec Slope Inclinometers. The SI's monitored were STN-71, STN-69, STN-34, STN-64(A), and STN-B-1.

Mr. Crouch obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch and Mr. Meyers obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	6:00 p.m.

7:00 a.m. –6:00 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03/16/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-17-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 183	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/17/10	Day of the Week: Wednesday	
	Weather: Cloudy	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/Ryan Clark/Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and Stantec Instrumentation

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/R Clark/M Crouch	Report No: 183	Date: 03/17/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Ryan Clark, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Meyers and Mr. Clark obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. Clark obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(A), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. Clark obtained bi-weekly readings from Stantec Slope Inclinometers. The SI's monitored were B-3, STN-8, STN-18, B-4, and SI-11.

Mr. Crouch obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	6:00 p.m.

7:00 a.m. –6:00 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03/17/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-18-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 184	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/18/10	Day of the Week: Thursday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/Ryan Clark/Liam Macphee

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and Stantec Instrumentation

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/R Clark/L Macphee	Report No: 184	Date: 03/18/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Ryan Clark, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Meyers and Mr. Clark obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. Clark obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12. Due to heavy equipment altering the ground around SI-4(A) this SI was not read on this date.

Mr. Meyers obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Meyers and Mr. Liam Macphee, technicians with Stantec, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. Macphee obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Meyers and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	6:30 p.m.

7:00 a.m. –6:30 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03/18/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-22-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 185	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/19/10	Day of the Week: Friday	
	Weather: Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/Ryan Clark/Liam MacPhee/ Leo Booth

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/R Clark/L MacPhee/ L Booth	Report No: 185	Date: 03/19/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Meyers and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. Ryan Clark, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12. Due to heavy equipment altering the ground around SI-4(A) this SI was not read on this date.

Mr. Meyers, Mr. Clark, Mr. MacPhee, and Mr. Leo Booth, technicians with Stantec, obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Meyers and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Meyers and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Meyers and Mr. MacPhee obtained Bi-Weekly Stantec water level reading from the PZ's on Dike "C". The PZ's monitored were STN-14, STN-15A1, STN-15A2, STN-15B, STN-26, STN-36, STN-37A1, STN-37A2, STN-37B, STN-48A1, STN-48A2, STN-48B, STN-47, STN-27A1, STN-27A2, and STN-27B.

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	6:30 p.m.

7:00 a.m. –6:30 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03/19/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 3-22-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 186	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-20-10	Day of the Week: Saturday	
	Weather: Sun	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/Liam MacPhee

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit?

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/Liam MacPhee	Report No: 186	Date: 03-20-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. MacPhee, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. MacPhee obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7 and SI-9. SI-4(A) was reinstated from the altered condition preventing readings and a new file was created SI-4(B)

Mr. Booth and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Booth and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Booth and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Booth and Mr. MacPhee obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:00

07:00 to 07:30 Reporting
07:30 to 17:30 Field Work
17:30 to 18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 03-21-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/26/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 187	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-21-10	Day of the Week: Sunday	
	Weather: Overcast and rain	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Leo Booth/Liam MacPhee

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit?

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/Liam MacPhee	Report No: 187	Date: 03-21-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. MacPhee, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. MacPhee obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7 and SI-9

Mr. Booth and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Booth and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Booth and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Booth and Mr. MacPhee obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	16:30

07:00 to 07:30 Reporting
07:30 to 16:30 Field Work
16:30 to 18:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 03-21-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/26/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 188	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/22/10	Day of the Week: Monday	
	Weather: Cloudy	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/Ryan Clark/Liam MacPhee/ Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and AECOM Instrumentation.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/R Clark/L MacPhee/ M Crouch	Report No: 188	Date: 03/22/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Ryan Clark and Mr. Mike Crouch, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Clark and Mr. Crouch obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Clark and Mr. Crouch obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Meyers and Mr. MacPhee obtained bi-weekly readings from AECOM Slope Inclinometers. The SI's monitored were SI-500, SI-502, SI-503, SI-408, SI-404, SI-101, and SI-102.

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	6:30 p.m.

7:00 a.m. –6:30 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03/22/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/26/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 189	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03/23/10	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/Ryan Clark/Liam MacPhee/ Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and AECOM Instrumentation.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/R Clark/L MacPhee/ M Crouch	Report No: 189	Date: 03/23/10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Meyers and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. MacPhee, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Mike Crouch and Mr. Ryan Clark, technicians with Stantec, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Meyers and Mr. MacPhee obtained bi-weekly readings from AECOM Slope Inclinometers. The SI's monitored were SI- 109, SI- 103, SI- 900SH2, SI- 106, SI- 211, SI-211E, SI- 301E, and SI- 303.

Stantec Field Representative's Activities

Arrive	07:00 a.m.
Depart	6:30 p.m.

7:00 a.m. –6:30 p.m. Instrumentation and report

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03/23/10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/26/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 190	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-24-10	Day of the Week: Wednesday	
	Weather: Sun	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: L Booth/L MacPhee/M Crouch/R Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? AECOM Pneumatics 604, 109, 502, 211 & 404.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/L MacPhee/M Crouch/R Clark	Report No: 190	Date: 03-24-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Clark and Mr. Crouch, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. MacPhee, Stantec Representatives, obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7 and SI-9

Mr. Booth and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Booth and Mr. MacPhee obtained readings from the AECOM pneumatic PZ's 600 503, 500, 303, 101, 102,103, 106, and 408.

Mr. Booth and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Clark and Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Clark and Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Booth and Mr. MacPhee obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Mr. Booth and Mr. MacPhee obtained daily readings from the AECOM Slope Inclinometers 605, 603 and 602.

Stantec Field Representative's Activities

Arrive	07:00
Depart	18:30

07:00 to 07:30 Reporting
07:30 to 18:30 Field Work
18:30 to 20:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 03-25-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/26/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 191	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-25-10	Day of the Week: Thursday	
	Weather: Rain	Temperature: 50's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: L Booth/L MacPhee/M Crouch/R Clark

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? AECOM Pneumatics 604, 109, 502, 211 & 404.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/L MacPhee/M Crouch/R Clark	Report No: 191	Date: 03-25-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. MacPhee, Stantec Representatives, obtained readings from the slope inclinometer located in the test embankment area. The SI's monitored in that area were SI-1.

Mr. Clark and Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-12 and PZ-13.

Work was suspended due to a site wide safety shutdown.

Stantec Field Representative's Activities

Arrive	07:00
Depart	13:00

07:00 to 07:30 Reporting
07:30 to 10:00 Field Work
10:00 to 13:00 Reporting & Safety reviews.

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 03-25-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/26/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 192	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-26-10	Day of the Week: Friday	
	Weather: Overcast, mixed Sun	Temperature: 40's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: L Booth/L MacPhee

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit?

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/L MacPhee	Report No: 192	Date: 03-26-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. MacPhee, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. MacPhee, Stantec Representatives, obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7 and SI-9

Mr. Booth and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, STN-3B.

Mr. Booth and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Booth and Mr. MacPhee obtained readings from the AECOM pneumatic PZ's 604, 109, 502, 211 & 404.

Mr. Booth and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Booth and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Booth and Mr. MacPhee obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	19:00

07:00 to 08:30 Reporting
08:30 to 19:00 Field Work
19:00 to 20:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 03-26-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/29/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 193	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-27-10	Day of the Week: Saturday	
	Weather: Sun	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: L Booth/L MacPhee

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes

Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit?

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: L Booth/L MacPhee	Report No: 193	Date: 03-27-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Booth and Mr. MacPhee, Stantec Representatives, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Booth and Mr. MacPhee, Stantec Representatives, obtained readings from the slope inclinometers located in the test embankment area. The SI's monitored in that area were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7 and SI-9

Mr. Booth and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "C". The PZs monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Booth and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Booth and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZs monitored were PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, and PZ-8.

Mr. Booth and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Booth and Mr. MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Booth and Mr. MacPhee obtained daily readings from the Stantec Slope Inclinometers SI-10 and SI-12.

Stantec Field Representative's Activities

Arrive	07:00
Depart	14:00

07:00 to 08:30 Reporting
08:30 to 13:00 Field Work
13:00 to 14:00 Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Leo Booth	**Date** 03-26-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3/29/10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 194 Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Instrumentation (KIF-IN-FR)	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 03-29-10	Day of the Week: Monday
	Weather: Cloudy	Temperature: 50's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: C Meyers/L MacPhee/R Clark/M Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and Stantec Instrumentation.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/L MacPhee/R Clark/ M Crouch	Report No: 194	Date: 03-29-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Ryan Clark and Mr. Mike Crouch, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Clark and Mr. Crouch obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Clark and Mr. Crouch obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch and Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Meyers and Mr. MacPhee obtained bi-weekly readings from Stantec Slope Inclinometers. The SI's monitored were SI-B1, SI-B2, SI-B3, SI-B4, and SI-11.

Stantec Field Representative's Activities

Arrive	7:00 am
Depart	7:00 pm

7:00am – 7:00pm
Instrumentation and reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03-29-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 3-30-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 195	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-30-10	Day of the Week: Tuesday	
	Weather: Cloudy/Sunny	Temperature: 60's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/ Liam MacPhee

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and Stantec Instrumentation.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers/Liam MacPhee	Report No: 195	Date: 03-30-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Meyers and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. MacPhee, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Meyers and Mr. MacPhee obtained bi-weekly readings from Stantec Slope Inclinometers. The SI's monitored were SI-STN-71, SI-STN-34, SI-STN-69, and SI-STN-64(A).

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	7:00 pm

7:00am – 7:00pm
Instrumentation and reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03-30-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-1-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 196	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 03-31-10	Day of the Week: Wednesday	
	Weather: Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: C Meyers/ L MacPhee/R Clark/M Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and Stantec Instrumentation.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/L MacPhee/R Clark/M Crouch	Report No: 196	Date: 03-31-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Meyers and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. MacPhee, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Ryan Clark and Mr. Mike Crouch, Technicians with Stantec, raised settlement plates located on the Test Embankment. The settlement plates raised were SP-2 and SP-3.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	7:00 pm

7:00am – 7:00pm
Instrumentation and reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 03-31-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-1-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 197	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 04-01-10	Day of the Week: Thursday	
	Weather: Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: C Meyers/ L MacPhee/R Clark/M Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation on the Test Embankment, Lateral Expansion, Dikes "C" & "D", and conclude the bi-weekly data collection of all instrumentation on Dikes "C" & "D".

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/L MacPhee/R Clark/M Crouch	Report No: 197	Date: 04-01-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Meyers and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. MacPhee, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Ryan Clark and Mr. Mike Crouch, Technicians with Stantec, obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Clark and Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Clark and Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Clark and Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Clark and Mr. Crouch raised a settlement plate located on the Test Embankment. The settlement plate raised was SP-1.

Mr. Meyers and Mr. MacPhee obtained bi-weekly Stantec slope inclinometer readings. The SI's monitored were STN-15 and STN-8(A).

Mr. Meyers and Mr. MacPhee obtained Bi-Weekly Stantec water level reading from the PZ's on Dike "C". The PZ's monitored were STN-14, STN-15A1, STN-15A2, STN-15B, STN-26, STN-36, STN-37A1, STN-37A2, STN-37B, STN-48A1, STN-48A2, STN-48B, STN-47, STN-27A1, STN-27A2, and STN-27B.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	5:30 pm

7:00am – 5:30pm
Instrumentation and reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 04-01-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr.	**Date** 4-2-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 198	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 04-02-10	Day of the Week: Friday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/ Liam MacPhee

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers/Liam MacPhee	Report No: 198	Date: 04-02-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Meyers and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. MacPhee, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	6:00 pm

7:00am –6:00pm
Instrumentation and reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 04-02-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-23-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 199	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 04-03-10	Day of the Week: Saturday	
	Weather: Sunny	Temperature: 70's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/ Liam MacPhee

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and AECOM Instrumentation.

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers/Liam MacPhee	Report No: 199	Date: 04-03-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Meyers and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. MacPhee obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	6:00 pm

7:00am –6:00pm
Instrumentation and reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 04-03-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-5-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 200 Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 04-05-10	Day of the Week: Monday
	Weather: Sunny	Temperature: 80's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/ Liam MacPhee/Ryan Clark/Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and AECOM Instrumentation for the bi-weekly data.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/L MacPhee/R Clark/M Crouch	Report No: 200	Date: 04-05-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Ryan Clark and Mr. Mike Crouch, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Clark and Mr. Crouch obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Clark and Mr. Crouch obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Clark and Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Clark and Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Clark and Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Clark and Mr. Crouch raised PZ-12 located in the former Area "B".

Mr. Meyers and Mr. MacPhee obtained Bi-Weekly AECOM Slope Inclinometer readings. The SI's monitored were SI-500, SI-502, SI-408, SI-503, SI-404, SI-103, SI-900SH2, SI-101, SI-102, SI-106, and SI-109.

.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	5:00 pm

7:00am –5:00pm Instrumentation
5:00 pm-6:00 pm Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 4-5-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-6-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 201	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 04-06-10	Day of the Week: Tuesday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/ Liam MacPhee/Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and AECOM Instrumentation for the bi-weekly data.

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/L MacPhee/M Crouch	Report No: 201	Date: 04-06-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Mike Crouch, a technician with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Crouch obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Crouch obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Meyers and Mr. MacPhee obtained Bi-Weekly AECOM Slope Inclinometer readings. The SI's monitored were SI-211, SI-211(E1), SI-303(A), SI-301(E), SI-602, SI-603, and SI-605.

.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	6:30 pm

7:00am –5:00pm Instrumentation
5:00 pm-6:00 pm Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 4-6-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-7-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 202	Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)		
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748		
	Date: 04-07-10	Day of the Week: Wednesday	
	Weather: Sunny	Temperature: 80's	

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/ Liam MacPhee/Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and AECOM monitoring

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/L MacPhee/M Crouch	Report No: 202	Date: 04-07-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Meyers and Mr. MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. MacPhee obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Mike Crouch, a technician with Stantec, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Crouch obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Crouch obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Meyers and Mr. MacPhee obtained Bi-Weekly AECOM pneumatic PZ readings. The PZ's monitored were 101, 102, 103, 106, 109, 211, 303, 404, 408, 500, 502, 503, 600, 603, 604, and 605.

.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	6:30 pm

7:00am –5:00pm Instrumentation
5:00 pm-6:00 pm Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 4-07-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-8-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 203 Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 04-08-10	Day of the Week: Thursday
	Weather: Cloudy/Rain	Temperature: 60's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Mike Steele / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: C Meyers/ L MacPhee/R Clark/D Berryman

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/L MacPhee/R Clark/D Berryman	Report No: 203	Date: 04-08-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Ms. Darlene Berryman, a technician with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Ms. Berryman obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Ryan Clark, a technician with Stantec, obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers, Mr. MacPhee, and Mr. Clark obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Clark obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	5:00 pm

7:00am –3:00pm Instrumentation
3:00 pm-5:00 pm Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 4-08-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-9-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 204 Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 04-09-10	Day of the Week: Friday
	Weather: Sunny	Temperature: 60's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers / Liam MacPhee

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation

Stantec
1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers / Liam MacPhee	Report No: 204	Date: 04-09-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Chris Meyers and Mr. Liam MacPhee obtained daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained daily readings from Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. MacPhee obtained daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Chris Meyers and Mr. Liam MacPhee obtained daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Chris Meyers and Mr. Liam MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	5:00 pm

7:00am –3:00pm Instrumentation
3:00 pm-5:00 pm Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Liam MacPhee	**Date** 4-09-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-10-10

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 205 Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 04-10-10	Day of the Week: Saturday
	Weather: Sunny	Temperature: 70's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Liam MacPhee / Darlene Berryman

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation

Stantec

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Liam MacPhee / Darlene Berryman	Report No: 205	Date: 04-10-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

.
Ms. Darlene Berryman, a technician with Stantec, obtained the daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Ms. Berryman obtained the daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Liam MacPhee, a technician with Stantec, obtained the daily readings from the Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. MacPhee obtained the daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Liam MacPhee obtained the daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. MacPhee obtained the daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Liam MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	5:00 pm

7:00am –3:00pm Instrumentation
3:00 pm-5:00 pm Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Liam MacPhee	**Date** 4-10-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** G.A. "Skip" Layton, Jr. Assist. Q.C. Manager	**Date** 4-10-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 206 Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 04-12-10	Day of the Week: Monday
	Weather: Sunny	Temperature: 70's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/ Liam MacPhee

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and Stantec Instrumentation.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers/ Liam MacPhee	Report No: 206	Date: 04-12-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

.
Mr. Chris Meyers and Mr. Liam MacPhee, a technician with Stantec, obtained the daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Meyers and Mr. MacPhee obtained the daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. MacPhee obtained the daily readings from the Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. MacPhee obtained the daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Meyers and Mr. MacPhee obtained the daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. MacPhee obtained the daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Meyers and Mr. MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Meyers and Mr. MacPhee obtained Bi-Weekly Stantec Slope Inclinometer readings. The SI's monitored were B-1, B-2, B-3, B-4, and SI-11.

.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	6:30 pm

7:00am –6:30pm
Instrumentation and Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 4-12-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 4-14-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 207 Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 04-13-10	Day of the Week: Tuesday
	Weather: Sunny	Temperature: 80's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/ Liam MacPhee

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and Stantec Instrumentation.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: Chris Meyers/ Liam MacPhee	Report No: 207	Date: 04-13-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

.
Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained the daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Meyers and Mr. MacPhee obtained the daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Meyers and Mr. MacPhee obtained the daily readings from the Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Meyers and Mr. MacPhee obtained the daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Meyers and Mr. MacPhee obtained the daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. MacPhee obtained the daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Meyers and Mr. Liam MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Meyers and Mr. MacPhee obtained Bi-Weekly Stantec Slope Inclinometer readings. The SI's monitored were STN-71, STN-34, STN-69, and STN-18.

.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	6:30 pm

7:00am –6:30pm
Instrumentation and Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 4-13-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 4-14-10

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Owner: TVA – Tennessee Valley Authority	Project No.: 175669015	Rep No.: 208 Page No: 1 of 2
Distribution:	Project Name: Kingston – KIF, Test Embankment Program (KIF-IN-FR)	
	Location or Address: 1134 Swan Pond Rd Kingston, TN 37748	
	Date: 04-14-10	Day of the Week: Wednesday
	Weather: Sunny	Temperature: 80's

Client: TVA – Tennessee Valley Authority	Stantec Project Manager/Engineer: Don Fuller / Jim Andrew
General Contractor: TVA Civil Projects	Stantec Lab Supervisor: Terry Kephart
GC Rep.:	Stantec Field Representative: Chris Meyers/ Liam MacPhee/Ryan Clark/Mike Crouch

Specialty Contractor: [ ] Earthwork [ ] Concrete [ ] Other	Specialty Contractor Foreman:

Plans and Specifications: By: Stantec Consulting Services Date: June 3, 2009

Project Briefing: [X] Previously Reported	
By: Jim Andrew	
On: 8-09-09	

Contractor's Personnel Present/Equipment Observed in Use:	Stantec Equipment Used: Type/Model	Manufacturer	Ser. No./ID No.
	VW PZ Reader	Durham Geo	32890
	Water Level Indicator	Durham Geo	33293
	Pneumatic Indicator	Slope Indicator	22073

Visitor's Name	Representing	Arrive	Depart

Follow-up from prior report? [X] No [ ] Yes
Follow-up from report number

Did you observe everything you expected to? [ ] No [X] Yes

Did you observe anything unexpected? [X] No [ ] Yes

Did you see, hear, smell, or touch anything unusual or unexplained? [X] No [ ] Yes

What, in particular, should be observed, checked, or tested during the next visit? Daily Instrumentation and Stantec Instrumentation.

1409 North Forbes Road
Lexington, Kentucky 40511
Phone: (859) 422-3000
Fax: (859) 422-3100

Daily Field Report
Activities and Observations

Project Name: Kingston – KIF, Test Embankment Program	Project No: 175669015	Page No: 2 of 2
Stantec Field Representative: C Meyers/ L MacPhee/R Clark/M Crouch	Report No: 208	Date: 04-14-10

Field Observation/Contractor Activities and Discussions:
Indicate activities you did and did not observe.

.
Mr. Ryan Clark and Mr. Mike Crouch, technicians with Stantec, obtained the daily water level readings from the PZ's on Dike "C". The PZ's monitored were STN-2, STN-3A1, STN-3A2, and STN-3B.

Mr. Clark and Mr. Crouch obtained the daily water level readings from the PZ's on Dike "D". The PZ's monitored were PZ-1 (Dike "D"), PZ-2 (Dike "D"), PZ-3 (Dike "D"), PZ-4 (Dike "D"), PZ-5 (Dike "D"), PZ-6 (Dike "D"), PZ-7 (Dike "D"), and PZ-8 (Dike "D").

Mr. Chris Meyers and Mr. Liam MacPhee, technicians with Stantec, obtained the daily readings from the Slope Inclinometers. The SI's monitored were SI-1, SI-2, SI-3, SI-4(B), SI-5, SI-6, SI-7, SI-9, SI-10, and SI-12.

Mr. Crouch obtained the daily readings from the AECOM pneumatic PZ's 603 and 605.

Mr. Meyers and Mr. MacPhee obtained the daily readings from the vibrating wire piezometers located in the Test Embankment area. The PZ's monitored in that area were PZ-2, PZ-3, PZ-4, PZ-5, PZ-6 and PZ-7.

Mr. Meyers and Mr. MacPhee obtained the daily readings from the vibrating wire piezometers located in the former Area "B." The PZ's monitored in that area were PZ-9, PZ-11, PZ-12 and PZ-13.

Mr. Meyers and Mr. Liam MacPhee obtained daily readings from the vibrating wire piezometers PZ-R1, PZ-R2, PZ-R3, PZ-R4, PZ-R5 and PZ-R6 located in the Relic Area.

Mr. Meyers and Mr. MacPhee obtained Bi-Weekly Stantec Slope Inclinometer readings. The SI's monitored were STN-64(A) and STN-8(A).

.

Stantec Field Representative's Activities

Arrive	07:00 am
Depart	6:00 pm

7:00am –6:00pm
Instrumentation and Reporting

Notice:
Stantec professionals are represented on site solely to observe operations of the contractor identified, to form opinions about the adequacy of those operations, and to report those opinions to our client. The presence and activities of our field representative do not relieve any contractor from its obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods, operations and sequences of construction.

X **This Field Report is Preliminary** A preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.	**Stantec Field Representative** Chris Meyers	**Date** 4-14-10
X **This Field Report is Final** A final report is an instrument of professional service. Any conclusions drawn from this report should be discussed with and evaluated by the professional involved.	**Reviewed By** James Andrew, QC Manager	**Date** 4-15-10

Appendix F

Weekly Summary Reports

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: August 02, 2009 – August 08, 2009

GENERAL ACTIVITES:

1) Stantec mobilizing embankment team.
2) Familiarizing team with safety requirements for TVA in general and site specific requirements.
3) Setting up the onsite facilities for daily testing and monitoring requirements of the Test Embankment.
4) Reviewing the placement of the geogrid, stone and screening.
5) Developing offset data for use with the nuclear gauge to determine approximate moisture levels in the ash.
6) Developing a range of moistures in the ash that can be utilized based upon performance in the Test Embankment.
7) Conducting trainning of CP personel to assist them with the selection of materials to be loaded and transported to the test.
8) Developing protocol for the acquisition and transmission of required data from the monitoring equipment within the Test Embankment area daily.

SPECIFIC ACTIVITES:

9) Weekly project planning meeting with TVA, CP, Jacobs, and Stantec was held on 8/4/09.
10) CP requested that ash placement begin on the afternoon of 8/6/09. This request was rejected by Mr. Skip Layton due to limited subbase development and the surveying by TVA to document the subase not completed.
11) A called meeting to accelerate test embankment ash placement was held on 8/7/09. The TVA surveying schedule was modified and all required surveying prior to placing ash was completed by 12:00 PM on 8/7/09.
12) A proof-roll was performed on the Test Embankment where the subbase was complete. This area was adjacent to the west edge of Area “A” and approx. 90’ wide. The area passed the proof-roll and placement of ash began in this area.
13) Approx. 150 C.Y. of ash were placed in the Test Embankment on 8/7/09.
14) An additional area of completed subbase was tested and approved for ash placement on 8/8/09. This area was adjacent to the area approved on 8/7/09 and was approx. 110’ wide.
15) Total estimated volume of ash placed during the week was 1,200 C.Y.s.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: August 09, 2009 – August 15, 2009

GENERAL ACTIVITES:

1) Stantec is reviewing the continuing work on the stone subbase for Area "A" of the Test Embankment..
2) Stantec is developing a working protocol for ash moistures that can be handled in the Test Embankment.
3) Stantec is working with the CP operators to educate them on the conditions needed for the ash being transported to the Test Embankment.
4) Stantec is performing daily moisture and compaction sampling to develop a correllation between nuclear gauge test resuts and drive cylinder densities to provide required offsets.
5) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
6) TVA is conducting daily surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
7) Developing protocol for the acquisition and transmission of required data from the monitoring equipment within the Test Embankment area daily.
8) Developing the FTP site for the Test Embankment. Programing and displays are being adjusted to provide maximum usable date.

SPECIFIC ACTIVITES:

9) Stantec's drillers arrived on-site 8/10/09 to begin the installation of required monitoring equipment for Area "B" of the Test Embankment Program.
10) Weekly project planning meeting with TVA, CP, Jacobs, and Stantec was held on 8/11/09.
11) Jacobs halted drilling operations until crane mats could be installed in unstable areas. These mats are to be the working platforms for the drill rig.
12) Jacobs is beginning to develop plans for grading and drainage issues related to the Relic Placement Area and its' impact on the Test Embankment Program.
13) CP completed the subbase on approx. 75% of the remaining footprint for Area "A".
14) Stantec observed the proof-rolling of the completed subase and approved it for ash placement.
15) TVA conducted a topographic survey of the completed subbase for the record drawings.
16) Settlement plates SP-1 and SP-2 have been set and TVA has shot elevations on the base plates and top of monuments.
17) Temporary stormwater diversion ditching is being placed in the compacted ash as required to minimize surface erosion caused by rain events.
18) Ash placement for this period is estimated at 11,000 C.Y.s.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: August 16, 2009 – August 22, 2009

GENERAL ACTIVITES:

1) Stantec is reviewing the continuing work on the stone subbase for Area "A" of the Test Embankment..
2) Stantec is continuing to monitor the moisture content of ash being delivered to the Test Embankment.
3) Stantec is continuing to observe conditions of the ash being placed in stockpiles east of Dike 2 prior to loading for delivery to the Test Embankment..
4) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
5) TVA is conducting daily surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
6) Stantec is continuing to transmit data from the monitoring equipment within the Test Embankment area daily.
7) Temporary stormwater diversion ditching is being placed in the compacted ash as required to minimize surface erosion caused by rain events.
8) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

9) Weekly project planning meeting with TVA, CP, Jacobs, and Stantec was held on 8/18/09.
10) Stantec was notified that Area "B" of the Test Embankment Program may not be utilized for this study. TVA scheduling is breaking Area "B" out of the schedule and it will be shown as "On Hold".
11) The "Test Embankment Program" FTP Site became operational on 8/18/09. The first report is available for review. A link to the site has been sent to Ms. Julie Pfeffer, with Jacobs, for distribution.
12) Stantec's drillers completed the installation of instrumentation for Area "B" of the Test Embankment Program on 8/19/09. Instrumentation installed consists of 4 – Muti-set Vibrating Wire Piezometers, and 1 – Slope Inclinometer. Also, 2 Cone Penetrometer Test (CPT) borings were completed. Additional slope inclinometers could be installed in the future if Area "B" is developed for the purposes of this program.
13) CP completed the subbase for the remaining footprint of Area "A".
14) Stantec has observed the proof-rolling of the completed subase and approved it for ash placement.
15) TVA has conducted a topographic survey of the completed subbase for the record drawings.
16) An additional settlement plate SP-4 has been set south of PZ-6. TVA surveyors recorded elevations on the base plate and top of monument.
17) Ash placement for this period is estimated at 18,000 C.Y.s.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: August 23, 2009 – August 29, 2009

GENERAL ACTIVITES:

1) Stantec is monitoring the placement and compaction of ash in the Test Embankment.
2) Density and moisture testing is being performed daily.
3) Stantec continues to monitor stockpiles of ash east of Dike 2 prior to loading for transport to the Test Embankment.
4) Stantec is reviewing additional ash stockplies from areas around the site to assist CP with storage issues.
5) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
6) TVA is conducting daily surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
7) Temporary stormwater diversion ditching is being placed in the compacted ash as required to minimize surface erosion caused by rain events.
8) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

9) Weekly project planning meeting with TVA, CP, Jacobs, and Stantec was held on 8/25/09.
10) Stantec was notified that Area "B" of the Test Embankment Program will not be utilized as part of this study.
11) A new proctor has been developed for the material that is currently being placed. This was required due to a significant clay content that was observed in the material after rain events.
12) Settlement plate SP-1 has been extended due to fill placement and the exterior sleeve positioned to reduce surface friction on the monument has been installed. TVA surveyors recorded before and after elevations on the top of monument.
13) Ash placement in the Test Embankment has reached 5000 C.Y.s for a single day.
14) Ash placement for this period is estimated at 25,700 C.Y.s.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: August 30, 2009 - September 05, 2009

GENERAL ACTIVITES:

1) Stantec is monitoring the placement and compaction of ash in the Test Embankment.
2) Density and moisture testing is being performed daily.
3) Stantec continues to monitor stockpiles of ash east of Dike 2 prior to loading for transport to the Test Embankment.
4) Stantec is reviewing additional ash stockplies from areas around the site to assist CP with storage issues.
5) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area “A” of the Test Embankment.
6) TVA is conducting daily surveys of the baselines and settlement plates located within Area “A” of the Test Embankment.
7) Temporary stormwater diversion ditching is being placed in the compacted ash as required to minimize surface erosion caused by rain events.
8) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

9) Weekly project planning meeting with TVA, CP, Jacobs, and Stantec was held on 9/01/09.
10) Stantec requested the Armouring of the toe of the embankment below the rock working surface. This is to prevent the unconsolidated ash below the Test Embankment from being washed out and creating voids below the test area.
11) Stantec was provided a plan to improve vehicle decontamination along the MAP area. This would cause AECOM instrumentation to be lost. Stantec’s stated positon was that we would not give permission for instrumentation to be disturbed. Jacob’s would need to discuss this issue with AECOM and TVA to achieve a rsolution.
12) All piezometers and slope inclineometers on Dikes “C” & “D” where read on the biweekly schedule.
13) Stantec recorded 0.3” of rain on 9/2/09 and 0.1” rain on 9/3/09
14) Ash was placed on every day this week except Sat. 9/5/09 due to access issues and rutting of the Test Embankment.
15) Ash placement in the Test Embankment has reached 5700 C.Y.s for a single day.
16) Ash placement for this period is estimated at 20,500 C.Y.s.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: September 06, 2009 – September 12, 2009

GENERAL ACTIVITES:

1) Stantec is monitoring the placement and compaction of ash in the Test Embankment.
2) Density and moisture testing is being performed daily.
3) Stantec continues to monitor stockpiles of ash east of Dike 2 prior to loading for transport to the Test Embankment.
4) Stantec is reviewing additional ash stockplies from areas around the site to assist CP with storage issues.
5) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
6) TVA is conducting daily surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
7) Temporary stormwater diversion ditching is being placed in the compacted ash as required to minimize surface erosion caused by rain events.
8) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

9) Stantec was told by Ms. Julie Pfeffer of Jacobs that the activites on the West Embanment was a wet ash storage and could then be utilzed as a bank for ash required on the Test Embankment when material was either un available or did not meet the moisture requirements ot this test.
10) Weekly project planning meeting with TVA, CP, Jacobs, and Stantec was held on 9/08/09.
11) Stantec provided a sketch to Jacobs and CP of the armoring requested along the toe of the Test Embankment. Mr Jim Andrew and Mr. Skip Layton met with Mr. John Miller to discuss the limits of the armoring of the toe of the Test Embankment slope. Stantec was notified that the project estimate would be completed and materials ordered to begin this work the week of 9-14-09.
12) Stantec is working with the TVA surveying and CP to develop some correlation between the estimated 25 C.Y. per truck being utlized to give volumes of wet material being installed in the Test Embankment and the actual inplace compacted fill.
13) All piezometers and slope inclinometers installed by AECOM in the failed dredge where read on the biweekly schedule.
14) Stantec recorded 0.1" of rain on 9/7/09 and no ash was delivered on this date.
15) Ash was placed on every day this week except Mon. 9/7/09 due to rains and rutting of the Test Embankment.
16) Ash placement in the Test Embankment has reached 6900 C.Y.s for a single day.
17) Ash placement for this period is estimated at 26,000 C.Y.s.
18) Settlement Plate SP-5 was placed in the Relic Placement area on 9/11/09 to assist CP with data regarding the unconsolidated ash being placed to fill the ravine. Vibrating wire piezometers 12 & 13 installed by Stantec in the area adjacent to SP-5 will be added to the daily data collection.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: September 13, 2009 – September 19, 2009

GENERAL ACTIVITES:

1) Stantec is monitoring the placement and compaction of ash in the Test Embankment.
2) Density and moisture testing is being performed daily.
3) Stantec continues to monitor stockpiles of ash east of Dike 2 prior to loading for transport to the Test Embankment.
4) Stantec is reviewing additional ash stockplies from areas around the site to assist CP with storage issues.
5) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
6) TVA is conducting daily surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
7) Temporary stormwater diversion ditching is being placed in the compacted ash as required to minimize surface erosion caused by rain events.
8) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

9) Stantec was told by Ms. Julie Pfeffer of Jacobs that the activites on the West Embankment was a wet ash storage and could then be utilzed as a bank for ash required on the Test Embankment when material was either un available or did not meet the moisture requirements ot this test.
10) Weekly project planning meeting with TVA, CP, Jacobs, and Stantec was held on 9/08/09.
11) Stantec provided a sketch to Jacobs and CP of the armoring requested along the toe of the Test Embankment. Mr Jim Andrew and Mr. Skip Layton met with Mr. John Miller to discuss the limits of the armoring of the toe of the Test Embankment slope. Stantec was notified that the project estimate would be completed and materials ordered to begin this work the week of 9-14-09.
12) Stantec is working with the TVA surveying and CP to develop some correlation between the estimated 25 C.Y. per truck being utlized to give volumes of wet material being installed in the Test Embankment and the actual inplace compacted fill.
13) All piezometers and slope inclinometers on Dikes "C" & "D" where read on the biweekly schedule.
14) Stantec recorded 1.0" of rain on 9/16/09, 1.3" rain on 9/17/09 and 0.6" rain on 9/18/09. Note that the onsite rain gauge is read once every 24 hours. This reading occurs in the morning at approx. 8:00 AM.
15) Ash was placed on Monday and untill noon Tuesday when rains began.
16) Note: 12 trucks where used on 9/14/09 and 9 trucks where used on 9/15/09 for the placement of ash.
17) Ash placement in the Test Embankment has reached 5,400C.Y.s for a single day this week.
18) Ash placement for this period is estimated at 7,800 C.Y.s.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: September 20, 2009 – September 26, 2009

GENERAL ACTIVITES:

1) Stantec continues to search stockpiles of ash east of Dike 2 to check for suitabliity of the material for transport to the Test Embankment.
2) Stantec is reviewing additional ash stockplies from areas around the site to assist CP with storage issues.
3) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
4) TVA is conducting daily surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
5) Temporary stormwater diversion ditching is being placed in the compacted ash as required to minimize surface erosion caused by rain events.
6) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

7) Due to rains and the lack of a work package, no work on the toe armoring occurred during this week.
8) No ash was placed on the Test Embankment due to excessive rainfall during the week and high moisture content in the ash that has been delivered to the site without any processing.
9) All piezometers and slope inclinometers installed by AECOM in the failed dredge cell were read on the biweekly schedule.
10) Stantec recorded 1.5" of rain for 9/20-21/09, 0.9" rain on 9/22/09 and 2.0"" rain on 9/26-27/09. Note that the onsite rain gauge is read once every 24 hours. This reading occurs in the morning at approx. 8:00 AM. The only exception is 48 hour readings from Saturdays to Mondays.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: September 27, 2009 – October 03, 2009

GENERAL ACTIVITES:

1) Stantec is continuing to work with Jacobs to find time critical ash sources that can be utilized for fill in the Test Embankment.
2) For the purposes of this test Stantec has expanded the the range for acceptable moisture levels in the fly ash being placed in the Test Embankment to a maximum of 30%.
3) With a higher moisture levels for the fly ash the test embankment is being utilized as a processing area to help dry the ash and obtain the required 90% compaction.
4) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area “A” of the Test Embankment.
5) TVA surveyors are conducting daily surveys of the baselines and settlement plates located within Area “A” of the Test Embankment.
6) Temporary stormwater diversion ditching is being placed in the compacted ash as required to minimize surface erosion caused by rain events.
7) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

8) Stantec is still waiting on a schedule from CP for the armoring of the toe of the Test Embankment.
9) The new plan has been developed for controlling erosion on the surface of the Test Embankment, this consists of the installation of line channels running north and south and spaced equally across all of Area “A”. CP is to review the channel spacing to be consistent with the needs of equipment being utilized.
10) Fly ash fill was placed in the Test Embankment five of six working days.
11) On October 1 the tractor pulled scraper pans began being utilized to remove material from the relic area and place it in the Test Embankment.
12) All piezometers and slope inclinometers installed by Stantec a long Dike's “C”. and “D”. were read on the biweekly schedule.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: October 04, 2009 – October 10, 2009

GENERAL ACTIVITES:

1) Stantec has been evaluating material that is considered time critical from the Ball Field and is utilizing this material to supplement with Relic material.
2) Stantec is reviewing additional ash stockplies from areas around the site to assist CP with storage issues.
3) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
4) TVA is conducting daily surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
5) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment.

SPECIFIC ACTIVITES:

6) The rains again prevented construction of the armoring of the toe of the Test Embankment.
7) Ash was only placed on two days this week with the average being approximately 2500 C.Y.s per day.
8) All piezometers and slope inclinometers installed by AECOM in the failed dredge cell were read on the biweekly schedule.
9) Stantec is attempting to do an equivalency analysis for the volume of ash being hauled by the tractor pulled scrapers versus the articulated dump trucks. CP utilizes 25 C.Y.s per load for articulated dump trucks and 36 C.Y.s per load for the tractor pulled scrapers utilizing two pans each.
10) Three of the storm water management channels have been installed on the Test Embankment and with the recent rain has shown to be effective in limiting erosion of the surface. Additional fill placement is required to create the minimum contouring needed to maximize the effectiveness of these drainage channels.
11) Stantec was put on notice by Jacobs that the priority currently on site was that all suitable ash was to be shipped by rail car off-site. This would mean that the Test Embankment would only get fly ash that fell within the required moisture ranges if a surplus exists beyond the needs of the shipping operations.
12) Stantec was asked to redefine the parameters of the Test Embankment and to attempt to utilize ash with a moisture level in excess of 30%.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: October 11, 2009 – October 17, 2009

GENERAL ACTIVITES:

1) Stantec continues to search stockpiles of ash east of Dike 2 to check for suitabliity of the material for transport to the Test Embankment.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area “A” of the Test Embankment.
3) TVA is conducting daily surveys of the baselines and settlement plates located within Area “A” of the Test Embankment.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) No ash was placed on the Test Embankment due to excessive rainfall during the week and high moisture content in the ash that has been delivered to the site without any processing.
6) Stantec specifically asked Jacobs for permission to utilize Relic material for building the Test Embankment since Jacobs has designated that all suitable ash on site would be utilized for loading of trains and shipment off-site.
7) The armoring of the toe of the Test Embankment is once again held up due to weather. CP is generating a schedule and is dedicated to installing the armoring as soon as conditions allow.
8) Piezometer's PZ-1 and PZ-8 have been automated and their data is downloaded automatically to an FTP site.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: October 18, 2009 – October 24, 2009

GENERAL ACTIVITES:

1) Stantec is reviewing all sources of ash for compliance with the test conditions on the embankment.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
3) TVA is conducting surveys of the baselines and settlement plates located within Area "A" of the Test Embankment each day that fill is placed.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) Due to rains no work on the toe armoring occurred during this week.
6) No ash was placed on the Test Embankment due to excessive rainfall during the week and high moisture content in the ash that has been delivered to the site without any processing.
7) As conditions allow repairs have been made on the Test Embankment due to erosion. The channels that have been installed on the surface of the test embankment are functioning well but on the 3:1 slope to the toe of the embankment these channels are being undermined. The severity of the washes is less than what has been previously observed with out these drainage improvements in place.
8) Stantec was requested to locate fly ash in the ball field to help with overloading and to be prepared to utilize this material in the Test Embankment.
9) During the weekly progress meeting for the test embankment Jacobs outlined priorities for the site as follows:
    - Removal of ash from the River
    - Removal of ash from the sluice trench.
    - Ash to be loaded onto trains and transferred offsite.
    - Articulated trucks would be dedicated to removing ash from the East Embayment.
    - The lowest site priority was the construction of the Test Embankment without utilizing time critical ash.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: October 25, 2009 – October 31, 2009

GENERAL ACTIVITES:

1) Stantec continues to find sufficient quantities of time critical ash to be utilized in the construction of the Test Embankment. These efforts are limited by the requirements that Jacobs has placed on the shipment of suitable moisture content material off-site.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
3) TVA is conducting surveys on a daily basis after the placement of fill in the Test Embankment along the baselines and settlement plates located within Area "A" of the Test Embankment.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) Ash was placed on the Test Embankment five of the six working days. All of this ash material came from the Relic Area, with the concurrence and permission of Jacobs, and was transported to the Test Embankment utilizing tractor pulled scraper pans
6) The Test Embankment surface is being prepared daily by use of dozers scraping off excessive moisture and tracking the surface in preparation for the new material being placed.
7) Insufficient quantities of ash material with a moisture content below 30% are available and all time critical ash that meets this criteria is being shipped off-site.
8) All articulated trucks are being utilized to move fly ash directly to the loading operations related to the rail shipping of this material off-site.
9) On Friday evening October 30, 2009 all fill placement activities related to the Test Embankment were stopped. This action was triggered when multiple instruments on the site exceeded the 15% alarm level that was established in the QC manual. This action was due to increasing pore pressures resulting in pressure ratios exceeding the alarm threshold.
10) Stantec will immediately begin a stability analysis for the Test Embankment relative to the data that was collected and an enhanced schedule for data collection will begin immediately.
11) Stantec has also been asked by TVA to perform a complete stability analysis related to all activities currently underway in the failed dredge cell. To enhance the data that is available Stantec will start reading all instruments in the failed dredge cell daily.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: November 01, 2009 – November 07, 2009

GENERAL ACTIVITES:

1) Stantec has begun daily evaluations of ash material located inside the Ball Field.
2) Stantec is reviewing additional ash stockplies from areas around the site to assist CP with storage issues.
3) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area “A” of the Test Embankment.
4) TVA is conducting daily surveys of the baselines and settlement plates located within Area “A” of the Test Embankment.
5) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

6) From October 31 through November 3 no work was allowed on the Test Embankment pending the results of the stability analysis.
7) Stantec completed the stability analysis for the Test Embankment and with the reduction in pore pressure and the results of the stability analysis, filling operations resumed on November 4, 2009.
8) All other activities within the failed dredge cell have been stopped pending the outcome of Stantec's overall stability analysis of the wet storage operations and any construction that was being performed.
9) Ball Field and Relic material are being utilized in the compacted fill of the Test Embankment.
10) The storm water drainage channels have performed admirably during the recent heavy rains and the only washing is on the slope or water has penetrated the geotextile fabric. CP is attempting to repair erosion on the slopes at these locations with dry ash compacted in place utilizing excavators for all placement and compaction activities.
11) The armoring of the toe of the Test Embankment is still being pursued by Stantec and a schedule for this construction is to be generated. Since this armoring has yet to occur discussions are underway regarding cost versus need. Jacobs has requested that Stantec agree to remove the recommendation for this armoring.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: November 08, 2009 – November 14, 2009

GENERAL ACTIVITES:

1) Stantec is evaluating daily time critical ash that's located in the Ball Field and attempting to coordinate with Jacobs and CP to provide equipment and manpower necessary to have this material brought to the Test Embankment.
2) Stantec is also evaluating moisture on stockpiles located east of Dike “T2”.
3) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area “A” of the Test Embankment.
4) TVA surveying is conducting surveys after the placement of ash along of the baselines and settlement plates located within Area “A” of the Test Embankment.
5) Stantec is evaluating the maintenance requirements of the Test Embankment relative to erosion.
6) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

7) Ash was able to be placed during this week four out of six working days. Rainfall during the middle of the week required CP to scrape the surface of the Test Embankment to remove excess moisture and prepare the surface for placement of additional fill.
8) As a point of caution, fill activities on the eastern 25% of the Test Embankment have been suspended until porepressures dissipate. The elevated pore pressures appear to be a direct result of processing and stockpiling activities in the Valley Area adjacent to the Test Embankment.
9) Stantec is continuing to perform multiple stability analyses for activities inside the failed dredge cell. TVA surveying has provided cross-sections of all wet storage areas.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: November 15, 2009 – November 21, 2009

GENERAL ACTIVITES:

1) Stantec conducts a daily search for suitable ash materials in the Ball Field. Suitable materials are deemed to have a moisture content less than 30%.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
3) TVA is conducting daily surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) Fill was placed on the test embankment five of six working days this week. Overnight rains on Friday created conditions that were not suitable for placement of material on Saturday.
6) The preliminary report for the shutdown of activities on the Test Embankment on October 30, 2009 has been completed and copies have been submitted to Jacobs and TVA for review.
7) All wet storage activities adjacent to the Test Embankment in the failed dredge cell have been terminated pending the results of the Stantec stability analysis.
8) Jacobs has requested that Stantec concur with the removal of stockpiled materials in the Valley processing area and provide written verification of that concurrence.
9) The material that is currently available in the Ball Field has a very high sand to ash ratio and is having a negative affect on the placement of materials in the Test Embankment.
10) Ash from the Valley Area processing has been utilized predominantly for the fill material in the Test Embankment. This material is being transported to the Test Embankment by sideloading the tractor pulled pan scrapers.
11) Jacobs has directed that time critical ash be utilized for the fill of the Test Embankment and the use of Relic material is only for supplemental purposes.
12) Armoring of the toe of the Test Embankment has been postponed until all slope repairs that are required have been completed.
13) The Test Embankment has reached its first milestone on fill placement. The height of the fill has reached the first bench and TVA surveying has set toe and crest staking for the final grading of this level and the beginning of the next tier.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: November 22, 2009 – November 28, 2009

GENERAL ACTIVITES:

1) Stantec is providing a daily evaluation of materials that are available in the Ball Field and their suitability for placement in the Test Embankment. Jacobs and CP are coordinating the removal of the materials from the Ball Field and the transportation to the Test Embankment
2) Stantec is reviewing additional ash stockplies from areas around the site to assist CP with storage issues.
3) Stantec is collecting data daily from the piezometers and slope inclinometers located within the Test Embankment.
4) TVA is conducting daily surveys of the baselines and settlement plates located within Area “A” of the Test Embankment.
5) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

6) This is a short week due to the Thanksgiving holiday and fill placement occurred in the Test Embankment two of the three working days this week.
7) Jacobs has agreed that material in the Ball Field that could be utilized for loading trains can now be brought to the Test Embankment..
8) Materials in the ball field currently have a high sand content and therefore the 30% moisture requirement for a suitable ash material does not apply. The higher the sand content of the ash material, the lower the moisture content of this material needs to be to perform properly in the Test Embankment. New proctors have been established to determine density requirements for this blended material.
9) The armoring of the toe of the Test Embankment has been placed on hold. This construction may be required at a future date.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: November 29, 2009 – December 05, 2009

GENERAL ACTIVITES:

1) Ash from the ball field is being brought to the Test Embankment utilizing articulated off-road trucks. This activity is concurrent with loading operations for the railcars and the off-site shipping.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
3) TVA is conducting daily surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
4) Permanent storm water structures are being recommended for construction on the Test Embankment.
5) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

6) Ash was placed in the Test Embankment from the relic area and the Ball Field three of the five working days this week.
7) Stantec requested additional equipment be utilized to bring material to the Test Embankment. Jacobs directed CP to divert articulating off-road trucks from their activities where they are assisting Sevenson with the hauling of materials from Dragline Road. These trucks could therefore be used to bring material to the Test Embankment from the Ball Field.
8) Stantec is working with CP to install permanent drainage structures on the first bench of the test embankment to transfer water from this level to the toe of the embankment without eroding slopes.
9) CP is completing the final grading operations regarding the first bench of the Test Embankment.
10) Stantec was notified that approximately 12,000 C.Y.s of ash that was being processed in the Valley Area has been spread out over the Valley Area and is to be utilized as fill in the Test Embankment when moisture levels are consistent with the embankment requirements.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: December 06, 2009 – December 12, 2009

GENERAL ACTIVITES:

1) Stantec is accepting ash from the Ball Field that has been deemed suitable to load onto rail cars and ship off-site. Jacobs is responsible for making this determination and Stantec will evaluate the materials being delivered to the Test Embankment on a case-by-case basis.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within the Test Embankment.
3) TVA is conducting surveys, as ash is being placed, of the baselines and settlement plates located within the Test Embankment.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) Ash placement in the Test Embankment occurred four of the six working days available this week.
6) TVA stopped all work on the Kingston site, due to high water levels along the river and overall site safety issues, at 9:30 AM Tuesday, December 8, 2009. Normal activities resumed on Thursday, December 10 at 1:30 PM..
7) Stantec requested additional manpower and equipment be provided for transporting suitable materials to the Test Embankment. As this equipment is made available Stantec will review all sources for ash meeting the project requirements.
8) Jacobs again requested that Stantec review the material that had been spread in the Valley Area the previous week. This material was tested by Stantec and currently the moisture content is in excess of the 30% maximum that has been established for placing materials in the Test Embankment. Stantec will continue to review this material.
9) Permanent drainage structures are being constructed at the first bench of the test embankment and repairs are being made on slope erosion as required.
10) The schedule for the completion of the Test Embankment has been discussed and it has been determined that the embankment will be considered complete when it reaches its final design height of 802 ft. Based on current fill rates, the estimated schedule to reach that file elevation would be approximately the end of January, 2010.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: December 13, 2009 – December 19, 2009

GENERAL ACTIVITES:

1) Stantec has been assisting Jacobs in locating suitable materials for for use in the Test Embankment.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within the Test Embankment.
3) TVA is conducting surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) Due to extensive rainfall and moisture levels in excess of 30% in the available ash materials, ash placement in the Test Embankment occurred on only two of the six working days this week.
6) Stantec again requested that additional equipment be utilized for the purpose of transporting suitable ash material to the Test Embankment. CP provided assurances that a minimum of four articulating trucks and three tractor pulled scrapers would be available for this task.
7) CP will begin maintenance issues regarding slopes that have washed and as soon as these washes are repaired CP will coordinate with Jacobs to have the slopes hydro-seeded to minimize future washes.
8) Currently slope inclinometer SI-4 is showing instabilities directly related to erosion along the toe of the Test Embankment. This erosion has been caused by the failure to finish the construction of the permanent drainage structures on the first bench.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: December 20, 2009 – December 26, 2009

GENERAL ACTIVITES:

1) Stantec is assisting Jacobs in locating suitable material in the Ball Field for placement in the Test Embankment.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
3) TVA surveying is conducting surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
4) Stantec is working with TVA surveying to assist CP with final grading and drainage construction.
5) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

6) This is a short work week due to the Christmas holidays; however, placement of ash was able to be accomplished even during wet rainy periods for two of the three working days this week.
7) Stantec has asked for additional articulated dump trucks to allow for the maximum placement of fill material on a daily basis. Currently the number of trucks employed to bring material to the Test Embankment is insufficient to maximize the production.
8) CP has been requested to complete the construction of the permanent drainage ruptures necessary on the test embankment first bench level to minimize erosion.
9) The surface of the Test Embankment was saturated this week and the surface layer of the embankment was pushed up the side slope of the relic area to facilitate dewatering of this material. This activity lasted one day and the material was returned to its original placement in the embankment. This also allowed for the placement of additional fill materials on the dewatered subgrade.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: December 27, 2009 – January 02, 2010

GENERAL ACTIVITES:

1) Stantec is assisting in the location of suitable materials meeting the project requirements inside the Ball Field area that can be transported to the Test Embankment.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
3) TVA is conducting daily surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) This was a short work week due to the New Year's holiday, but ash placement did occur on three of the four working days this week. The ash was obtained from the Relic Area and the Ball Field.
6) Stantec again requested additional equipment for transporting ash to the Test Embankment to allow for the maximum daily placement of material. Jacobs requested that CP divert trucks currently being utilized for transporting ash to the railcar loading activities and provide additional material to the Test Embankment.
7) CP is continuing to build permanent drainage structures inside the limits of the test embankment to minimize erosion.
8) During the weekly progress meeting for the Test Embankment Jacobs requested a timeline regarding the testing requirements and duration on the Test Embankment after the completion of all filling activities. Stantec anticipates monitoring all instrumentation on the completed Test Embankment for a period of approximately 4 weeks.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: January 03, 2010 – January 09, 2010

GENERAL ACTIVITES:

1) Stantec reviews ash stockpiles in the Ball Field on a daily basis and notifies Jacobs and CP of the material that is suitable to be transported to the Test Embankment.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within the Test Embankment.
3) TVA is conducting surveys of the baselines and settlement plates located within Area “A” of the Test Embankment.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) Fill was able to be placed in the Test Embankment and compacted every day of this work week
6) Stantec again requested that additional trucks be made available for hauling suitable ash material from the Ball Field to the Test Embankment to maximize the daily placement rates. Truck availability this week has increased over previous weeks but is still not sufficient to produce the maximum daily placement of ash.
7) A new volume milestone has been reached in the placement of ash in the Test Embankment. It is currently estimated at 200,000 C.Y.s of compacted ash have been placed in the Test Embankment.
8) Drainage structures have been completed this week and all repairs to the lower slopes of the Test Embankment have also been completed. All of this work has been hydro-seeded to minimize future slope maintenance requirements.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: January 10, 2010 – January 16, 2010

GENERAL ACTIVITES:

1) Stantec has been providing daily reviews of stockpiles in the Ball Field area for for use as fill in the Test Embankment. Jacobs and CP coordinated the loading and transporting of suitable ash to the Test Embankment.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within the Test Embankment.
3) TVA is conducting daily surveys of the baselines and settlement plates located within Area “A” of the Test Embankment.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) Ash was placed in the Test Embankment all six working days this week. Sufficient equipment has been dedicated to the placement of fill material and the volumes exceeded an average daily fill rate of 5000 C.Y.s.
6) Stantec's drill crew was on site for the installation of the second round of CPT's and installation of SI-6 and SI-7. All drilling was completed this week with the exception of CPT-4. This site could not be accessed due to excessively wet and soft conditions at the toe of the Test Embankment.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: January 17, 2010 – January 23, 2010

GENERAL ACTIVITES:

1) Stantec is reviewing additional ash stockplies from areas around the site to assist CP with storage issues.
2) Stantec is continuing to seek out suitable materials for placement in the Test Embankment. The materials currently found in the Ball Field have moisture levels that are consistently running at 30% or greater.
3) Stantec is collecting data daily from the piezometers and slope inclinometers located within the Test Embankment.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) No ash was placed on the Test Embankment due to excessive rainfall during the week and material placed previously in a frozen state has now begun to thaw out. The moisture in this material has been brought to the surface with the use of equipment tracking across the embankment.
6) The estimated fill for the Test Embankment currently stands at 250,000 C.Y.s.
7) Stantec's drill rig officially left site January 19, 2010.
8) Due to increasing pore pressures on the west side of the Test Embankment, on January 21, 2010, Stantec decided to stop all filling operations on the west half of the project. This area is defined as everything west to the instrument line created by PZ-3 and PZ-8. The stability analysis for this area will be performed and the results will determine how work on the west half of the Test Embankment will proceed.
9) Based on current weather conditions and daily volumes that have been brought to project when conditions allowed, it is estimated that the Test Embankment will reach the 802 ft. design elevation on or about mid February.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: January 24, 2010 – January 30, 2010

GENERAL ACTIVITES:

1) Stantec is continuing to evaluate ash stockpiles in the Ball Field and the East Embayment to determine suitability for placement in the Test Embankment.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area “A” of the Test Embankment.
3) CP is continuing to process the surface of the test embankment to force moisture to the surface by utilizing dozer is tracking across the embankment.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) A total of 31 loads of fly ash were placed on the test embankment this week. This was caused by the excessive moisture at the surface of the material previously placed. This material is being bladed often six-inch lifts and moved to the bench areas to aid with the dewatering.
6) Stantec is observing lime modification applications along Dragline Road and in the West Embankment to determine the feasibility of performing lime stabilization on the surface of the Test Embankment.
7) The preliminary stability analysis has determined that the the safety factor on the West side of the Test Embankment is less than the 1.5 established by TVA guidelines. A formal report will be submitted the first week of February.
8) Mactec is installing new piezometer locations across the relic area. As each installation is completed Stantec will rewire the new piezometer's to be consistent with the piezometer's already installed on the Test Embankment and began reading these instruments immediately.
9) A review of the current surface conditions of the test embankment indicate that the completion date for this project should be extended through the month of February. This estimated completion is contingent upon weather, equipment and material.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: January 31, 2010 – February 06, 2010

GENERAL ACTIVITES:

1) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment and the Relic Area.
2) TVA is conducting surveys as requested of the baselines and settlement plates located within the Test Embankment.
3) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

4) Due to weather conditions it has not been possible to dry out the surface of the Test Embankment to allow for continued placement of ash.
5) Lime modified ash has again been discussed but no resolution has been accepted. CP continues to dewater the surface of the Test Embankment utilizing dozers tracking the material and forcing the water to the surface.
6) CP began the construction of a new permanent drainage structure on the north side of the Test Embankment in the middle of the first terrace. The structure is a swale approximately 50 feet long, 20 feet wide, and 3 feet deep. Two 10-inch HDPE pipes or used as effluent discharges to convey all work collected down to the toe of the embankment without erosion.
7) The formal report has been submitted to TVA regarding the stabilization of the West side of the Test Embankment. This report requires that all work stop until a sand buttress can be constructed all at the toe of the embankment. Sand buttress would be a 50 feet wide platform at the toe of the slope and begin on the west side of the embankment at elevation 754 ft. and continue along the North face of the embankment until it ties back into elevation 754 ft.
8) This report has to be submitted to TDEC by TVA for their concurrence and approval prior to any construction beginning in this area.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: February 7, 2010 – February 13, 2010

GENERAL ACTIVITES:

1) Stantec has continued to evaluate stockpiles of ash inside the Ball Field to determine suitability for placement in the Test Embankment.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
3) TVA is conducting surveys as requested of the baselines and settlement plates located within the Test Embankment.
4) Stantec is monitoring storm water structures within the Test Embankment and requesting CP to complete construction of the agreed-upon BMPs.
5) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

6) Due to weather conditions drying of the surface of the Test Embankment has not been possible; however, CP has been working the surface on a regular basis to force moisture to the top of the ash and by the end of this work week conditions were suitable to resume placement of ash on the east half of the Test Embankment. Ash from the Ball Field was placed on Friday and Saturday of this week.
7) Discussions have been held with Jacobs to formulate a plan for lime modification on the surface of the Test Embankment. Jacobs is to coordinate all environmental issues with TVA and acquire their concurrence with these activities.
8) Jacobs has incorporated a grading plan into the required buttress for the west side of the Test Embankment. This modification has been submitted to TDEC for their consideration and approval.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: February 14, 2010 – February 20, 2010

GENERAL ACTIVITES:

1) Jacobs has taken over the activity of finding suitable material in the ball field the may be utilized in the Test Embankment and meets the requirements of the QC plan.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within the Test Embankment.
3) TVA is conducting surveys as requested of the baselines and settlement plates located within Area "A" of the Test Embankment.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) In an attempt to make up for the poor weather conditions and the high moisture content of the ash in the Test Embankment work has begun on a seven day per week schedule. Placement of ash began on Sunday, February 14, 2010 but had to be halted at midday due to excessive moisture in the ash being brought to the Test Embankment from the Ball Field.
6) Stantec attempted to find suitable ash in the Ball Field for utilization as fill in the Test Embankment. No material could be found that was either fly ash with less than 30% moisture or a sand/fly ash mixture that had a moisture content of less than 25%. Since no suitable material was available, CP utilized the remainder of the week to repair and clean up the side of the Test Embankment.
7) Lime modification of ash on the Test Embankment was again discussed but no plan has been developed for the actual operations.
8) The West side of the Test Embankment is still off-limits pending the construction of the buttress at the toe to improve the stability of this area.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: February 21, 2010 – February 27, 2010

GENERAL ACTIVITES:

1) Jacobs has taken over the responsibility of finding suitable ash in the Ball Field for placement on the Test Embankment in accordance with the QC plan.
2) Stantec is reviewing any ash coming to the Test Embankment from the Ball Field on a load by load basis.
3) Stantec is collecting data daily from the piezometers and slope inclinometers located within Area "A" of the Test Embankment.
4) TVA is conducting surveys, as ash placement occurs, along the established baselines and settlement plates located within the Test Embankment.
5) Stantec is reviewing erosion issues and repairs daily on the east side of the Test Embankment.
6) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

7) On Sunday, February 21, 2010 ash from the Ball Field was again placed on the Test Embankment but due to excessive moisture and this material the Test Embankment had to be closed and the material processed on site until Thursday, February 25, 2010 when placement of relic material resumed in the Test Embankment .
8) Jacobs concur that the material in the ball field was not suitable for a compacted fill as required in the Test Embankment and therefore CP utilized excavators and articulating dump trucks to remove material from the relic area to the Test Embankment for placement. This activity occurred for the rest of the week and the dry ash from the relic material was incorporated with the Ball Field material and stabilized.
9) CP decided to attempt a lime stabilization test in the West Embankment prior to attempting any lime modification on the Test Embankment. This test was a failure from the standpoint of dust control and all operations were required to be halted in the West Embankment.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: February 28, 2010 – March 06, 2010

GENERAL ACTIVITES:

1) Jacobs review of ash materials in the Ball Field has been extended to Dragline Road in an attempt to find suitable material for the Test Embankment.
2) Stantec is reviewing any time critical material that is being brought to the Test Embankment on a load by load basis.
3) Stantec is collecting data daily from the piezometers and slope inclinometers located within the Test Embankment.
4) TVA is conducting surveys as requested of the baselines and settlement plates located within Area “A” of the Test Embankment.
5) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

6) Material being loaded by excavators from the relic area is being placed in the test embankment and production is back to an acceptable 4500 C.Y.s minimum per day placement rate.
7) Lime modified material from the East Embayment's Mt Caramel stabilization activities began being received at the Test Embankment on Monday, March 1, 2010.
8) TVA initiated a site wide safety stand down on Wednesday, March 3, 2010. Work was not resumed until 1:30 PM on Thursday, March 4, 2010. This stand down was in response to an on-site accident. The time during the stand down was utilized to review all JHA's and re-evaluate work schedules and potential hazards that could be encountered due to weather and fatigue.
9) Additional material is now being brought to the Test Embankment from Sevenson's operations in the Ball Field and Dragline Road. All of these materials have been lime modified and are being reviewed on a load by load basis for placement.
10) The piezometer's on the east side of the Test Embankment have begun to show elevated pressures that could be related to filling activities either on the Test Embankment or any adjacent Valley Area. A stability analysis will be performed by Stantec to determine what course of action if any is required at this time.
11) The results of the stability analysis determined that no action was required but close attention will be paid to all instruments in this area and any changes will trigger another round of analyses.
12) Lime stabilization of the actual Test Embankment surface is now a dead issue. With the acceptance of lime stabilized materials from the East Embayment incorporated with Relic material it was determined that the off-site processing was sufficient to continue allowing placement of ash in the Test Embankment.
13) Without approval fromTDEC regarding the construction of the buttress at the toe the Test Embankment, all fill in the east side of the Test Embankment will be complete within four days and all operations will have to be suspended.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: March 07, 2010 – March 13, 2010

GENERAL ACTIVITES:

1) Jacobs continues to evaluate time critical ash sources on Dragline Road and the Ball Field for placement in the Test Embankment per the requirements of the QC plan.
2) Stantec is reviewing all materials coming from Sevenson operations on a load by load basis.
3) Stantec is collecting data daily from the piezometers and slope inclinometers located within the Test Embankment.
4) TVA is conducting daily surveys of the baselines and settlement plates located within Area "A" of the Test Embankment.
5) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

6) Materials being placed in the Test Embankment are a mixture of Relic material, lime modified material from the East Embayment, and the lime modified materials from the Ball Field and Dragline Road. This stream of material is creating a placement rate of approximately 4200 C.Y.s per day and with the limited space on the east side of the Test Embankment the 802 ft. finish elevation was reached on March 10, 2010.
7) On March 8, 2010 TVA received TDEC approval for the construction of the buttress along the north and west sides of the Test Embankment. Work on this buttress began on March 12, 2010.
8) Upon the completion of the buttress and CP furnishing and as built survey work will resume on placing fill material on the west side of the Test Embankment.
9) CP asked Stantec to be able to utilize dry ash material adjacent to the toe of the Test Embankment in lieu of the dredged sand that was used in the design calculations for the stability buttress construction. Stantec evaluated this request and determined that the placement of the ash was an equivalent in the buttress construction to the sand and therefore this request was approved.
10) The increase for pressures on the east side of the Test Embankment have begun to subside and are not a cause for concern at this time. Stantec will however continue to monitor all activity in both areas to ensure that the stability of the Test Embankment and the Valley Area are not compromised

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: March 14, 2010 – March 20, 2010

GENERAL ACTIVITES:

1) Jacobs continues to evaluate ash stockpiles along Dragline Road and in the Ball Field for conformance with the requirements of the QC plan for the Test Embankment.
2) Stantec is observing the construction activities of the buttress along the west and northwest toe of the Test Embankment.
3) Stantec is collecting data daily from the piezometers and slope inclinometers located within the Test Embankment.
4) CP is performing basic maintenance and housekeeping activities on the east side of the Test Embankment.
5) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

6) In preparation for the completion of the buttress and the resumption of fill placement on the west side of the Test Embankment density testing was performed across the remaining surface of the project area.
7) CP completed the construction of the Test Embankment buttress at the 758 ft. contour on March 18, 2010. And as built survey was provided to Stantec on this date.
8) Placement of ash on the west side of the Test Embankment resumed on March 19, 2010. The ash came from the Relic Area, lime modified material from Dragline Road, and lime modified material from the East Embayment.
9) Based on the availability of material the current completion schedule that brings the entire test embankment to the final 802 ft. finish elevation is the end March.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: March 21, 2010 – March 27, 2010

GENERAL ACTIVITES:

1) Jacobs continues to evaluate ash stockpiles along Dragline Road and in the Ball Field for conformance with the requirements of the QC plan for the Test Embankment.
2) Stantec is collecting data daily from the piezometers and slope inclinometers located within the Test Embankment.
3) CP is performing basic maintenance and housekeeping activities on the east side of the Test Embankment.
4) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

5) Filling operations on the west side of the Test Embankment were performed from Sunday through Tuesday of this week. A placement rate of approximately 4000 C.Y.s per day was obtained.
6) Stantec had to request that no additional material be brought to the Test Embankment from the Sevenson operations due to excessive moisture that was creating problems with the placement and compaction of the material in the Test Embankment.
7) On Wednesday, March 25, 2010, TVA initiated a safety stand down for the entire site and no work was accomplished on this day.
8) CP graded the eastern side of the test embankment and have the entire surface area rolled with a smooth drum to seal the surface from absorbing excess moisture.
9) The remainder of this week was subjected to rain that saturated the sub grade of the test embankment and no additional ash could be placed.

WEEKLY SUMMARY REPORT

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, TN

DATE: March 28, 2010 - April 3, 2010

GENERAL ACTIVITES:

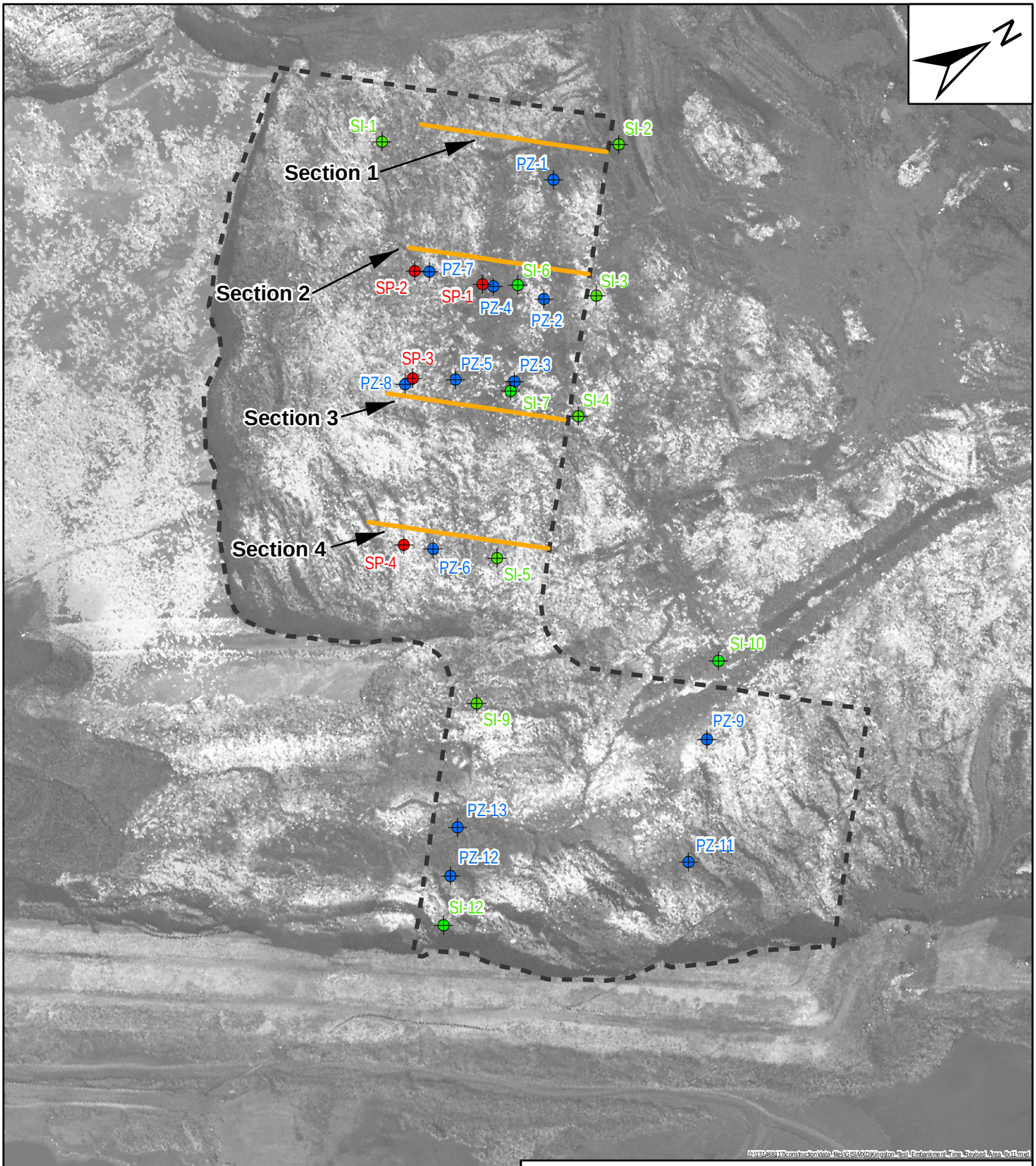
1) Stantec is collecting data daily from the piezometers and slope inclinometers located within the Test Embankment.
2) CP is performing basic maintenance and housekeeping activities on the entrie area of the embankment.
3) Stantec is collecting the daily instrumentation data from the Test Embankment.
4) Density testing is being performed on a lift by load basis due to the restricted size of the area for placement of fill multiple testing is done daily.
5) Stantec is maintaining an FTP site for posting the reduced data collected from the Test Embankment monitoring equipment.

SPECIFIC ACTIVITES:

6) Final placement of ash on the west side of the Test Embankment occurred on Friday, April 2, 2010. These final 16 truck loads brought the finished elevation to an elevation of 802 ft. across the entire embankment.
7) Field contouring of the finished surface to provide controlled drainage was completed on Saturday, April 3, 2010.
8) CP utilized multiple dozers to finish grade and dress all slopes and benches on the Test Embankment.
9) Stantec had coordinated with Jacobs for the hydro-seeding of the finished slopes, benches, and surfaces.
10) Stantec has scheduled the final CPT testing to begin on Monday, April 5, 2010.
11) With the completion of the CPT's all activities on the Test Embankment will cease other than normal maintenance related items.
12) Stantec will continue to do daily data collection from all instruments on the Test Embankment until April 30, 2010. This data will be included as an addendum to the final Test Embankment report.
13) This is the last summary report that will be generated.

Appendix G

Summary Instrumentation Data Report



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)
- Settlement Plate (SP)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

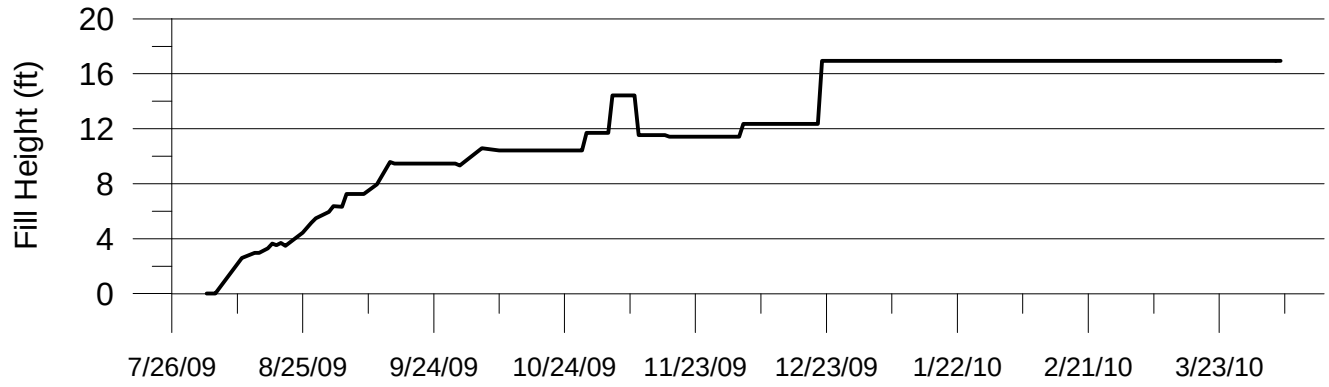
DRAWN BY:	MEP	PROJECT NO.	175669015	DATE:	February 10, 2010
CHECKED BY:	JWA	SCALE:	1" = 200'		

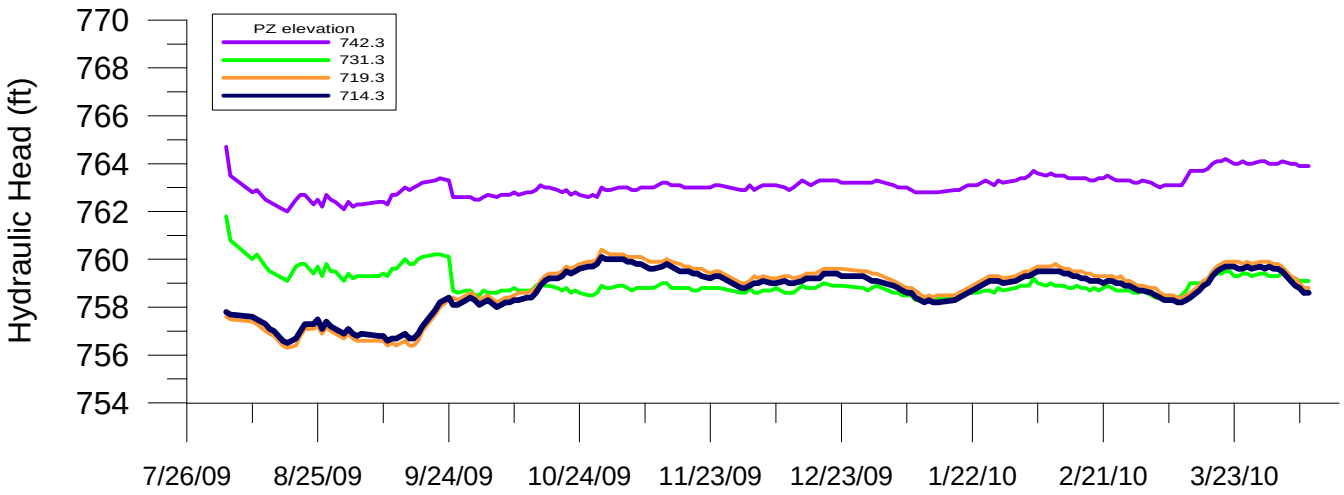
Stantec

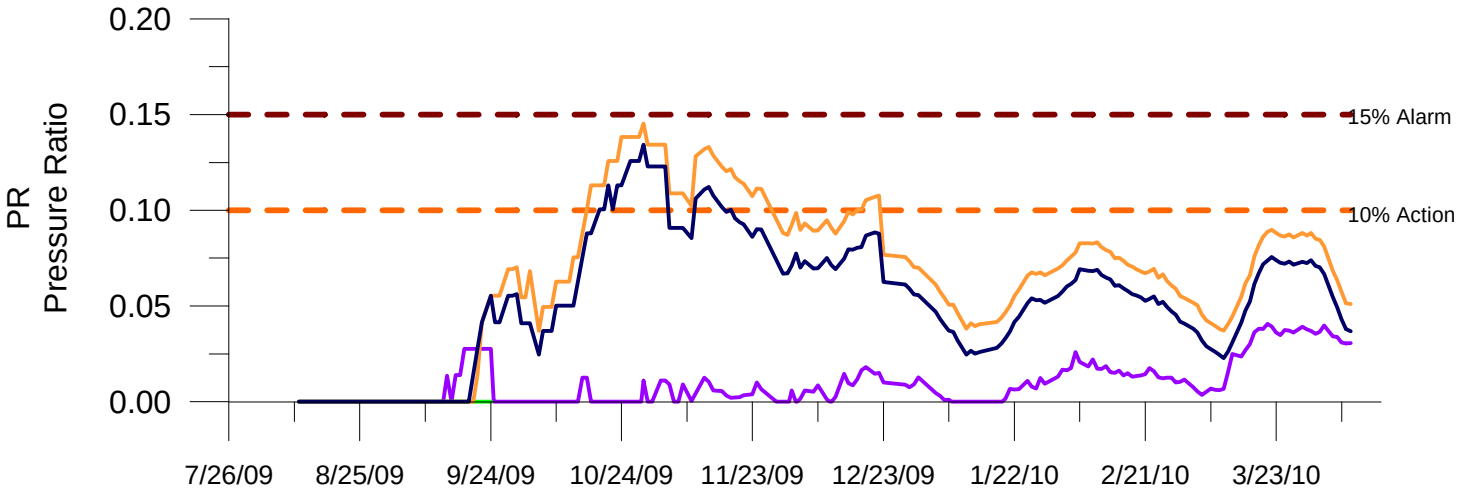
Kingston Test Embankment
175669015

Survey Section 1

PZ-1







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

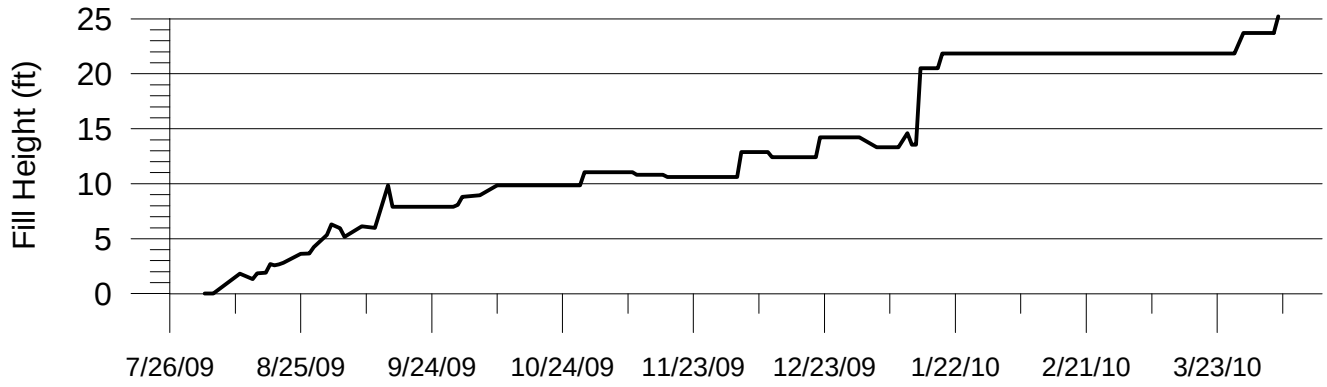
* △Z= Fill Height x 110 (pcf)

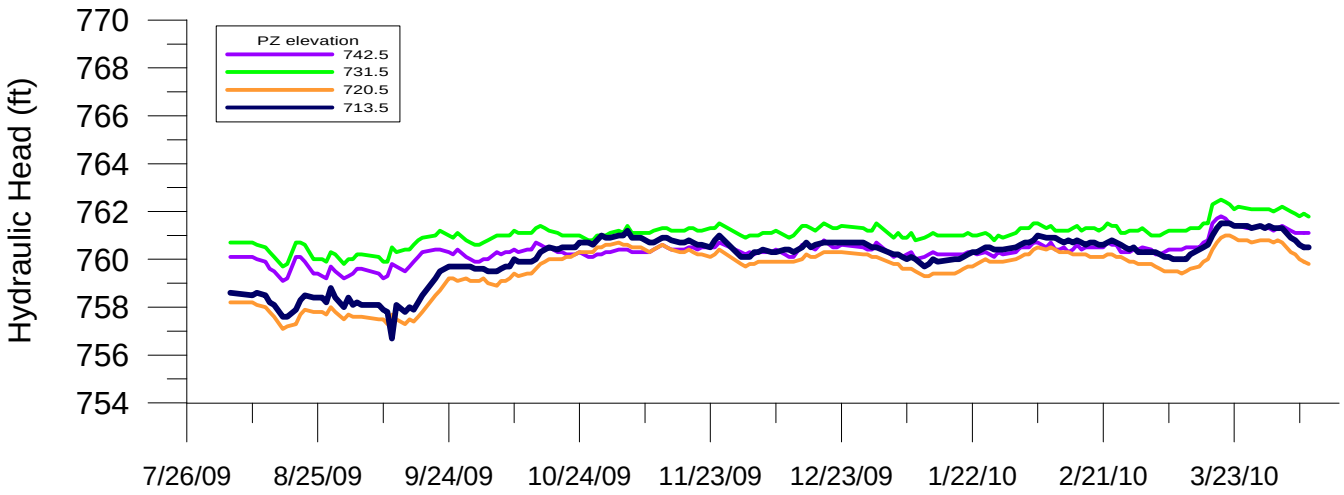
Stantec

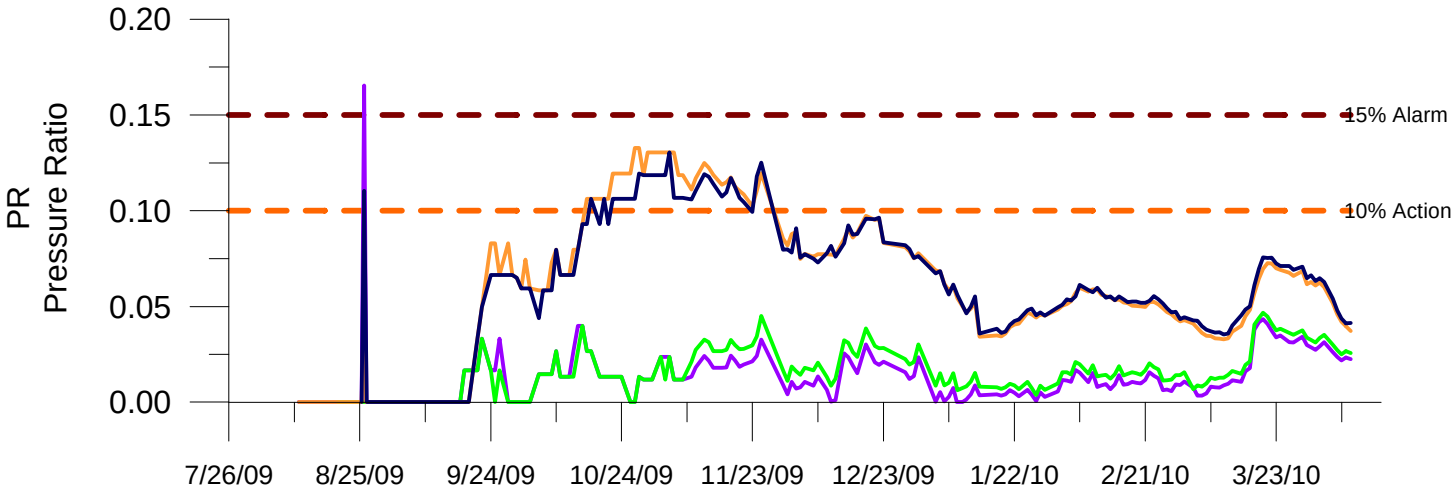
Kingston Test Embankment
175669015

Survey Section 2

PZ-2







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

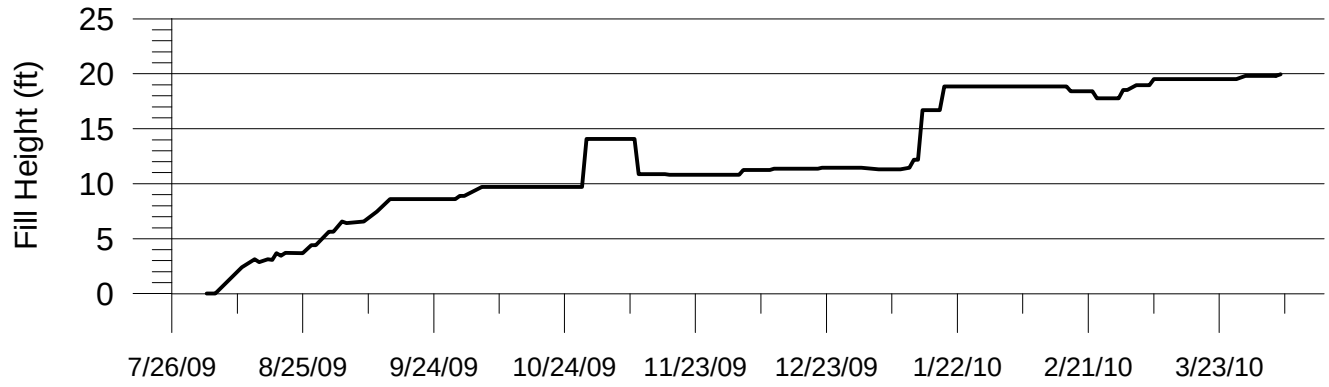
* △Z= Fill Height x 110 (pcf)

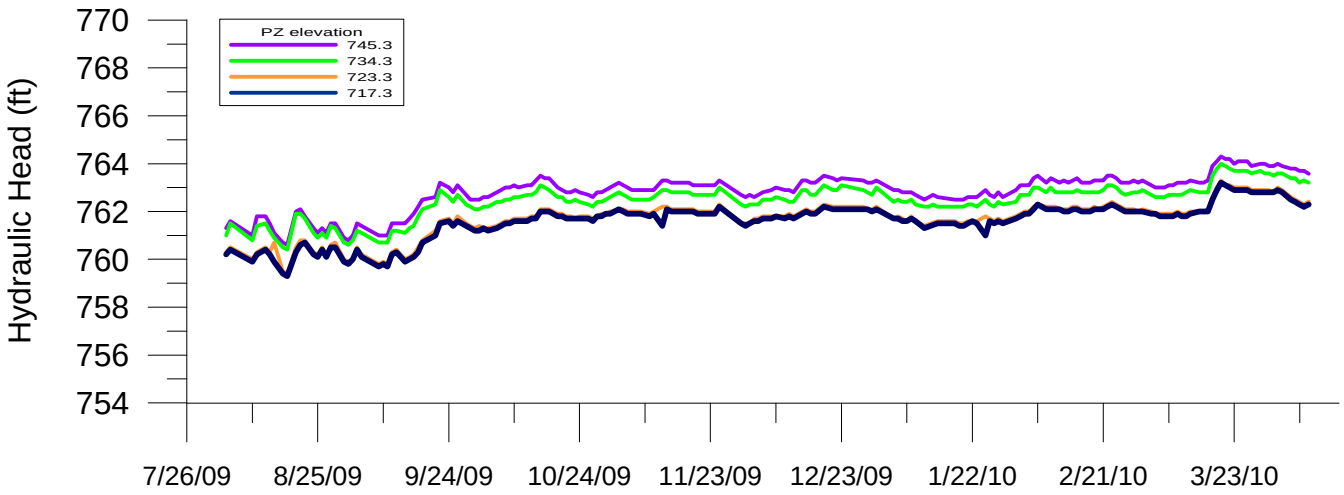
Stantec

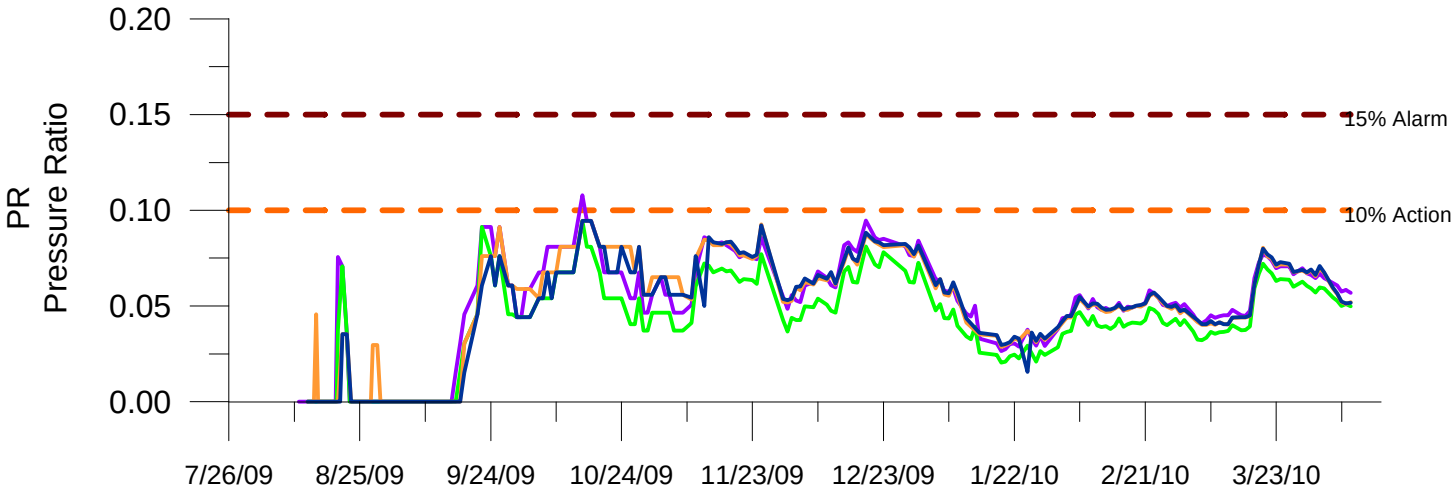
Survey Section 3

Kingston Test Embankment
175669015

PZ-3







* PR(Pressure Ratio) = △U/△Z

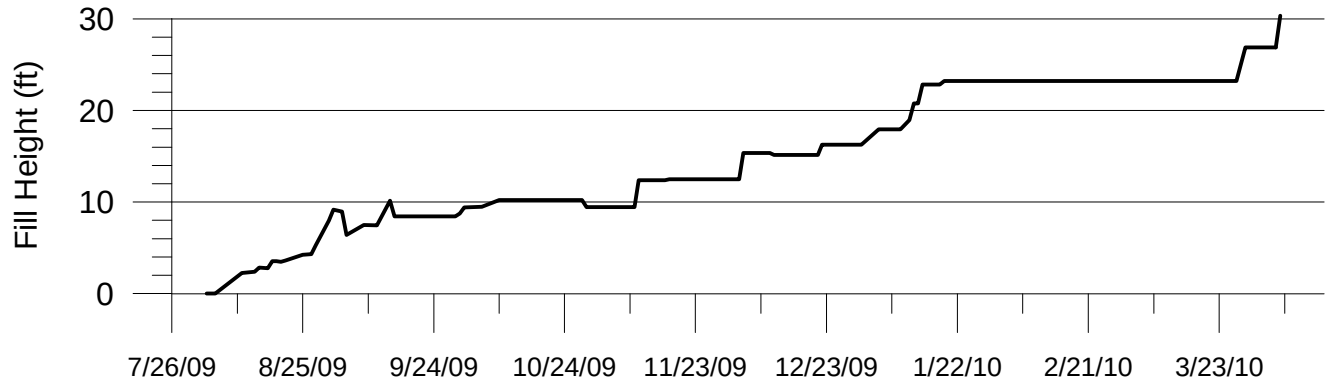
* △U= Change in Pore Pressure (psf)

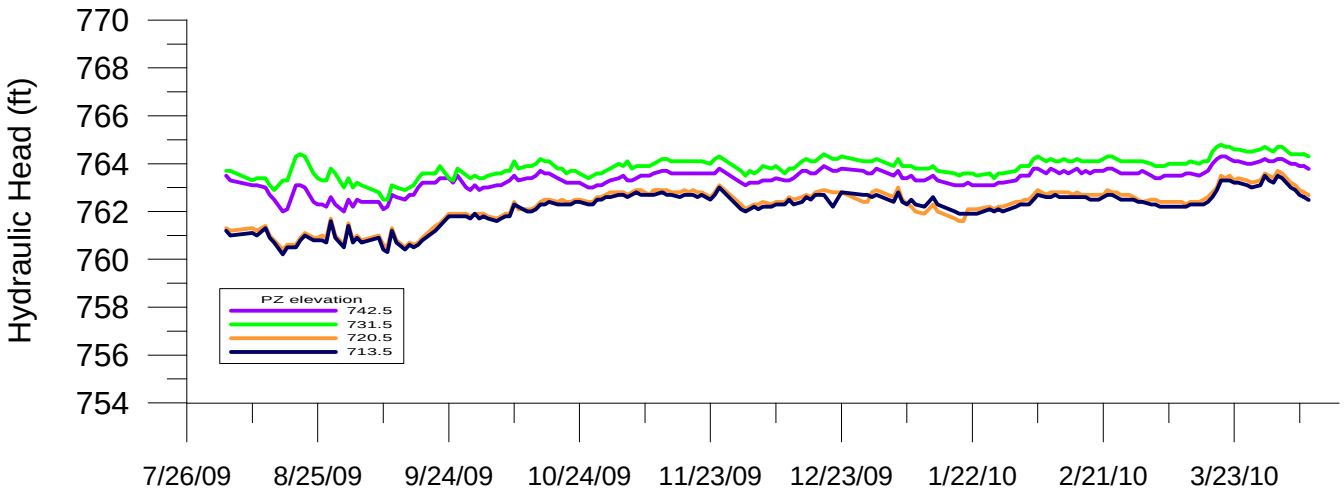
* △Z= Fill Height x 110 (pcf)

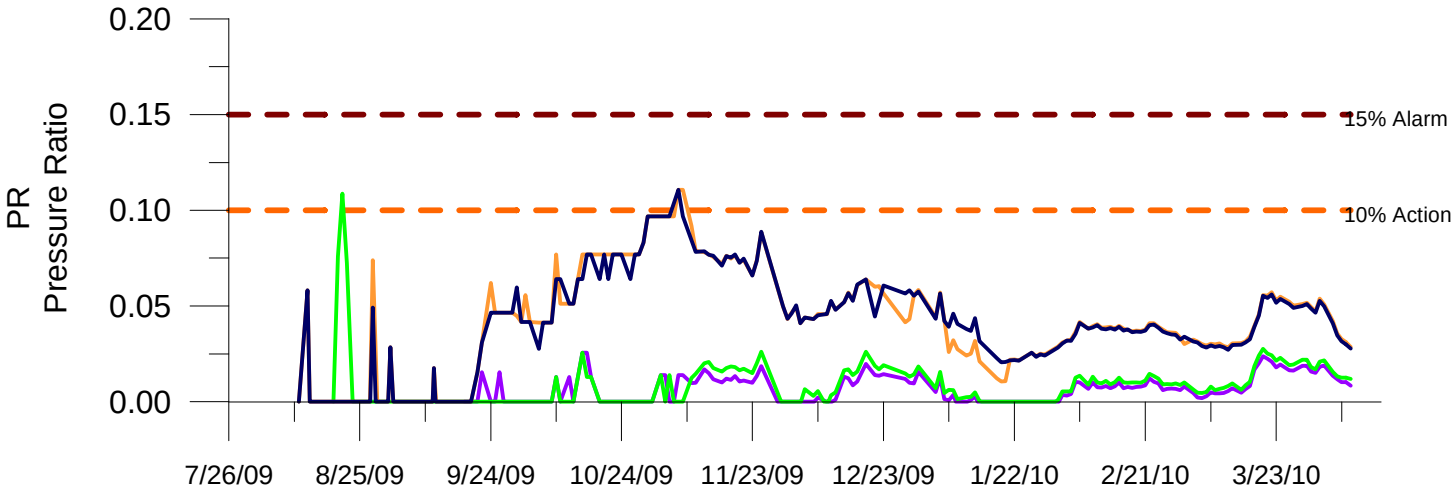
Survey Section 2

Kingston Test Embankment
175669015

PZ-4







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

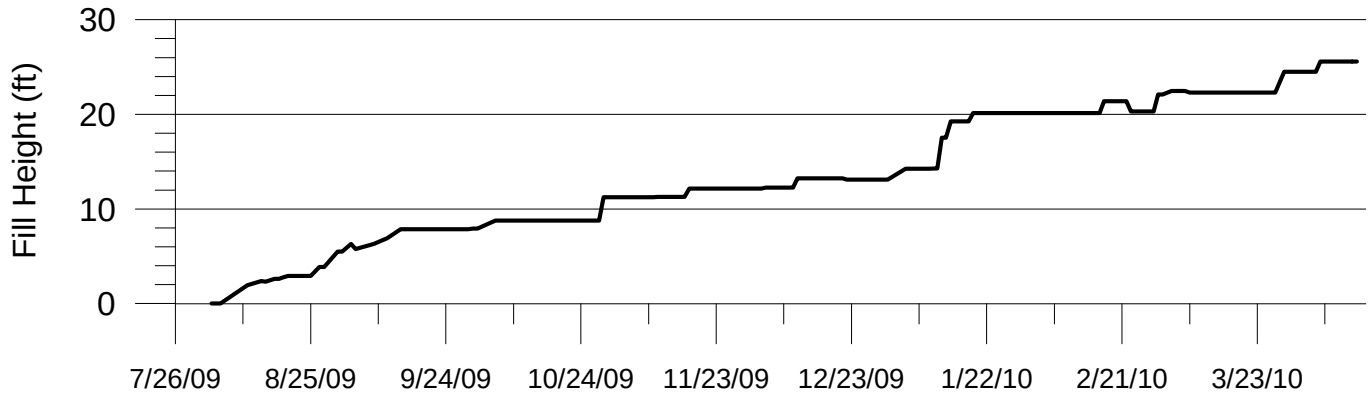
* △Z= Fill Height x 110 (pcf)

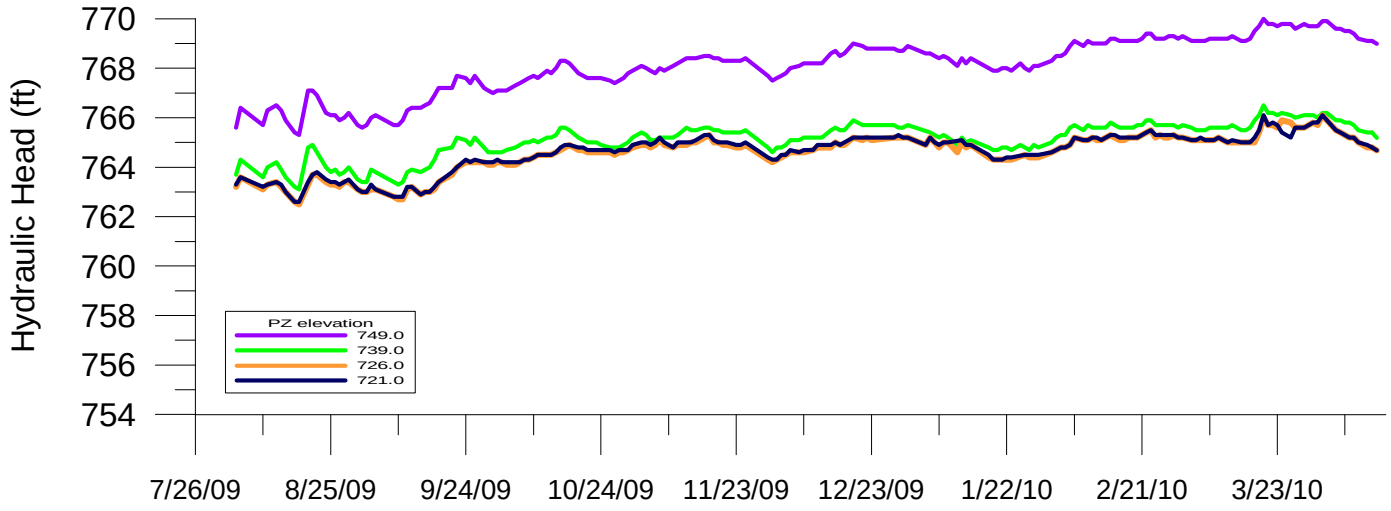
Stantec

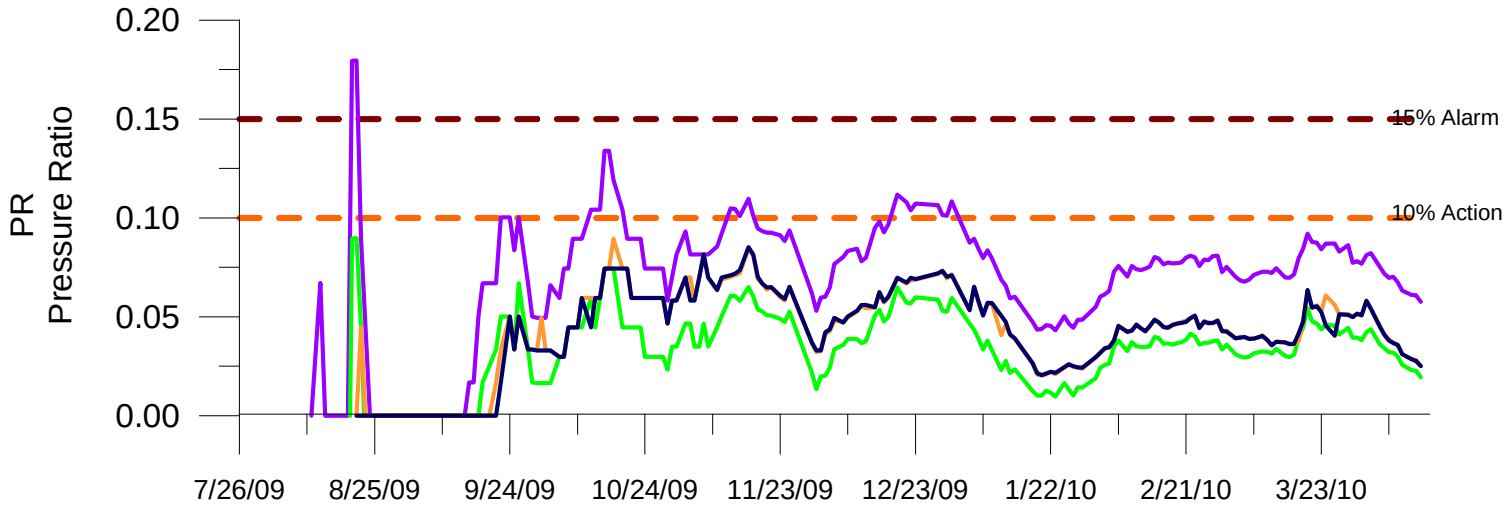
Kingston Test Embankment
175669015

Survey Section 3

PZ-5







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

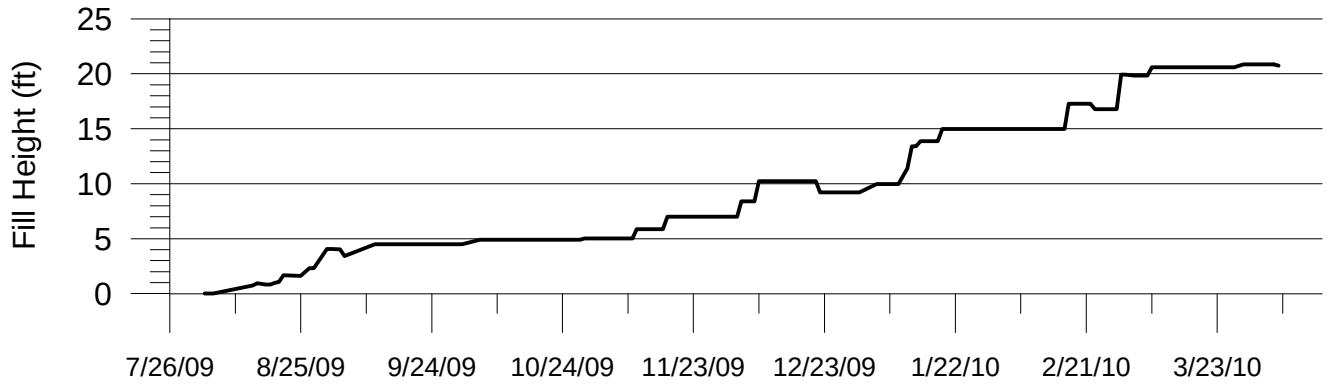
* △Z= Fill Height x 110 (pcf)

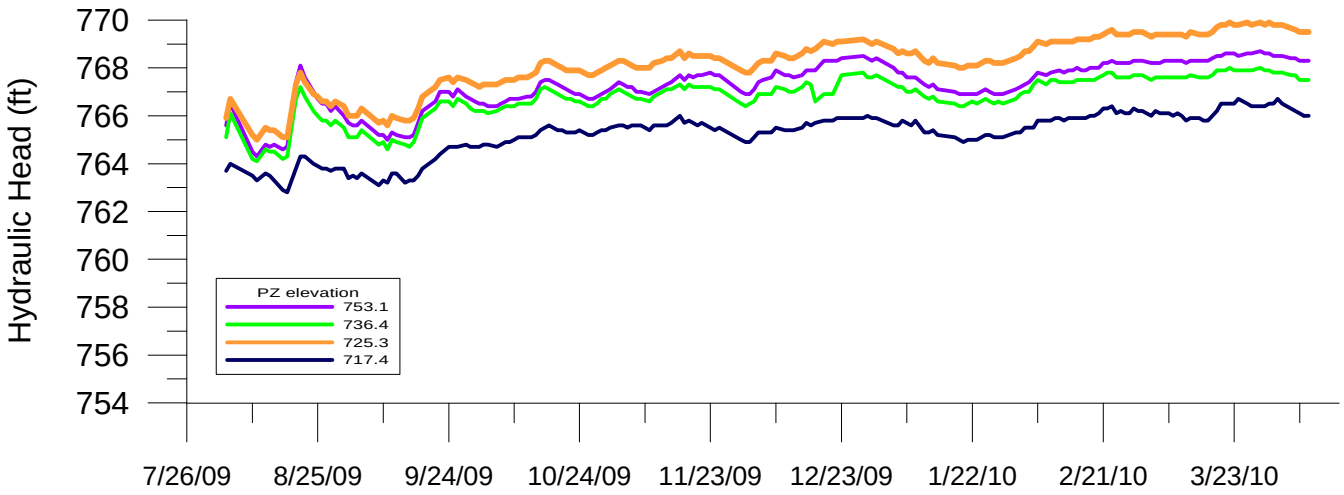
Stantec

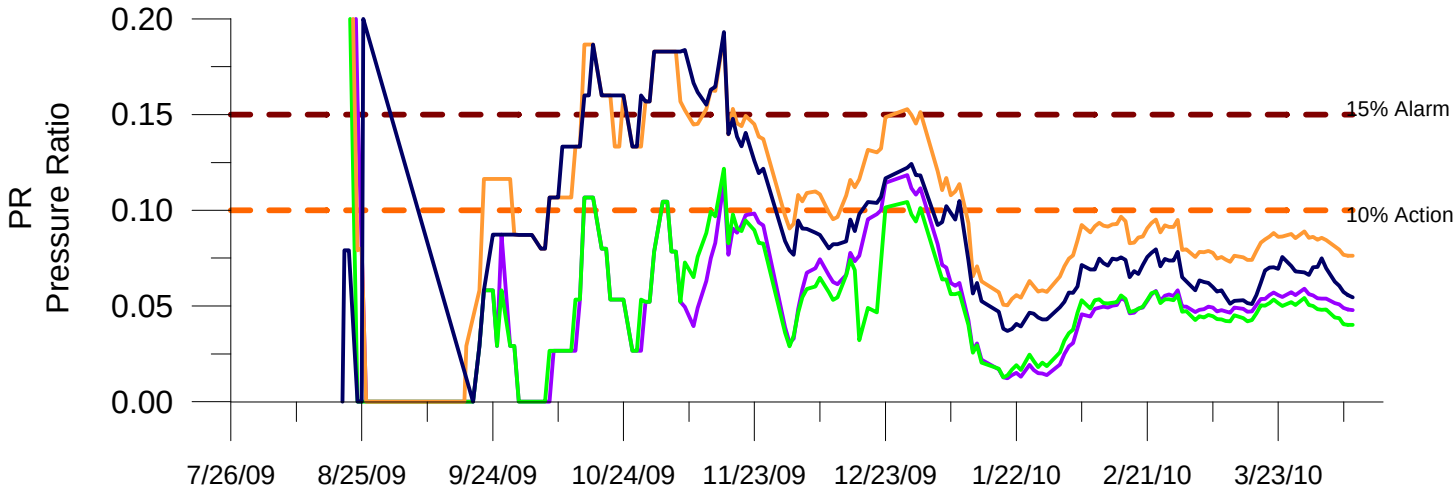
Kingston Test Embankment
175669015

Survey Section 4

PZ-6







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

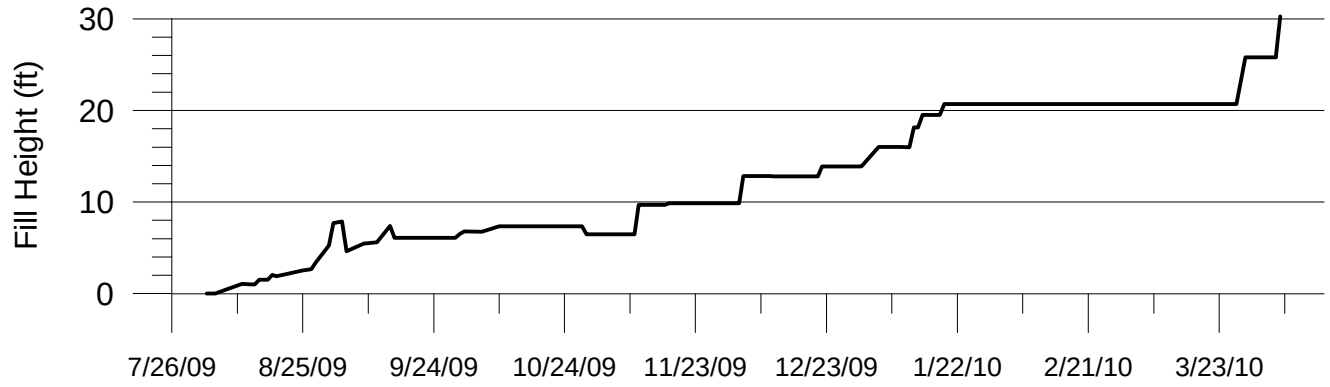
* △Z= Fill Height x 110 (pcf)

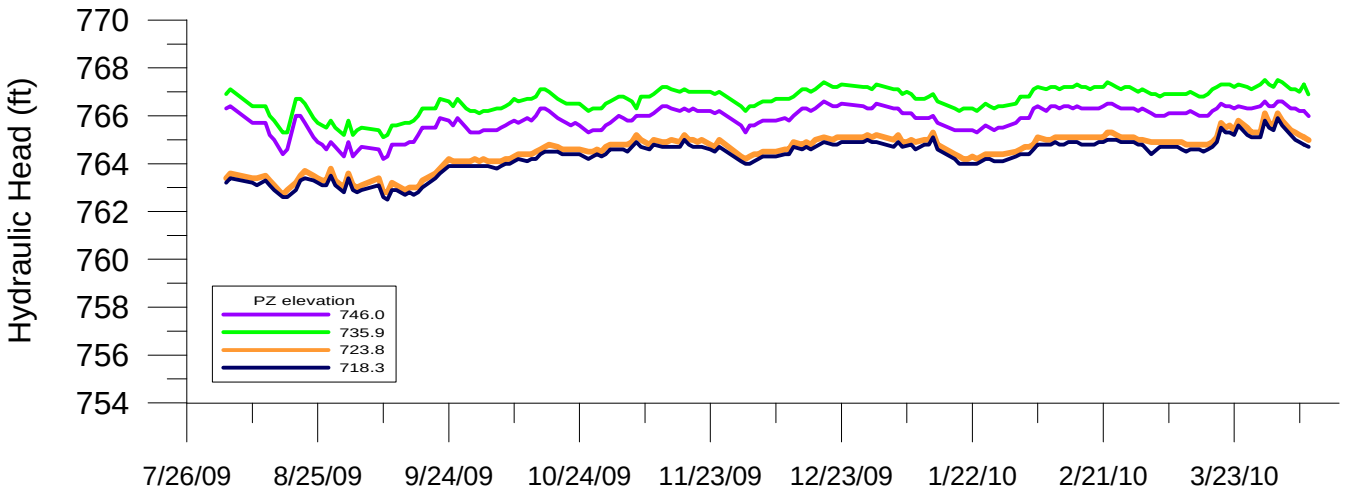
Stantec

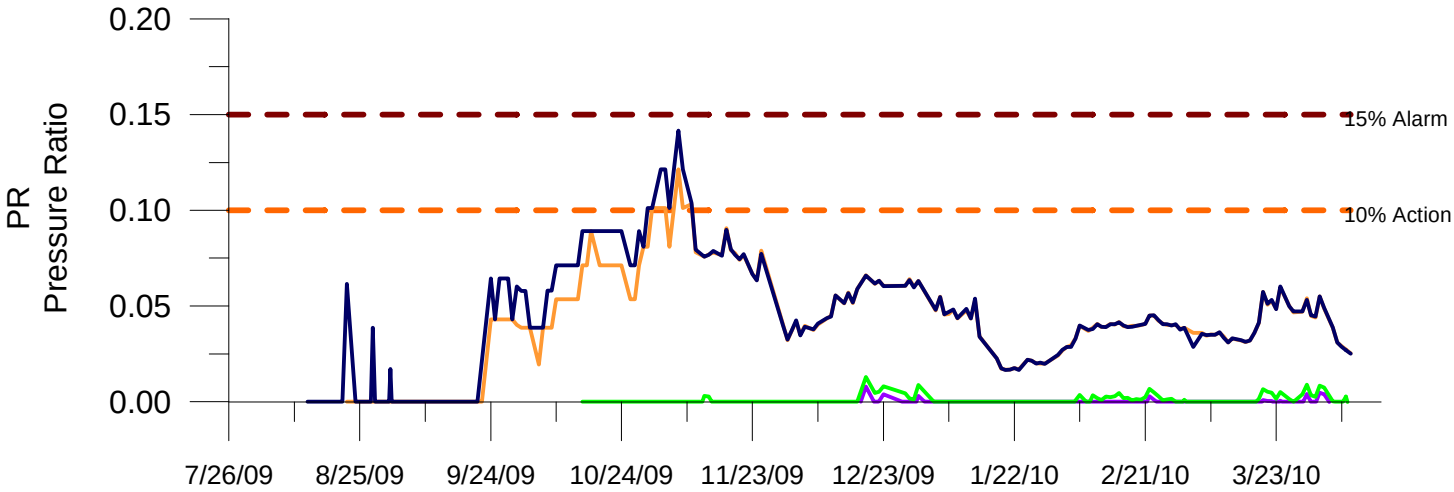
Kingston Test Embankment
175669015

Survey Section 2

PZ-7







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

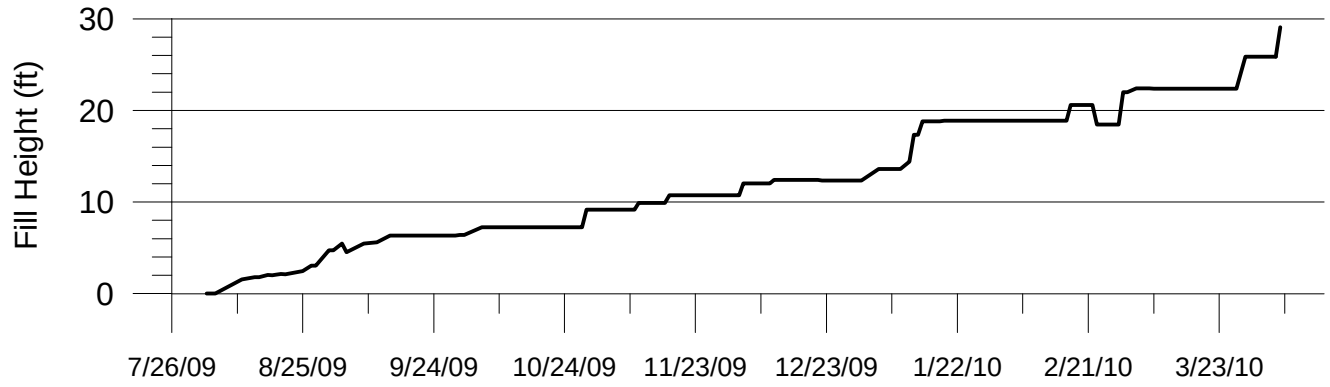
* △Z= Fill Height x 110 (pcf)

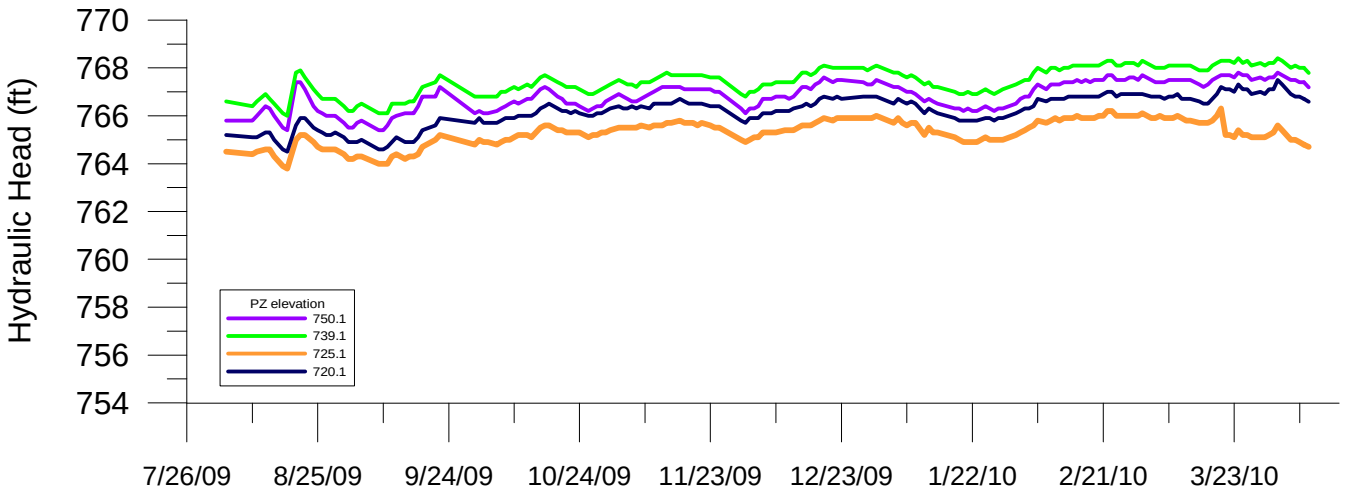
Stantec

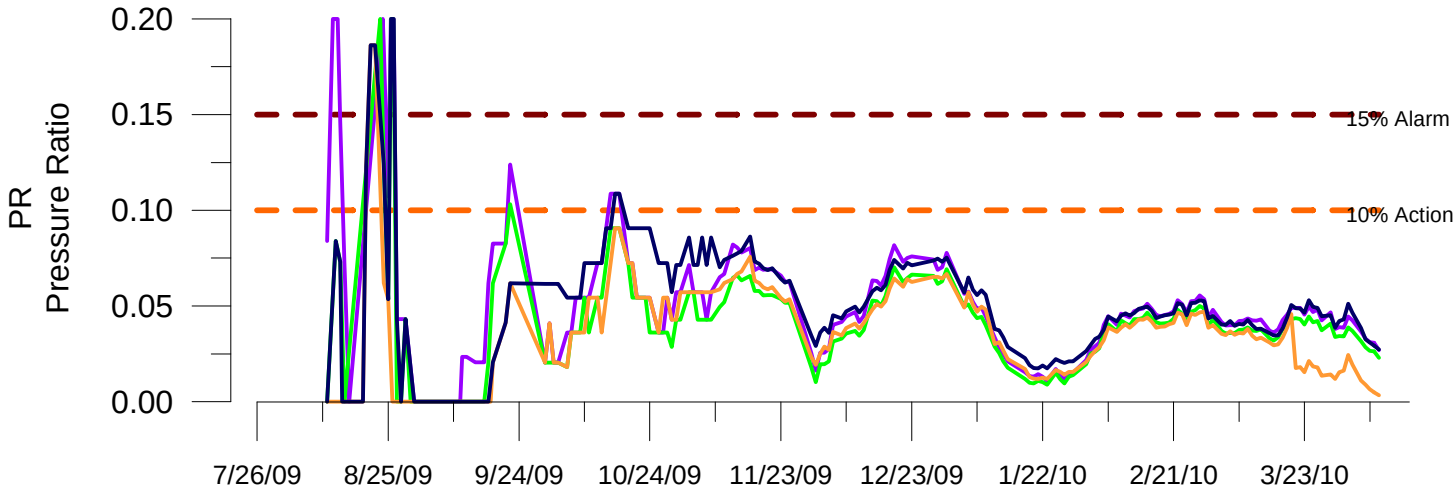
Kingston Test Embankment
175669015

Survey Section 3

PZ-8







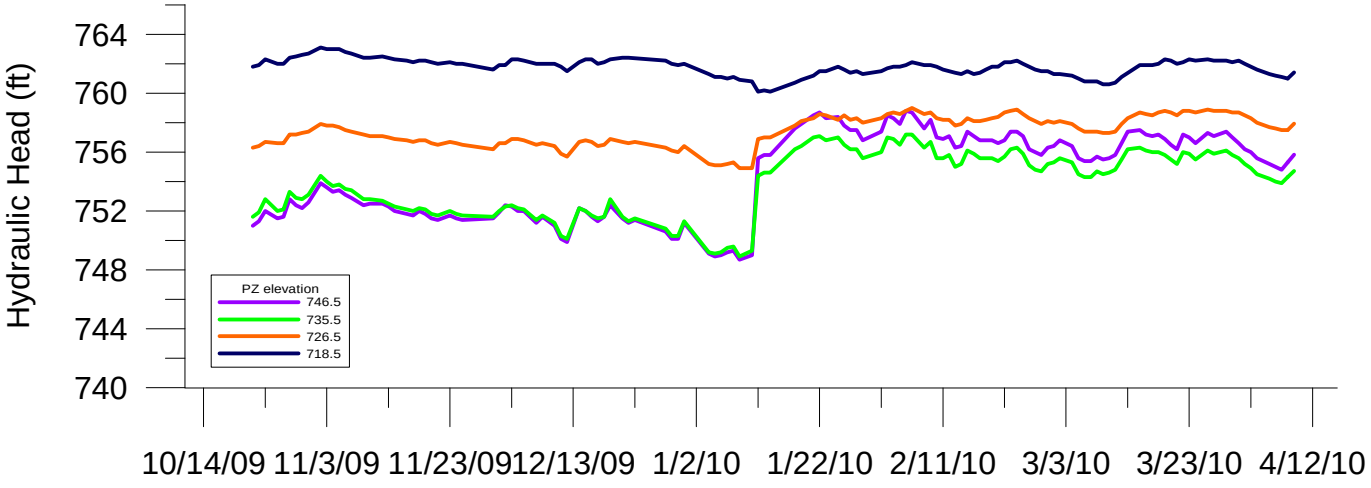
* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

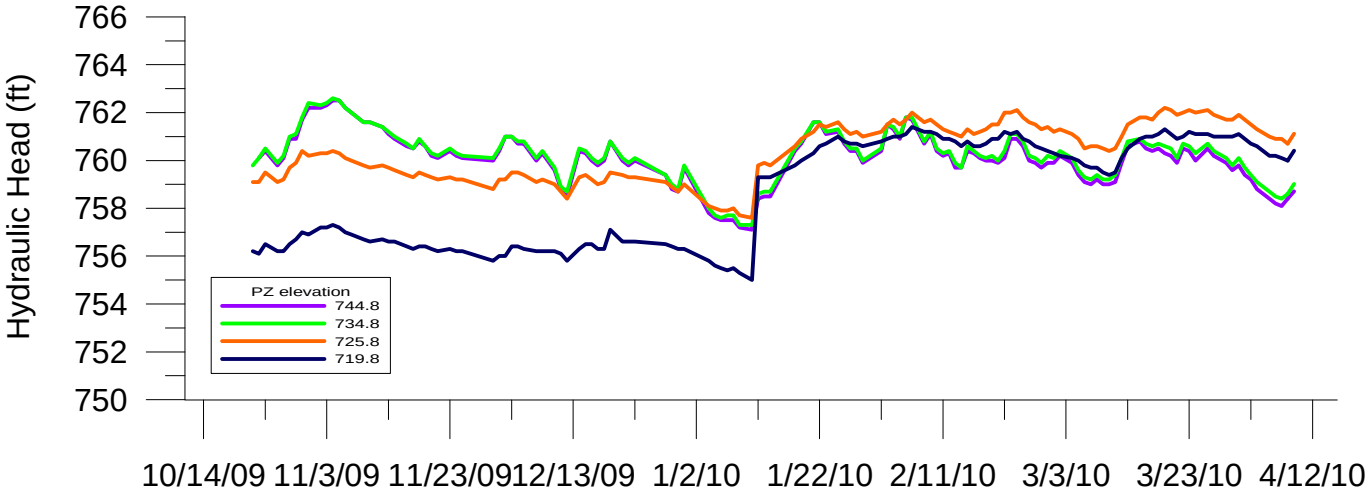
* △Z= Fill Height x 110 (pcf)

Kingston Test Embankment
175669015

PZ-9

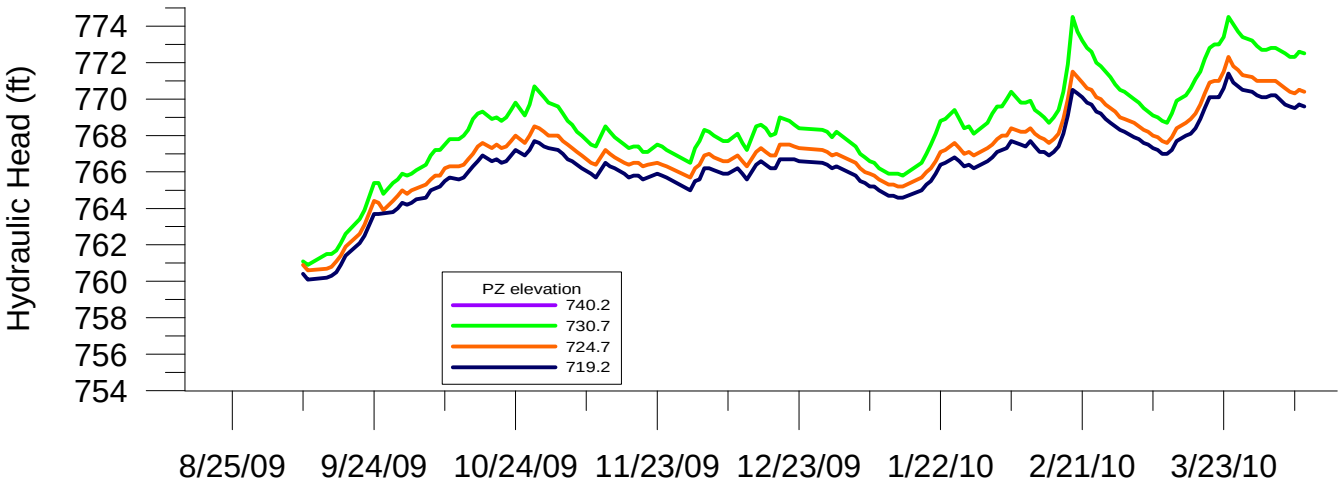


PZ-11

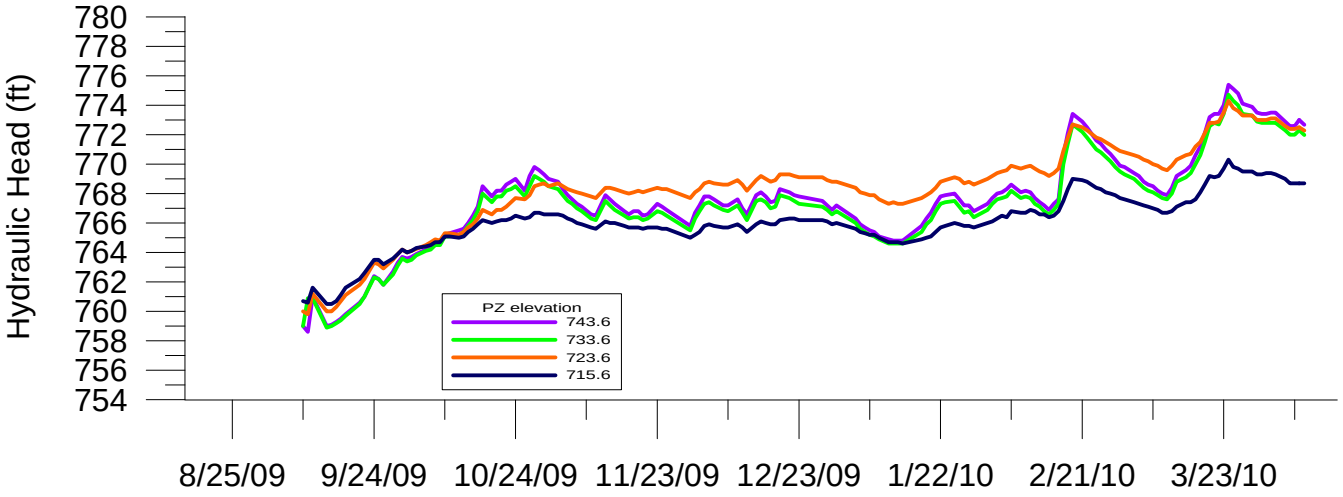


Kingston Test Embankment
175669015

PZ-12



PZ-13

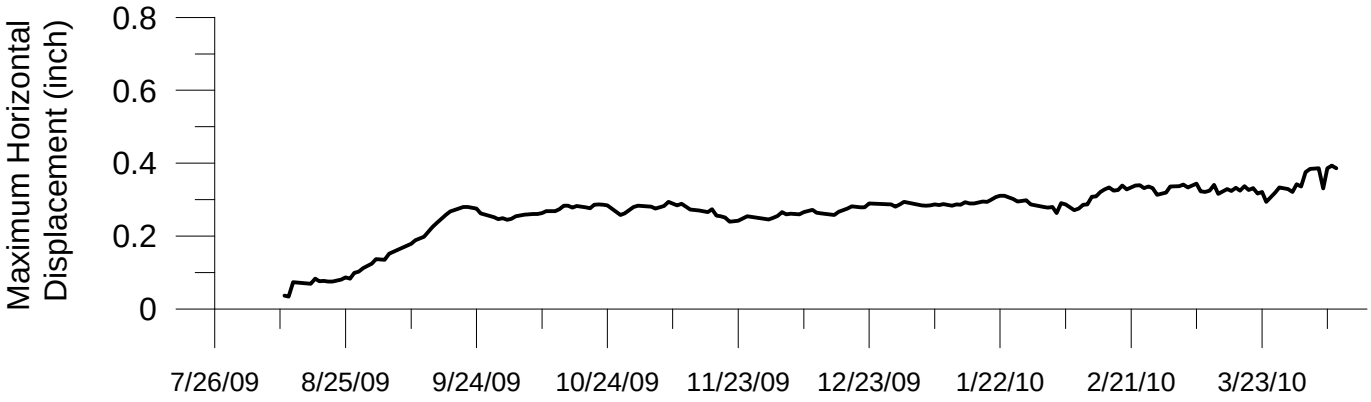


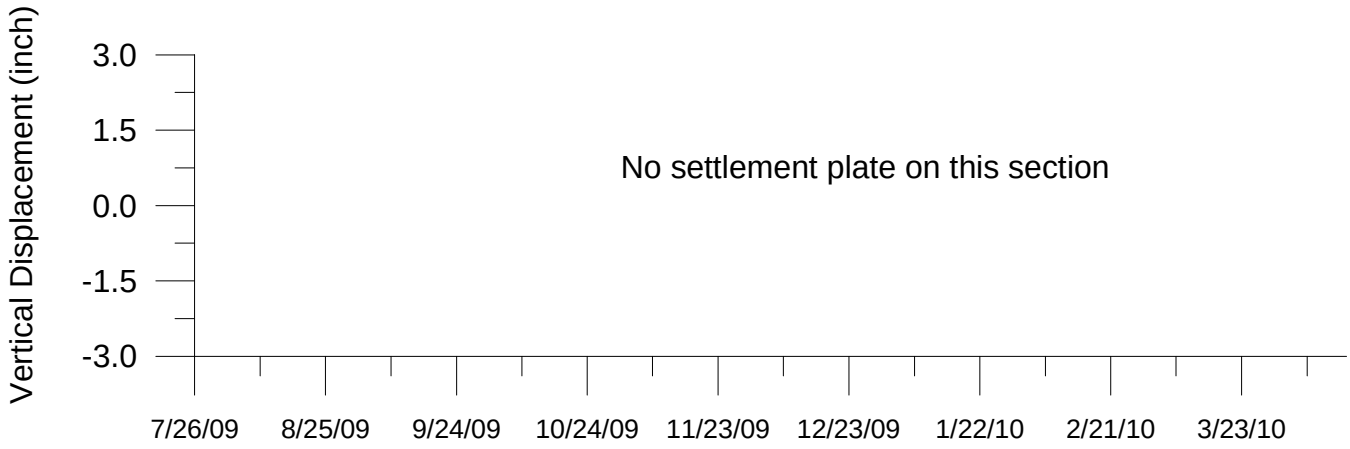
Stantec

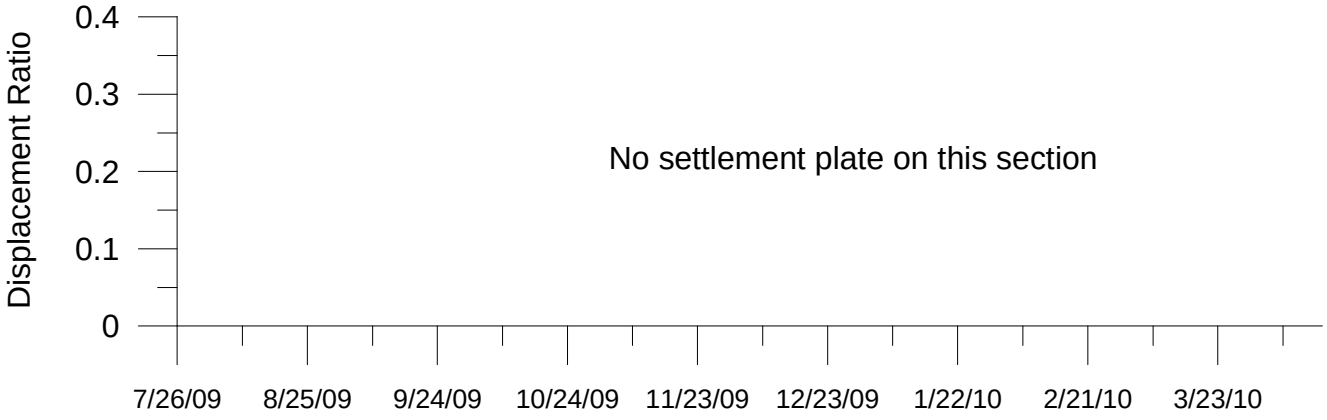
Kingston Test Embankment
175669015

Survey Section 1

SI-2







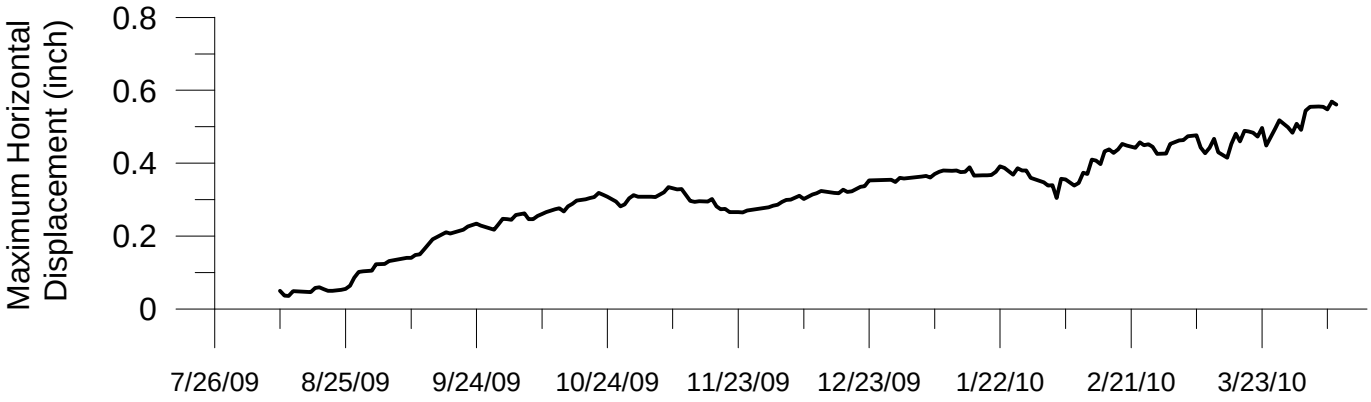
* DR (Displacement Ratio) = Max Horizontal Displacement / Vertical Displacement

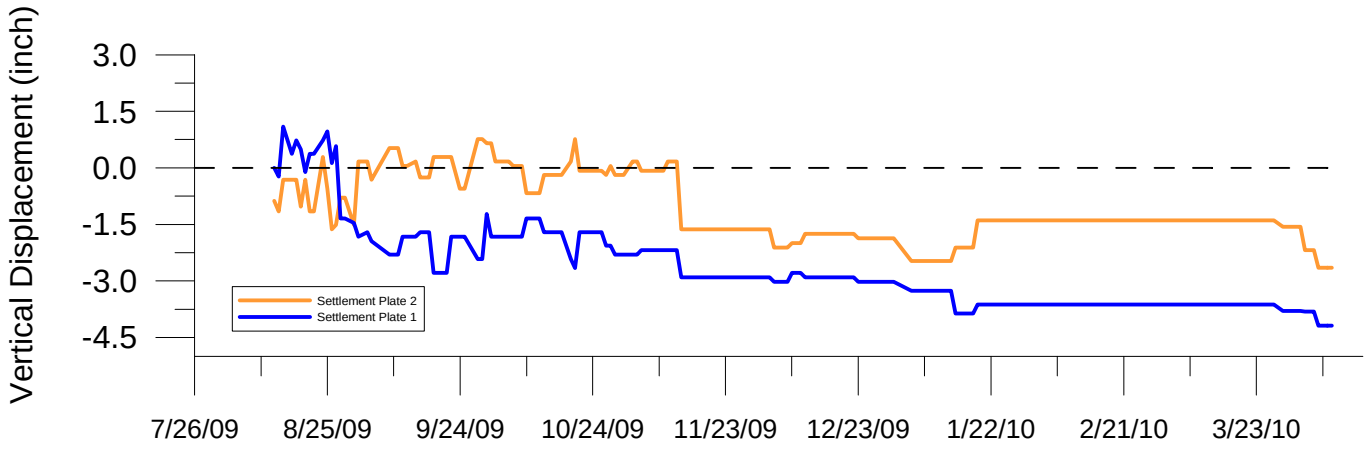
Stantec

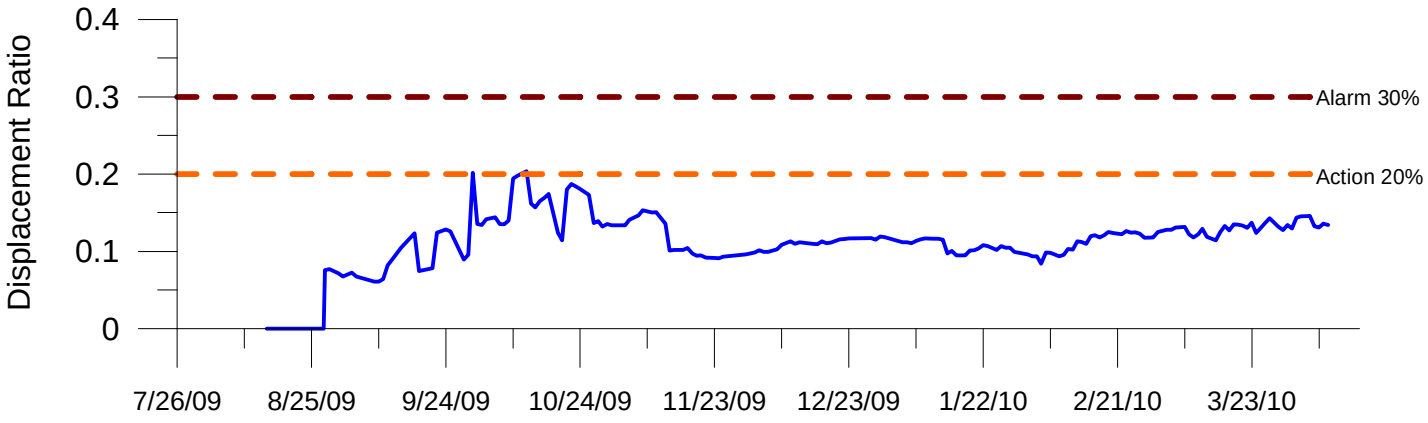
Kingston Test Embankment
175669015

Survey Section 2

SI-3







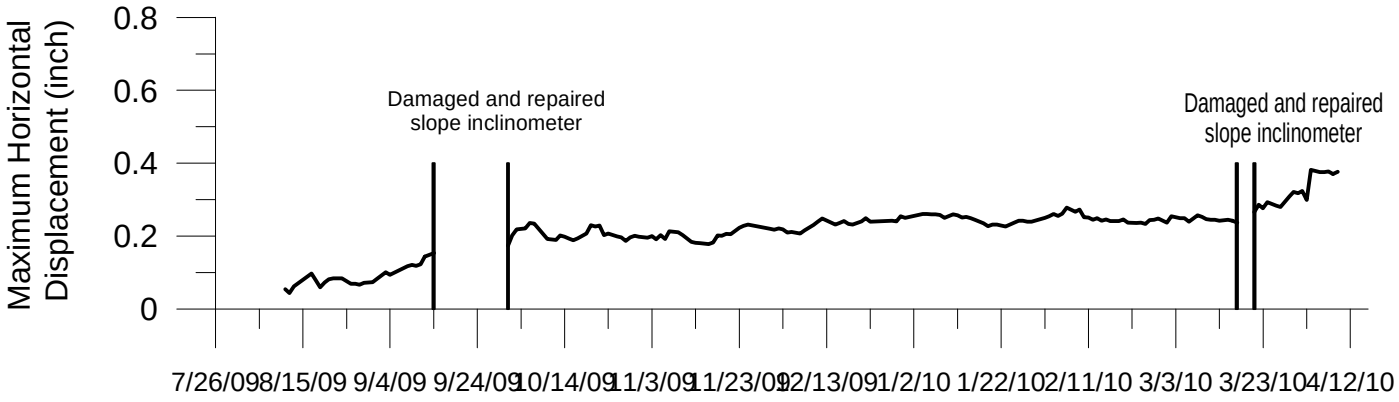
* DR (Displacement Ratio) = Max Horizontal Displacement / Vertical Displacement

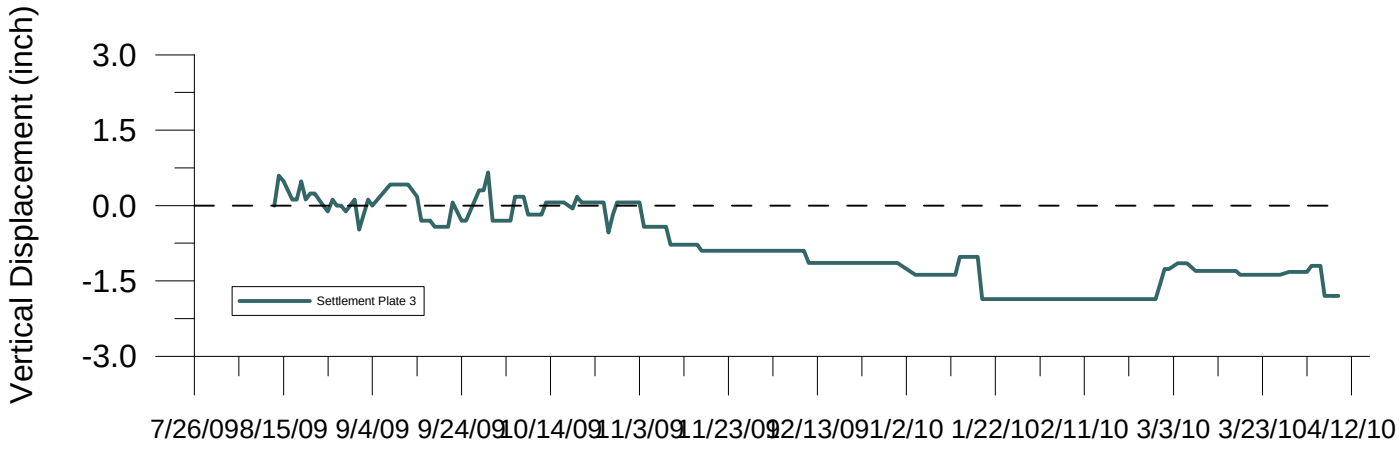
Stantec

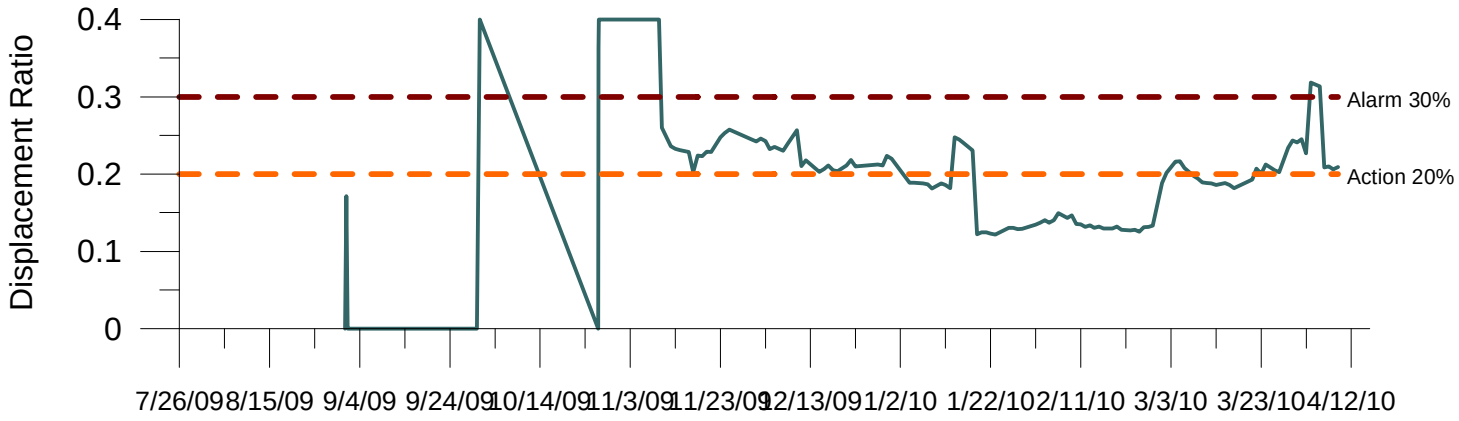
Kingston Test Embankment
175669015

Survey Section 3

SI-4







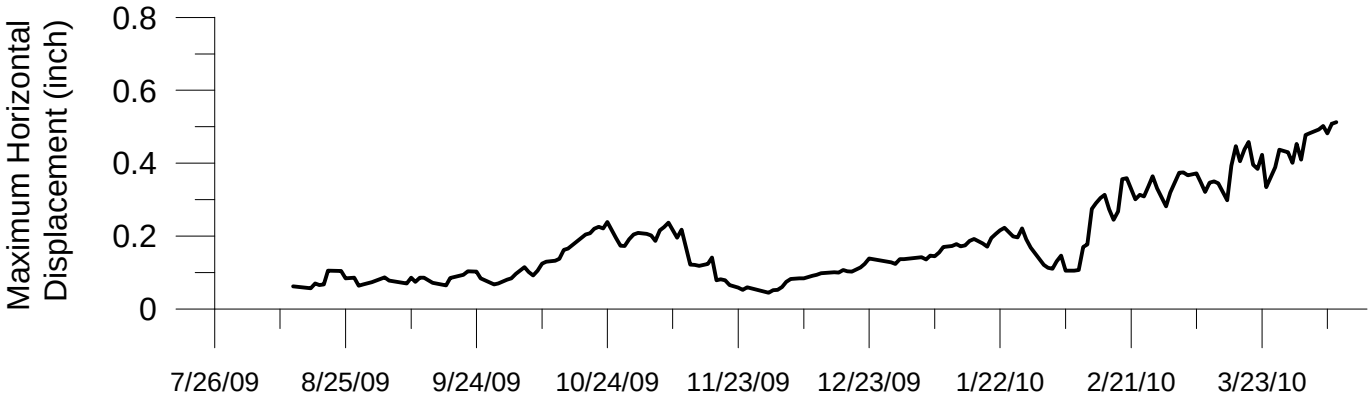
* DR (Displacement Ratio) = Max Horizontal Displacement / Vertical Displacement

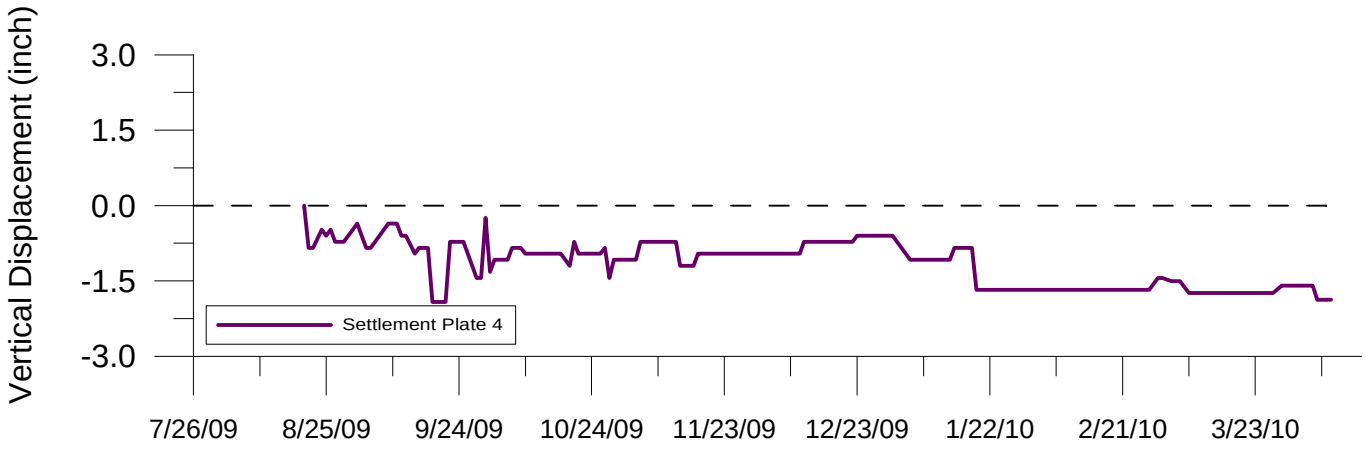
Stantec

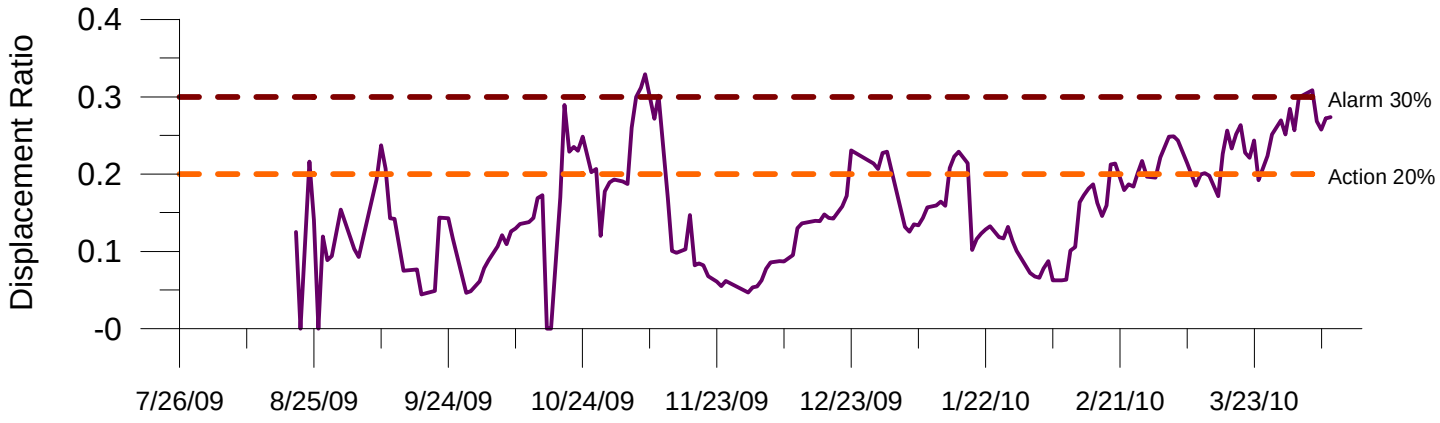
Kingston Test Embankment
175669015

Survey Section 4

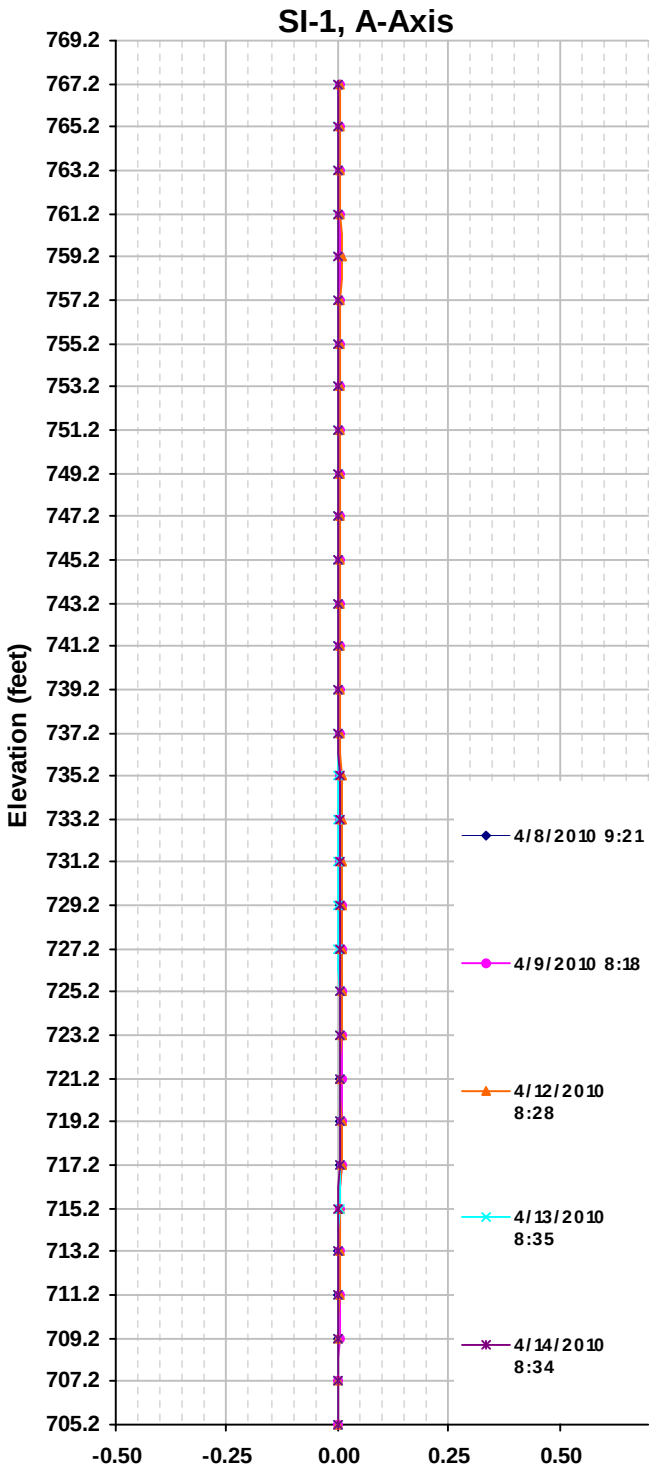
SI-5



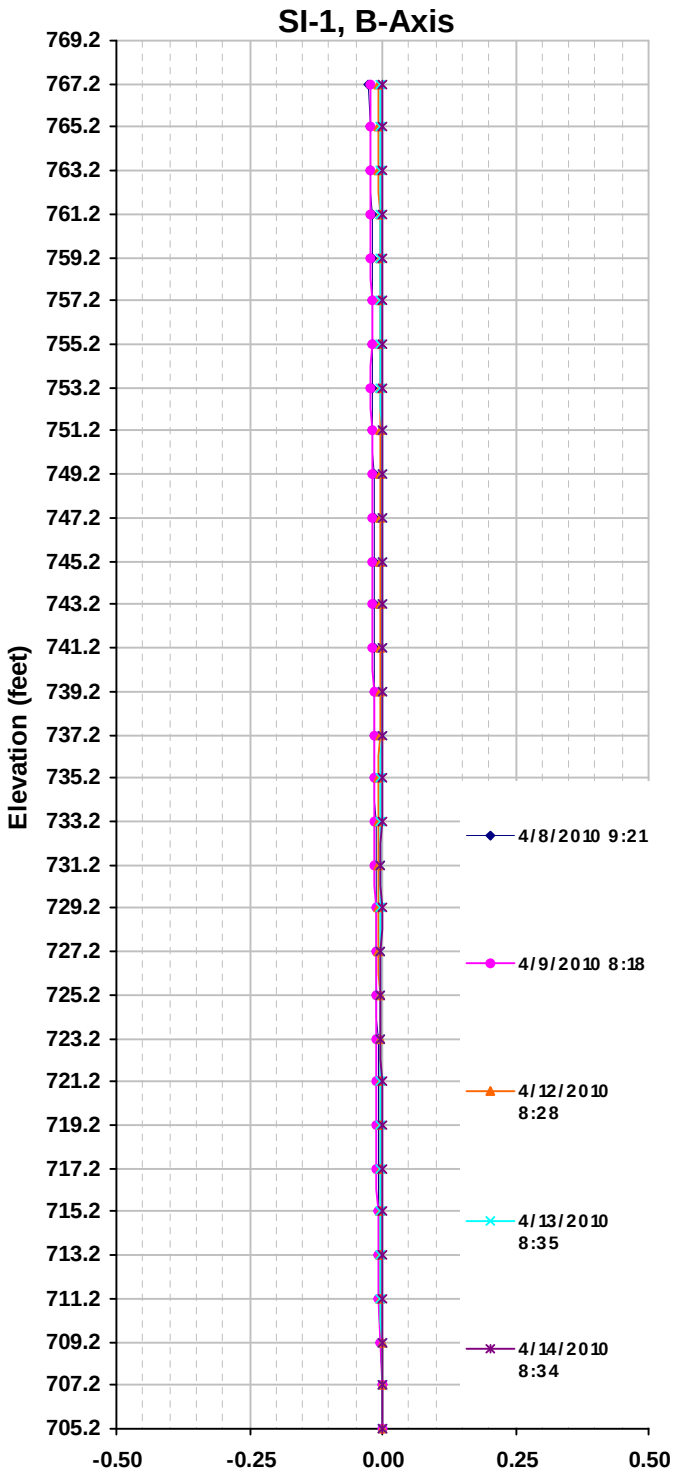




* DR (Displacement Ratio) = Max Horizontal Displacement / Vertical Displacement



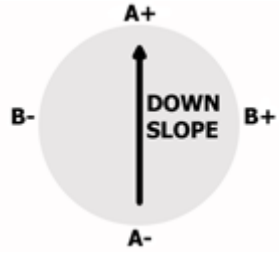
Maximum Displacement: .0096 (in)
Initial date: 4/3/2010



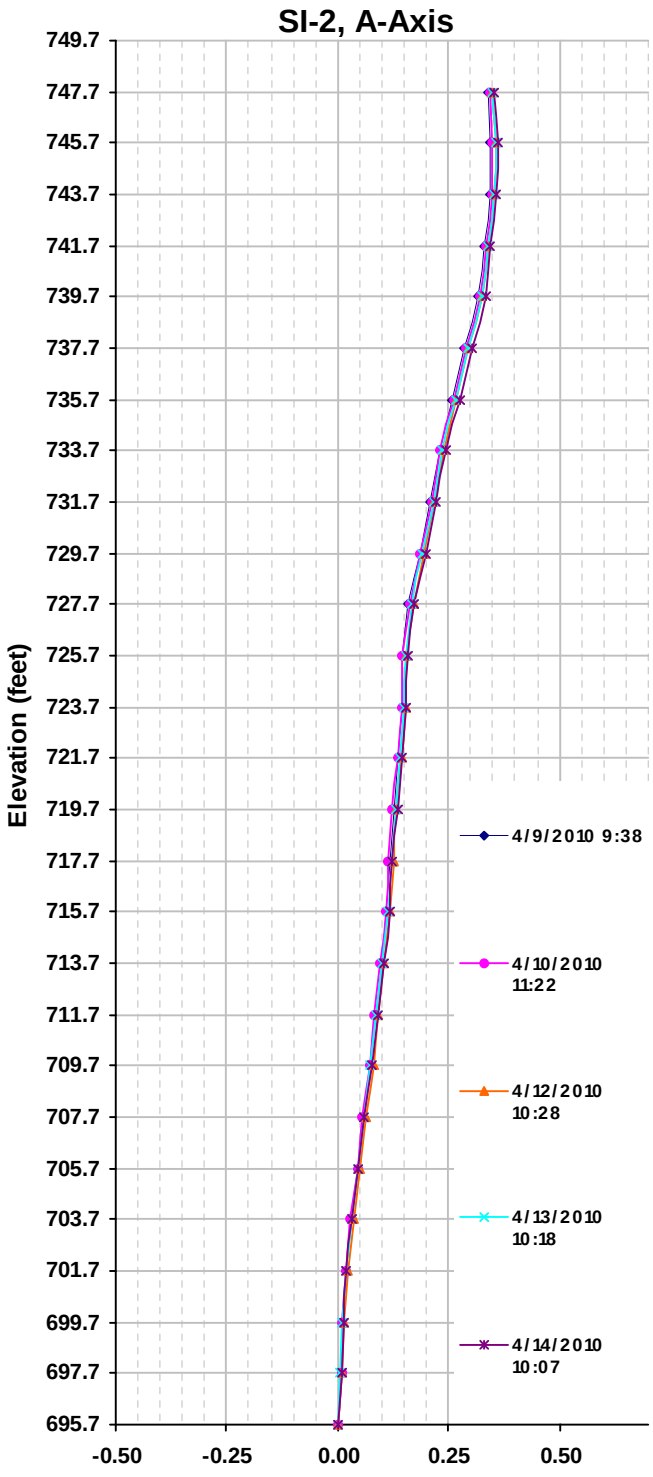
Maximum Displacement: .0246 (in)
Initial date: 4/3/2010

Stantec

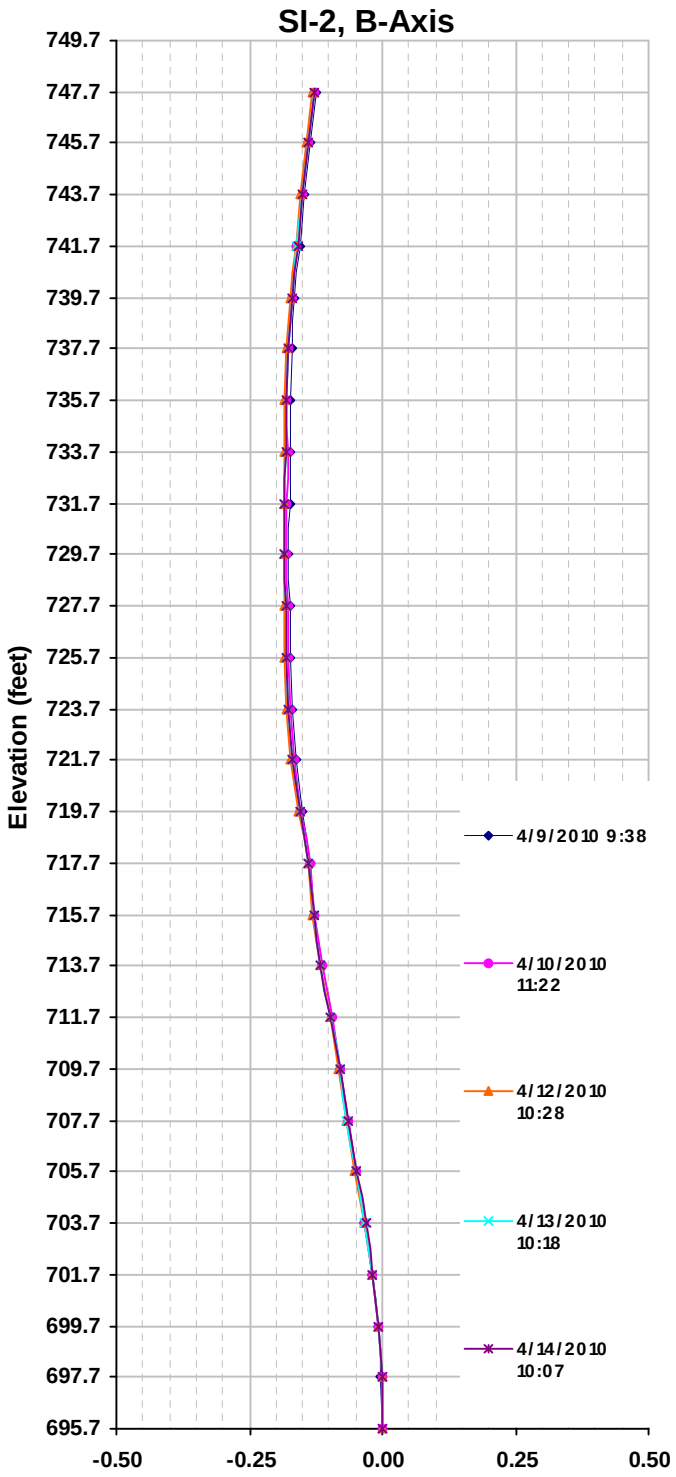
Damaged on 4/2/2010. New baseline from 4/3/2010 with readings to 70'.



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
4/15/2010

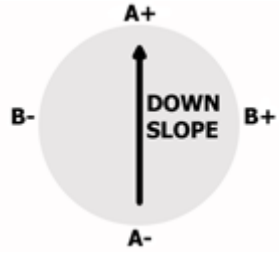


Maximum Displacement: .3600 (in)
Initial date: 8/8/2009

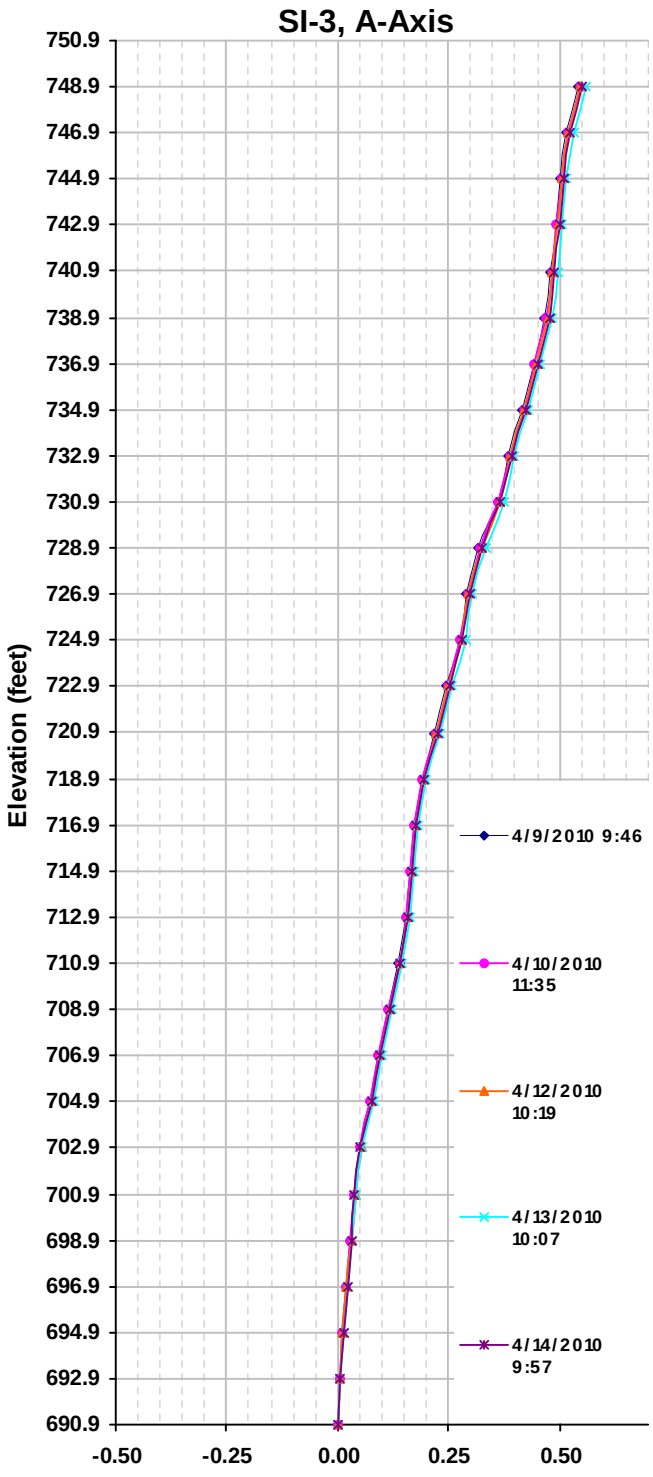


Maximum Displacement: .1854 (in)
Initial date: 8/8/2009

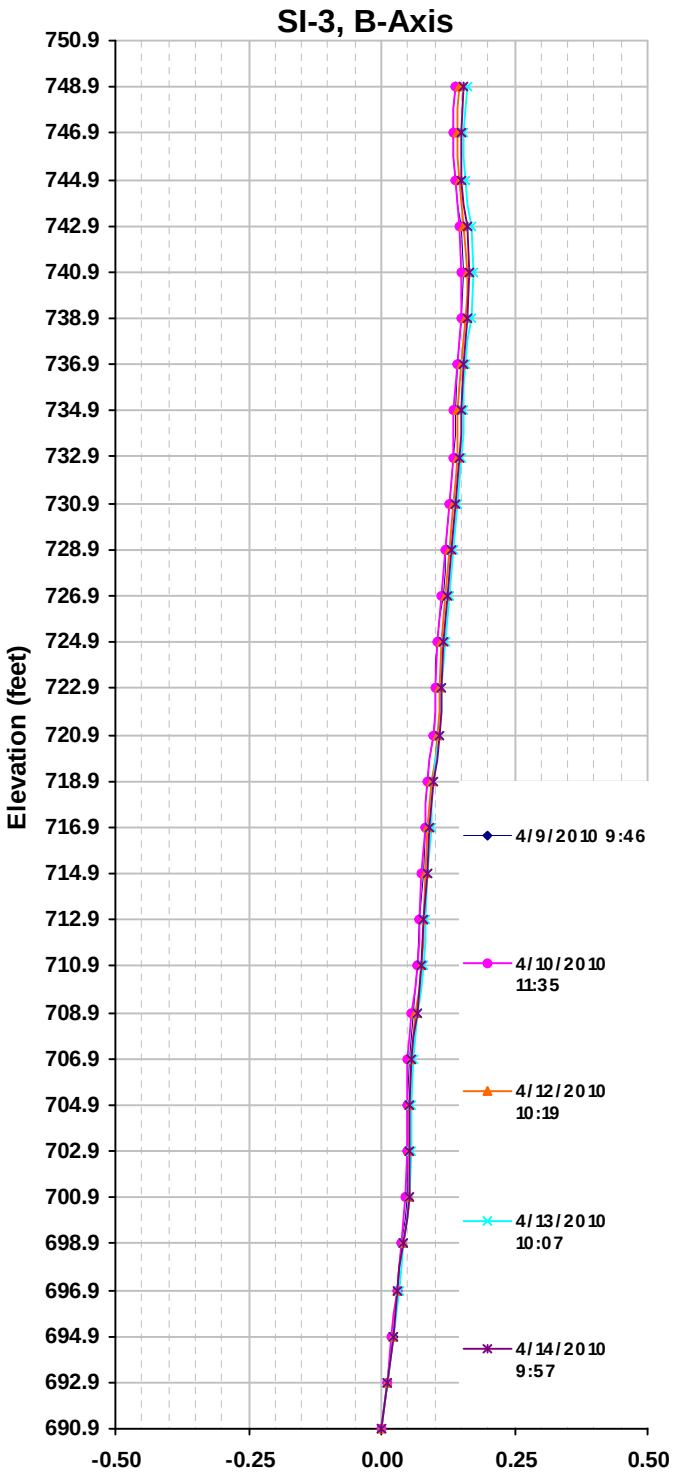
Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
4/14/2010

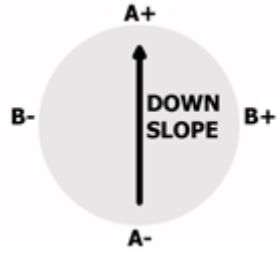


Maximum Displacement: .5598 (in)
Initial date: 8/8/2009

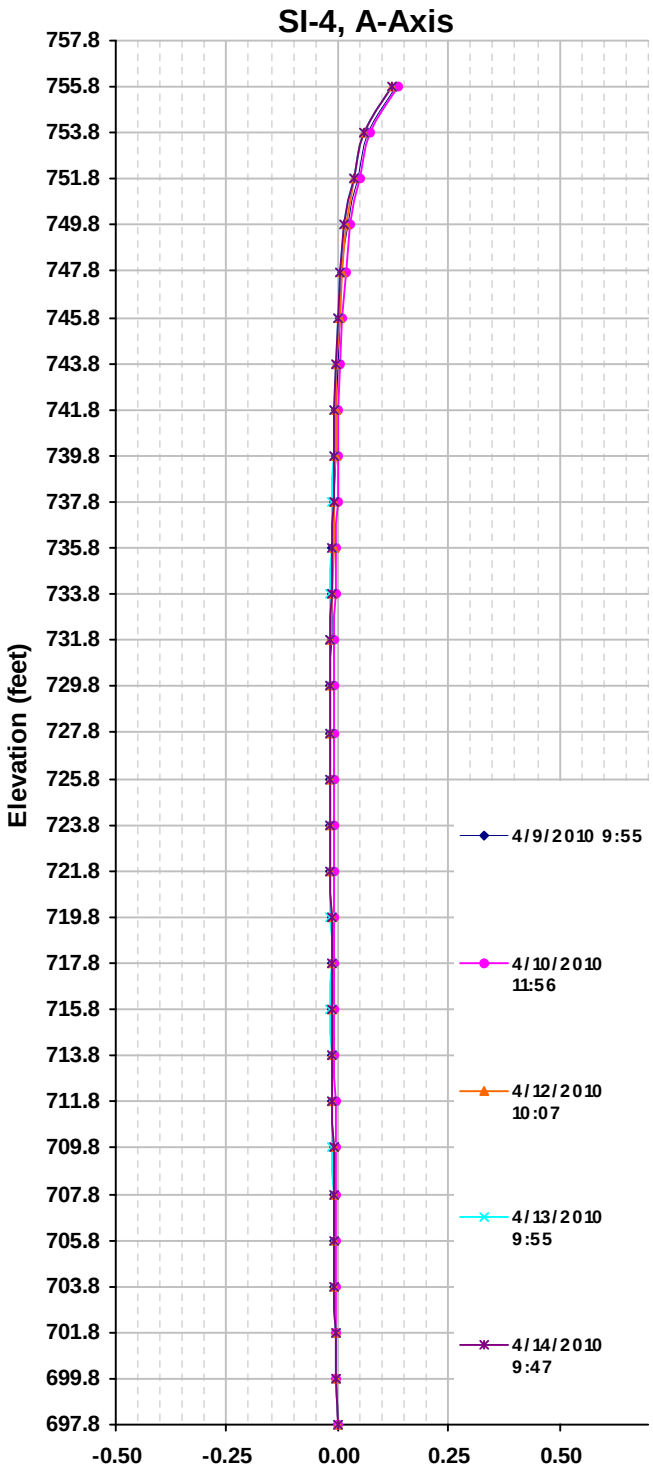


Maximum Displacement: .1728 (in)
Initial date: 8/8/2009

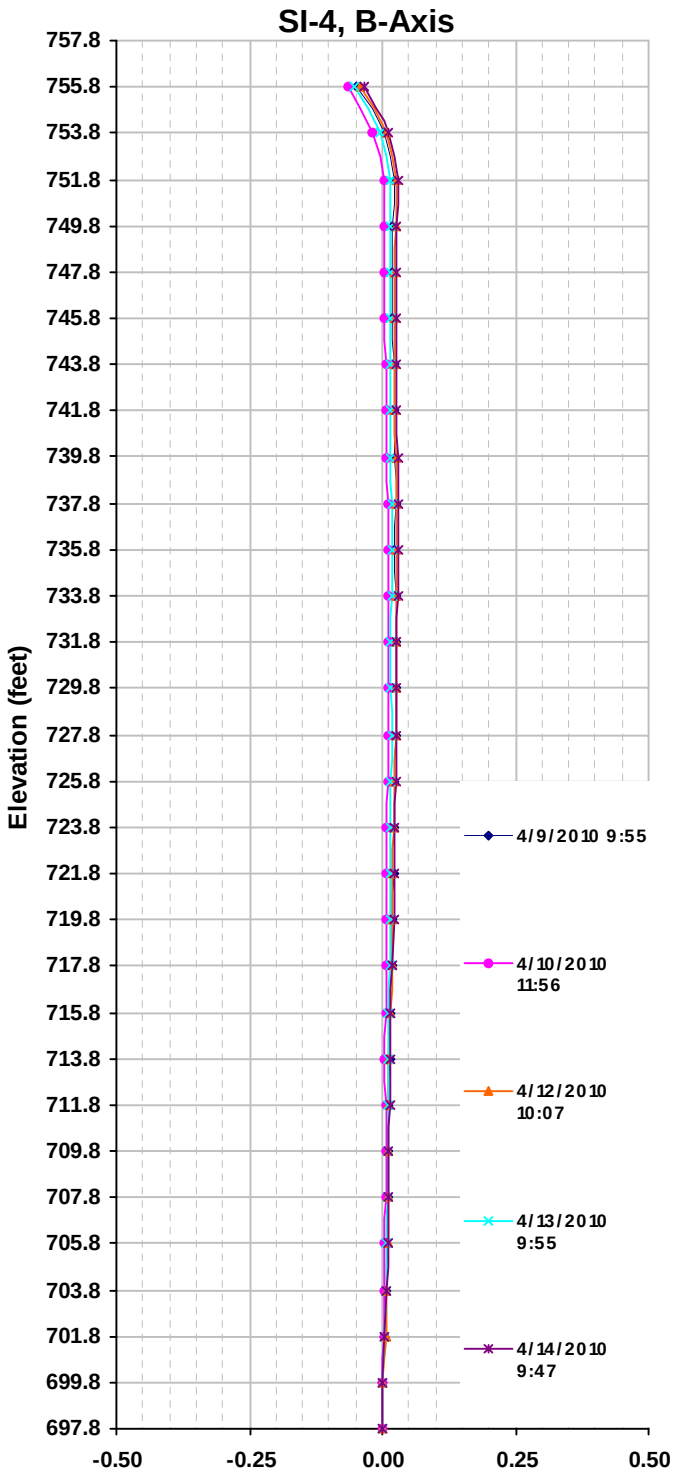
Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
4/14/2010

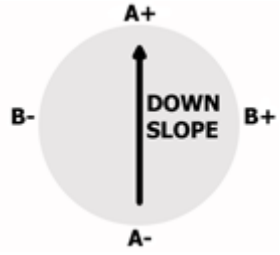


Maximum Displacement: .1344 (in)
Initial date: 3/20/2010

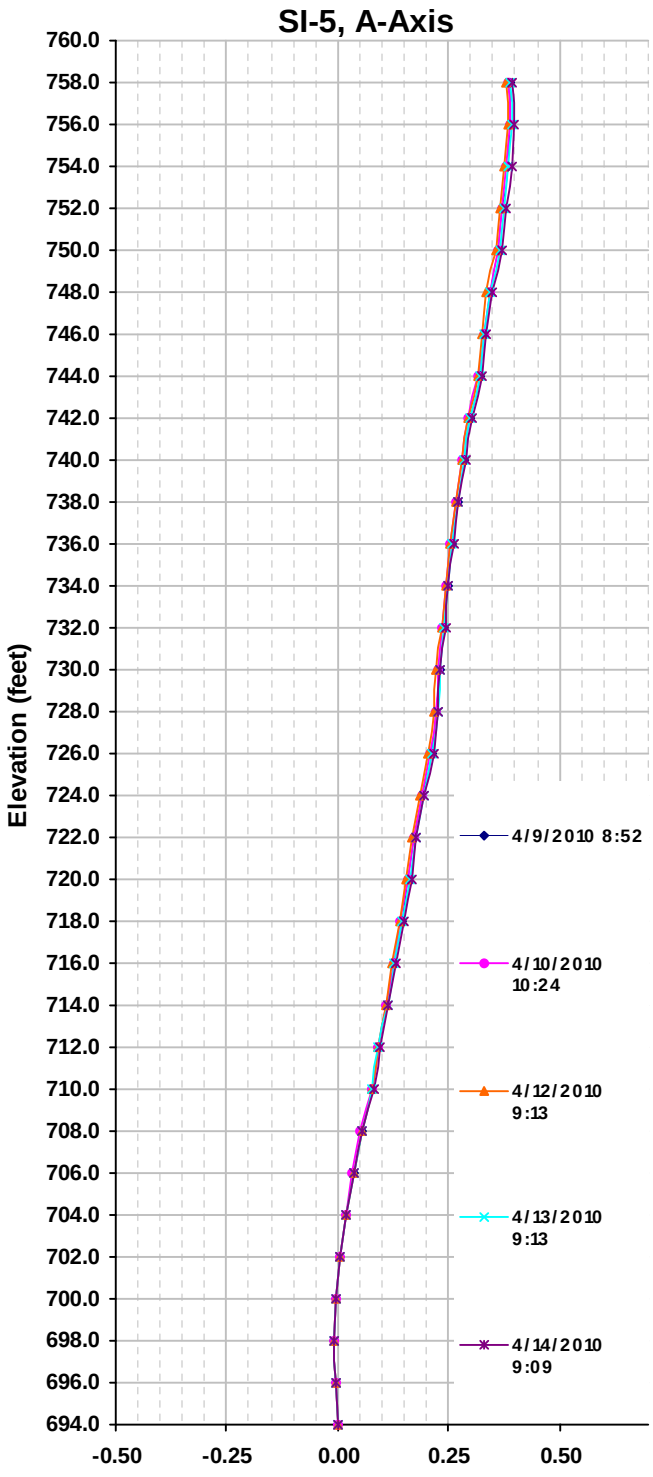


Maximum Displacement: .0642 (in)
Initial date: 3/20/2010

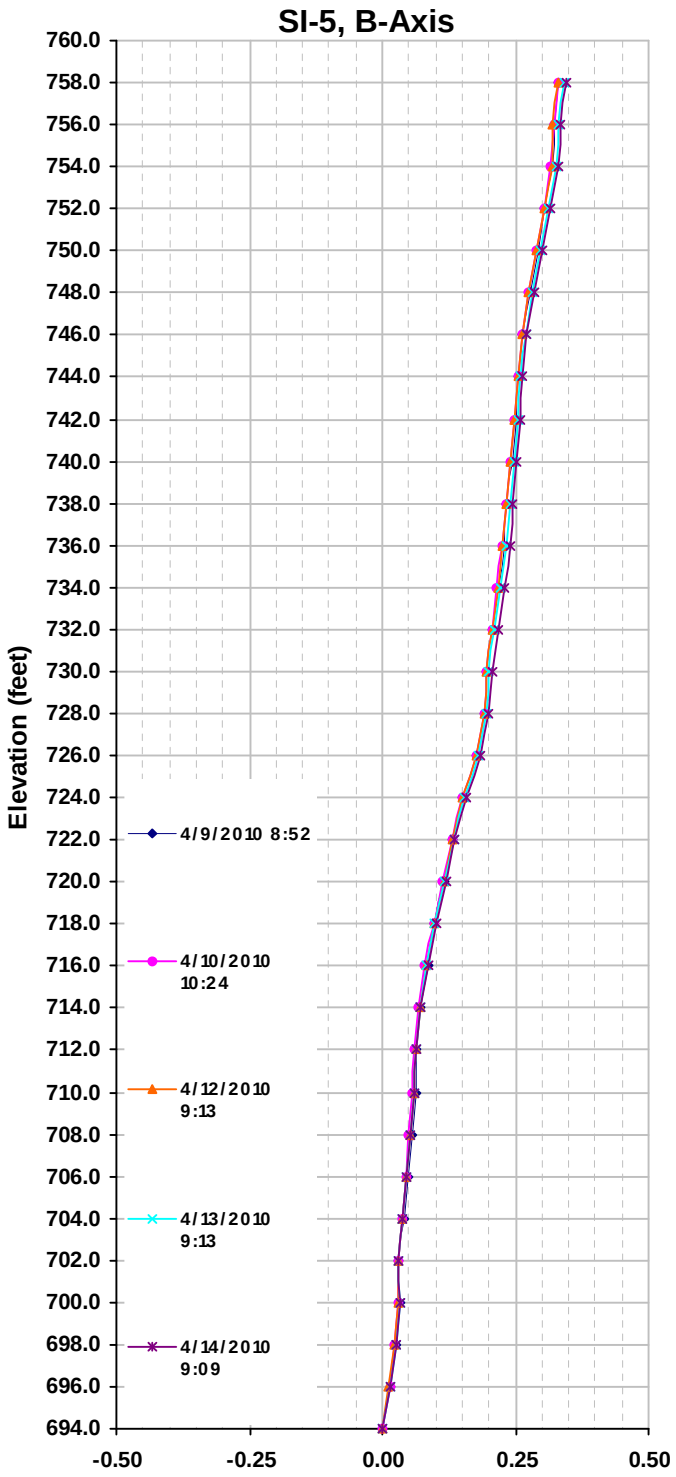
Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
4/14/2010

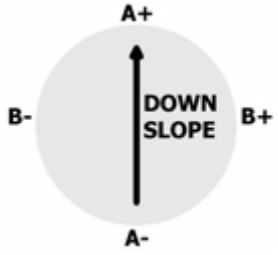


Maximum Displacement: .3978 (in)
Initial date: 8/8/2009

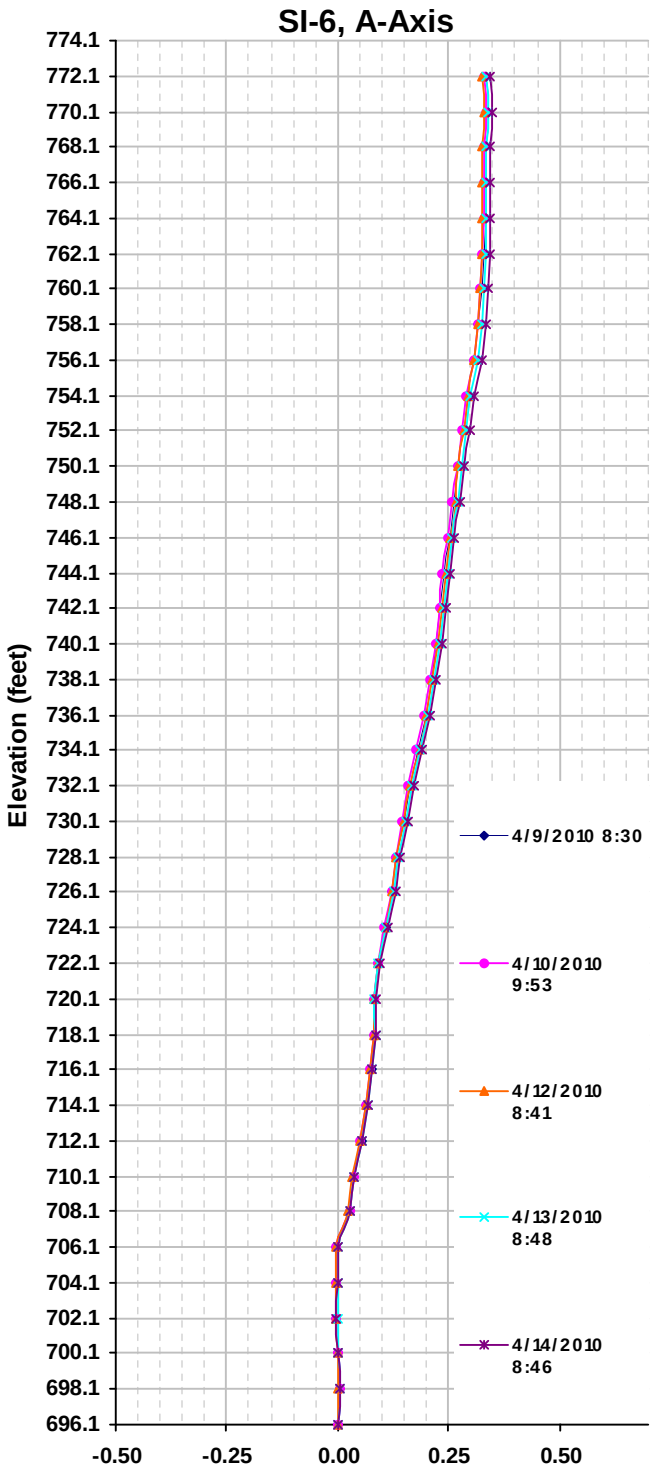


Maximum Displacement: .3450 (in)
Initial date: 8/8/2009

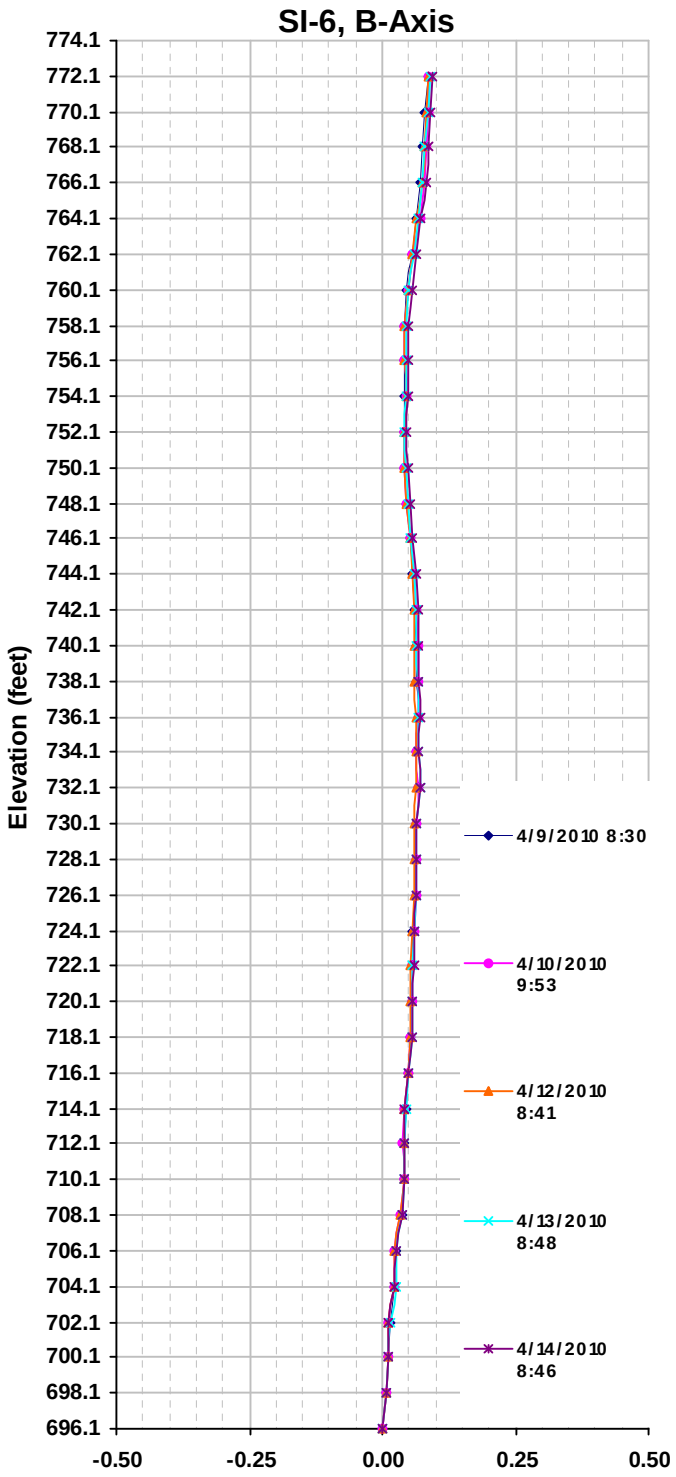
Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
4/14/2010

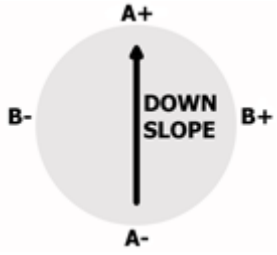


Maximum Displacement: .3462 (in)
Initial date: 1/19/2010

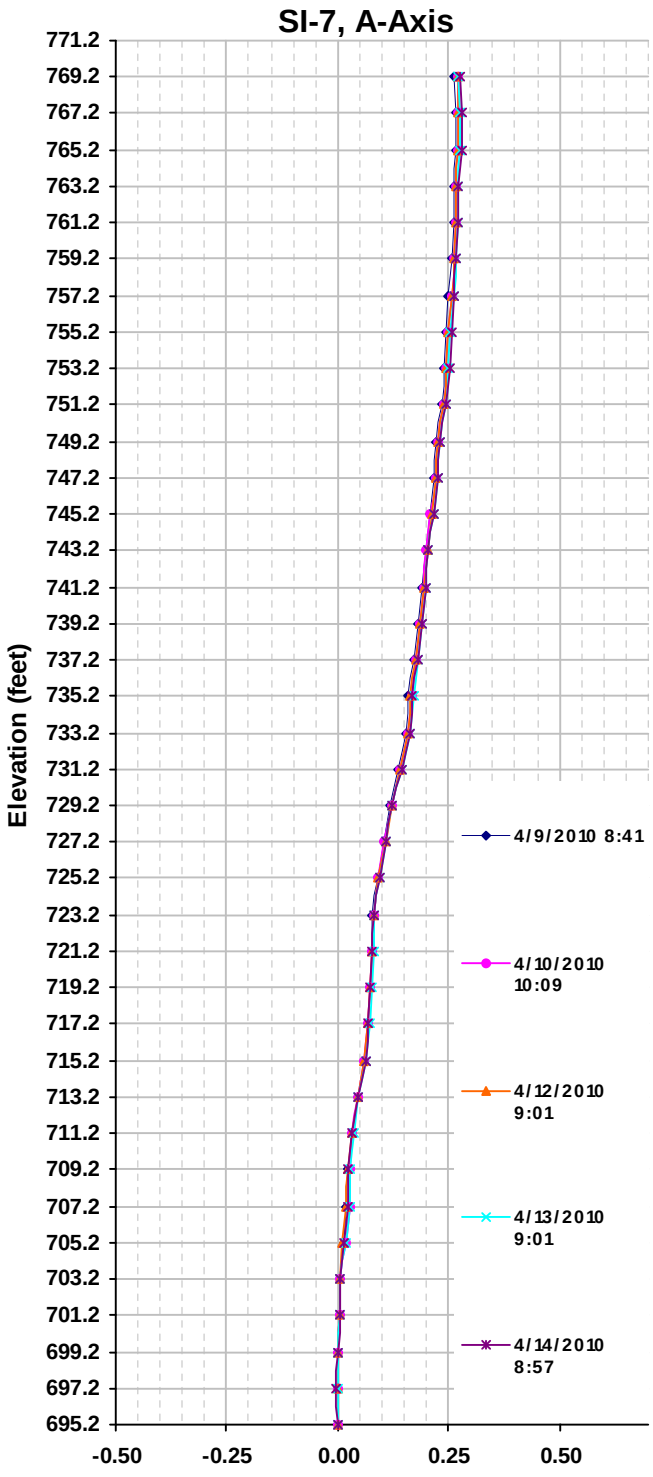


Maximum Displacement: .0954 (in)
Initial date: 1/19/2010

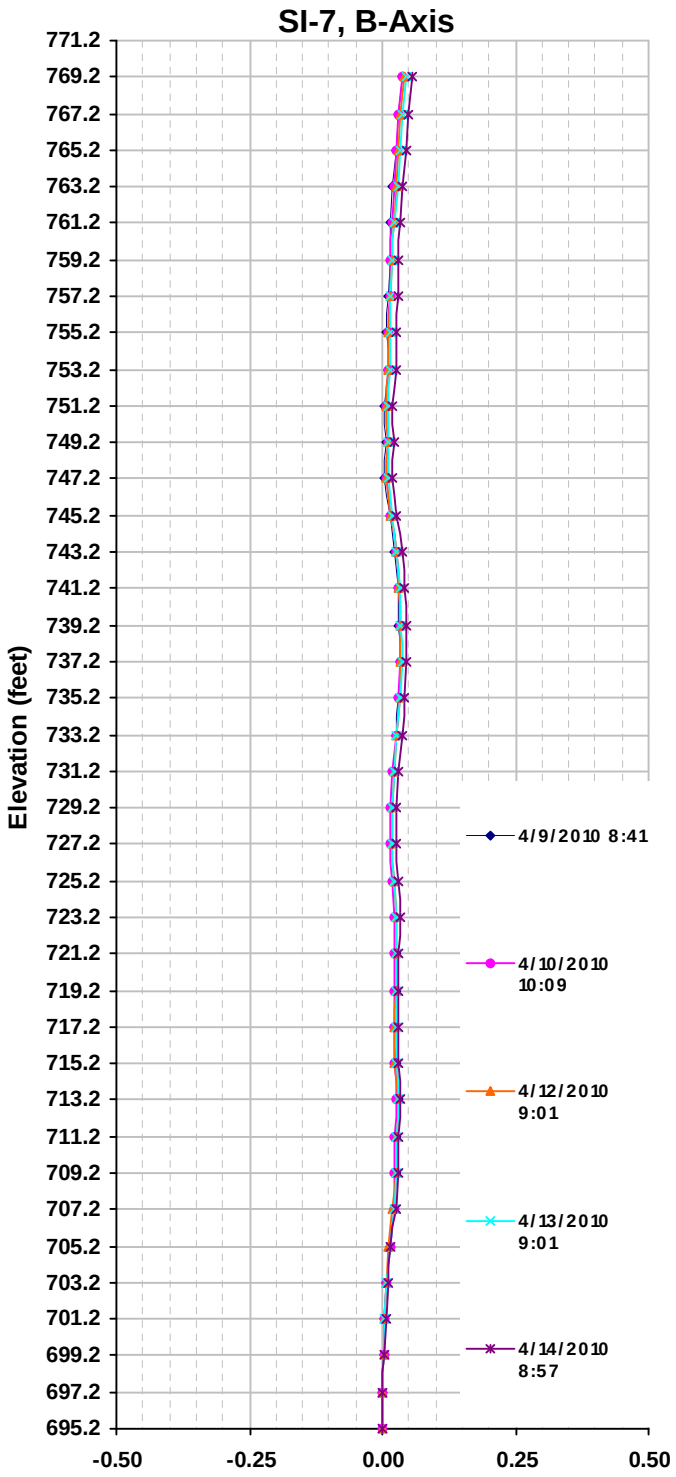
Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
4/14/2010

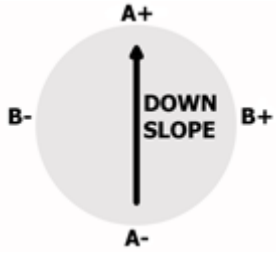


Maximum Displacement: .2790 (in)
Initial date: 1/19/2010

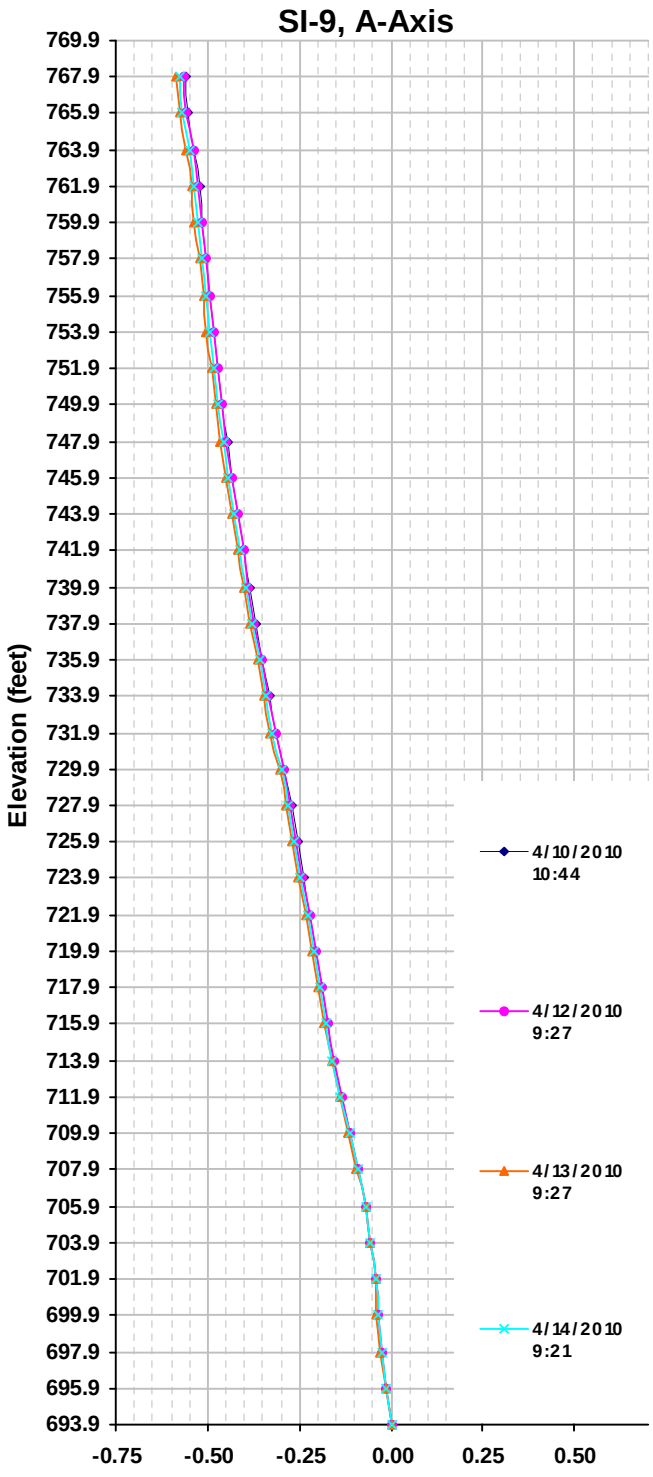


Maximum Displacement: .0582 (in)
Initial date: 1/19/2010

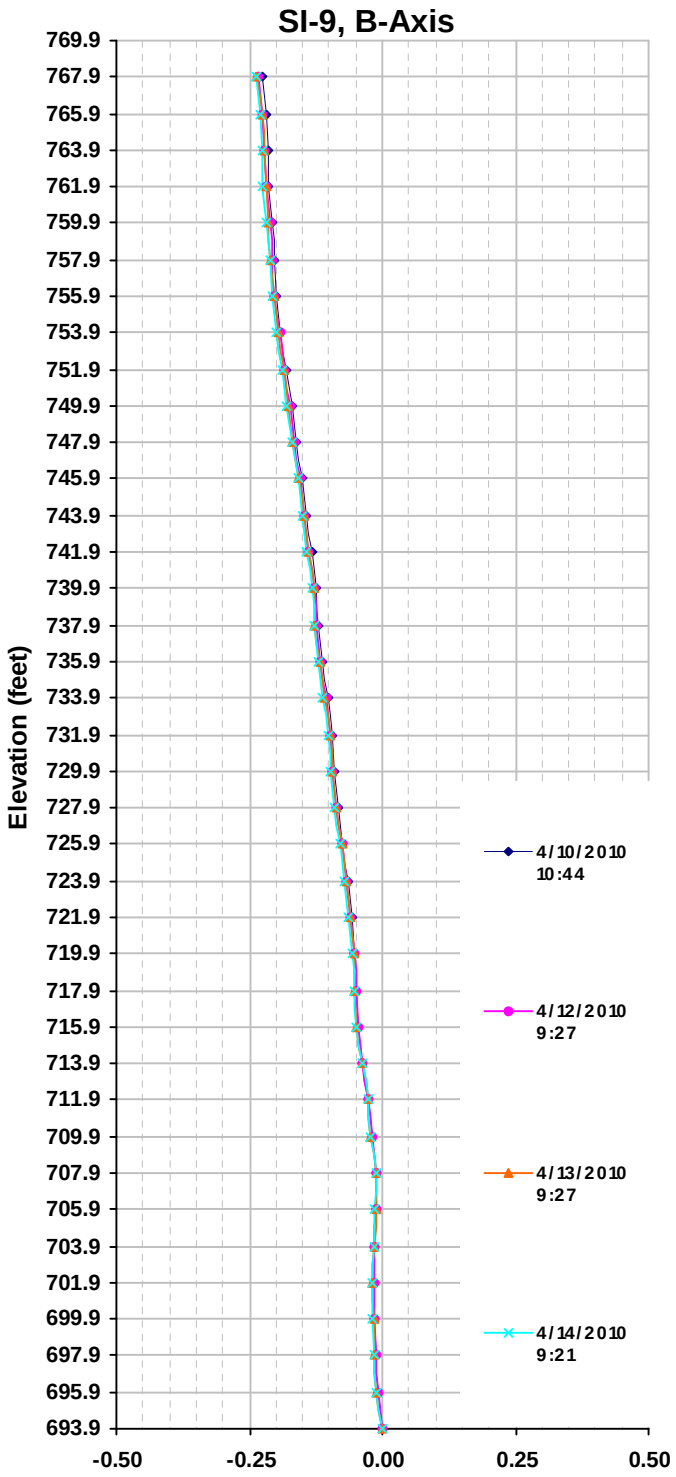
Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
4/14/2010

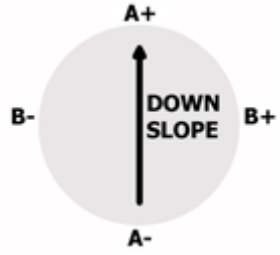


Maximum Displacement: .5856 (in)
Initial date: 8/22/2009



Maximum Displacement: .2376 (in)
Initial date: 8/22/2009

Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
4/14/2010

Appendix H

Meeting Minutes

TVA -- Kingston
Test Embankment - Meeting Minutes
July 30, 2009 -- 9 A.M.

Attending

Randy Denton	**Julie Pfeffer**	**Don Givens**	**Larry Radford**
John Miller	**Jim Robinson**	**Dan Quinn**	**Jim Andrew**
Skip Layton			

- **Stantec's drillers will be on site August 10 to begin the installation of additional monitoring equipment on the east side of Area "A". Jim Andrew will be with Reggie to discuss access required for this work.**
- **Stone for the working platform has been amended from the # 57 stone currently being installed to allow 1 1/2" stone as a substitute. Stantec will provide a formal notification that this material change has been approved.**
- **Julie Pfeffer will provide Stantec with the distribution list that will apply to meetings and reporting.**
- **Stantec will develop a protocol for documenting milestones within the project guidelines to document these points in the project.**
- **Placement of the rock for the working platform will be checked by survey and random field investigation to verify rock depth. Additional rock may be required to stabilize some areas. This will be determined by Stantec through proof rolling. Should the rock being placed exceed 24 inches in depth additional geogrid will be required to be install.**
- **Stantec will assist initially with training of the operators loading the ash to allow these operators to select material that falls within the required 20% to 30% moisture level.**
- **The CP group has stated that they are ready to begin moving ash as soon as Stantec approves the area where rock has been applied to the working platform.**
- **The weekly meeting for the test embankment program will be moved to Tuesday at 8:15 A.M. until further notice.**
- **The CP group has stated that the installation of geogrid and rock on the west side of Area "A" will be complete by August 8th. Drainage installation for the east side has been started and is considered to be a 12 day activity pending whether.**
- **Stantec was notified that this project could be reduced to approximately 250,000 yards of material to pending on the availability of material and test results at that point in time.**
- **The CP group will concentrate on Area "A" and a high wall and plan for a slope on the east side of Area "A".**

End of Minutes

7/30/2009 TEST EMBANKMENT

ATTEND	EMAIL
Randy Denton	randy.denton@jacks... co
Julie Pfeffer	jpfeffer@tva.gov
DON GIVENS	dlgivens@tva.gov
Arry Radford	ldradfor@TVA.gov ✓
John Miller	jhmiller@tva.gov
Jim Robinson	Jimmy Robinson@tva.gov
SKIP LAYTON	
JIM ANDREW	

TVA -- Kingston
Test Embankment - Meeting Minutes
August 4, 2009 -- 8:15 A.M.

Attending

Julie Pfeffer	**Jason Ward**	**Bruce Haas**	**John Miller**
Ricky Lynn	**Larry Radford**	**Jim Andrew**	**Max Kirkpatrick**
Skip Layton			

1. **All surveying on this project is being performed by TVA. Stantec is coordinating the survey needs for this project. Surveying will be a daily task to determine the extent of work in coordination with the data obtained from the instrumentation**
2. **Proof-rolling of the working platform will be performed in accordance with the approved Stantec plan and utilize loaded off-road trucks at the direction of Stantec.**
3. **Settlement plates to be installed beginning with the west area of the test embankment. CP will assist Stantec with the transportation and installation of these devices.**
4. **CP will assist with access roads for the new monitoring equipment that will be installed by Stantec's drillers beginning on Monday, August 10th. Drillers will work through the weekend if necessary to complete the installation of all testing equipment.**
5. **CP will work on new access to the test embankment area to provide an ingress/egress that will allow fluid movement of ash and rock trucks.**
6. **Stantec will begin training this week of the operators loading the ash to allow these operators to select material that falls within the required 20% to 30% moisture level. Number of operators and equipment will be dependent upon the actual amount of ash that can be safely installed in accordance with the approved plan.**
7. **Ash in the test embankment will be spread in uniform lifts over the largest area possible to minimize the possibility of point loads in the test area.**
8. **Stantec is currently reading the installed instrumentation to provide base data. Not all sites are currently accessible. The data recorded once the ash placement begins will be placed into a weekly report and distributed by Stantec to all requested personnel.**
9. **Currently there have not been any issues related to the instrumentation function and dependability. CP will work with Stantec to assure there is not any disturbance during the operations of any of the installed equipment.**
10. **CP is to conduct a site review of the underdrain system to determine what has been installed, what needs to be installed and what systems will be expanded with additional piping.**
11. **CP will evaluate the drainage requirements off of Dike "D" with regards to the east side of the test embankment. Structures may be utilized to eliminate the ponding of water south of the test embankment.**

End of Minutes

8/4/2009 TEST EMBANKMENT ~~SCHEDULING~~

ATTENDING	REPRESENTING	EMAIL
Jennifer Pfeffer	Jacobs	jpfeffer@tva.gov
Jason Ward	Jacobs	Jason.Ward2@jacobs.com
Bruce Haas	Jacobs	bjhaas@tva.com
John Miller	CP	jhmiller@TVA.gov
Ricky Lynn	CP	[illegible]
LARRY RADFORD	CP	ldradfor@TVA.GOV
Jim Andrew	Stantec	jim.andrew@stantec.com
MAX KIRKPATRICK	CP	MKIRKPATRICK@TVA.GOV
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM

TVA -- Kingston
Test Embankment - Meeting Minutes
August 11, 2009 -- 8:15 A.M.

Attending

Julie Pfeffer	**Don Givens**	**Bruce Haas**	**John Miller**
Ricky Lynn	**Jim Robinson**	**Jim Andrew**	**Max Kirkpatrick**
Skip Layton			

1) Preparation of test cell along Dike "D". Grading and drainage issues that pertain to the test cell subgrade. Instrumentation will be complete in Section "B" by the end of this week. Jacobs will be responsible for the grading and drainage issues on the west side of Dike "D". Stantec will confer with Jacobs as it pertains to protecting Area "A" of the Test Embankment. Drainage for Area "B" of the Test Embankment will be reviewed at a later date as necessary.

2) Developing additional stockpiles for initial drying phase to assure adequate quantities of material for daily placement. CP will begin establishing additional stockpiles for the Test Embankment to assure Stantec can select material based upon moisture. Also, the area west of Dike 2 is being prepared as an inplace stockpile for the Test Embankment.

3) Daily scheduling of anticipated material being placed in the test cell. It should include the number of trucks being used for hauling. Needed to determine amount of testing required daily or stockpiled material and material in place in the test cell. CP will notify Stantec of the number of trucks that they plan to utilize for the next days hauling. Everyone is aware that this is not a production driven test and if issues arise loads may be required to be reduced or stopped at the direction of Stantec.

4) Designation of a direct contact person with Jacobs to communicate all daily activities and assist with project requirements. Julie Pfeffer has designated that Don Givens will be the Jacobs contact for anything related to construction and Bruce Haas will be the Jacobs contact for all engineering issues.

5) Developing a storm water diversion plan including a daily temporary berm to help control sheet flow and velocities of storm water across the in-place material. CP will work with Stantec to develop a workable diversion berm scenario that will be utilized to minimize the flow coming from the relic area across the Test Embankment.

6) Review the minutes from the August 4, 2009 meeting.

7) Additional topics:

Jacobs has requested that Stantec provide an estimated yardage for inplace ash in the Test Embankment on a bi-weekly basis.

TDEC is requesting the FTP site be active by the first of next week.

Mr. Don Givens, with Jacobs stated that he would have to approve the JHA for the drilling operations before any drilling could begin. (Reviewed by Mr. Sean Healy on 8/12/09)

Stantec pointed out a hot plate will be used to conduct moisture tests on site. Jacobs asked if Stantec had a hot work permit for this hot plate. Stantec stated that Jacobs Health and Safety had been informed of the hot plate and affirmed that a hot work permit was not required for this task. Mr. Don Givens then asked Mr. Sean Healy, Health and Safety Officer with Jacobs, to join the meeting and comment on the hot work permit requirements. Mr. Healy stated that he had already informed Stantec personnel that they would not need a hot work permit for this task.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

August 11, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Richy L[illegible]	C.P	[illegible]
JHMiller	CP	jhmiller@tva.gov
JIM ROBINSON	CP	JROBINSON@TVA.GOV
DON GIVENS	JACOBS	dlgivens@tva.gov.
Bruce Haas	Jacobs	bjhaas@tva.gov
MAX KIRKPATRICK	CP	MKIRKPATRICK0@TVA.GOV
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
Jim Andrew	Stantec	jim.andrew@stantec.com
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

August 18, 2009 - 8:15 AM

Old Business

1) **Review the minutes from the August 11, 2009 meeting**: Minutes approved without discussion.

2) **Monitoring equipment Installation update:** three piezometers and two CPT's have been completed. One CPT, one piezometer and one slope inclinometer remain to be installed. Final count on new monitoring equipment in Area "B": 4 – piezometers, 2 – CPT's, & 1 – slope inclinometer have been installed. Additional slope inclinometers will need to be installed at a later date.

3) **Instrumentation and data collection:** eight piezometers, five slope inclinometers and three settlement plates are being reviewed daily. TVA surveyors are collecting baseline data in Area "A" daily. A fourth plate has been installed and TVA surveying is providing daily baseline and special needs as requested.

4) **Fill placement update:** the second access road has been completed and is being utilized for the hauling of ash. Approximately 70% of Area "A" subbase is complete and approved for the placement of ash. Currently ash placement is estimated at 1200/1400 yd.^{3} per day. Ash placement has been continuous as weather has permitted. 100% of the subbase has now been approved in Area "A". Currently 4 trucks are being used daily for hauling to the test embankment. Additional stockpiles are to be developed including the area west of Dike 2.

5) **Data report:** the FTP site is up, however the read only access has a glitch that is being corrected ASAP. Link to password has been sent to distribution list. Mr. Jim Andrew has meet with Mr. Bruce Haas to discuss reporting format.

New business

6) **Coordination:** Connex trailer grounding and replacement of air conditioner, Jacobs approval of connex set up. Mr. Don Givens has completed the Connex and generator grounding. Waiting on the replacement of the air conditioner. Ready for Jacobs review of the Connex for compliance.

7) **Site Instrumentation Access:** Don Givens is putting together work package to allow Stantec safe access to all instruments on the site that must be read on a weekly and biweekly basis. Waiting for contact with CP to begin access improvements to site monitoring equipment.

8) **Additional Topics:**

A. Scheduling will be separated to reflect Area “A” and Area “B” as distinct activities. Area “B” will be shown as on hold.

B. CP is to located all sock drains along the test embankment and verify that the effluent is daylighted. CP will extend these drains as needed.

C. Mr. Bruce Haas will coordinate the Jacobs efforts to design the drainage required in the Relic Placement Area.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

August 18, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
MAX KIRKPATRICK	CP	MKIRKPATRICK@TVA.GOV
Jason Ward	Jacobs	jason.ward2@Jacobs.com
Don Givens	JACOBS	donald.givens@JACOBS.com
JOE BENEDICT	CP	JABENEDICT@TVA.GOV
JIM ROBINSON	CP	JROBINSON@TVA.GOV
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
JIM ANDREW	STANTEC	JIM.ANDREW@STANTEC.COM
BRUCE HAAS	JACOBS	haasbje tva.gov
Larry Radford	TVA-CP	HRadford@TVA.gov
John Miller	TVA-CP	Jhmiller@tva.gov
Gary MacDonald	TVA-CP	GRMACDON@TVA.GOV
Charlie Comer	TVA-CP	cwcomer@tva.gov

Agenda

TVA – Kingston
Test Embankment Meeting

August 25, 2009 - 8:15 AM

Old Business

1) **Review the minutes from the August 11, 2009 meeting**: Minutes approved without comment.

2) **Fill placement update:** Ash placement has been continuous as weather has permitted. 100% of the subbase has now been approved in Area "A". A minimum of four trucks are being used daily for hauling to the test embankment. Additional stockpiles are to be developed including the area west of Dike 2. Notified everyone that the test embankment has reached the 5000 C.Y. point for a single day for the placement and compaction of ash in the embankment. CP notified Stantec that placement of ash in Area "A" will cease for a few days approx. 30 days in the future. This is due to operational needs by CP.

3) **Data report:** the FTP site was operational on 8-18-09. The link to password has been sent to distribution list. Link was provided to CP managers and they will distribute as their needs dictate.

New Business

4) **Erosion and Drainage – Relic Placement Area:** Drainage in the relic placement area has been directed and concentrated along the east side of Area "A" for the Test Embankment. Stantec requested that drainage be redirected to the center of Area "B" to protect Area "A". Mr. Bruce Haas and Mr. Jim Robinson will coordinate this modification. New underdrains are to be installed through the bottom area in Area "B".

5) **Site Radio:** Stantec has been provided with a site radio and we will monitor channel "1" for weather info and/or operational directives. Stantec is now monitoring radio channel "1".

6) **Jacobs Review of Connex:** Jacobs safety personnel have reviewed operations and equipment used in the connex and have given their approval. Stantec would like a written statement for our safety files. Awaiting written statement.

7) **New Proctors Established:** Stantec has submitted new ash samples to our laboratory to determine the density due to observed increased clay content in the ash. A new proctor has been received and is being used to determine compaction of the current materials.

8) **Moisture Levels:** The ash continues to be averaging 30% moisture for materials currently being placed in the Test Embankment. Stantec has been working with the CP operators to help handle wet materials and provide training on mixing materials to keep the moisture levels at a workable limit.

9) **Future CPT and SI Borings:** Upon completion of the first 15-foot tier, another set of slope inclinometers will be installed at the toe of the next slope. At that time, Stantec will also conduct cone penetrometer tests (CPT's) where they were previously conducted to evaluate strength gain of the underlying foundation materials. All construction must be halted long enough for the additional pore pressures to dissipate prior to conducting the CPT borings.

10) **Additional Items:**

- Mr. John Miller has been added to the distribution list for these meetings.
- CP will check all underdrains along the Test Embankment are daylighted and extended as needed to keep all drains open and functioning.
- CP will install subbase system along the interface of the relic slope to tie the Test Embankment to the slope without trapping water.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

August 25, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
SKIP LAYTON	STANTEC	SKIP.LAYTON @ STANTEC.COM
MOE PAYNE	JACOBS	
DON GIVENS	JACOBS	
Jason Ward	Jacobs	
Bruce Haas	Jacobs	bjhaas@tva.com
JHMiller	CP	Jhmiller@tva.gov
Jim ROBINSON	CP	JROBINSON@TVA.GOV
Julie Pfeffer	Jacobs	JPfeffer@tva.gov
Ricky Lynn	CP	RKLynn@TVA.GOV
MAX KIRKPATRICK	CP	MKIRKPATRICK@TVA.GOV

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

September 1, 2009 - 8:15 AM

Old Business

1) **Review the minutes from the August 25, 2009 meeting**: Reviewed and one correction was noted: Stantec not CP will be stopping the test for 2-3 days in the future to install CPT's after the first 15' bench is in place.

2) **Fill placement update:** Receiving ash from east side of Dike 2 and starting on Saturday began receiving blended ash from the slough northeast of Dike 2. Material is coming to the Test Embankment at 30% moisture as an average. Last week an estimated 25,700 C.Y. of material were placed and compacted, in spite of scattered showers on Thursday, Friday and Saturday. Stantec will provide a check between the estimated volume being brought to the Test Embankment and the actual inplace compacted fill volumes.

3) **Data report:** The report is updated weekly and placed on the FTP site for review. Settlements of less than 1" have been ignored to keep data in understandable format.

4) **Jacobs Review of Connex:** Stantec is awaiting a written report for the files. No Change

New Business

5) **Armoring the Northern Toe of Area "A":** Stantec is providing a typical detail of the rock armoring for the subgrade beneath the toe along the northern boundary of the Embankment Area "A". This will protect the Test Embankment due to unstable and uncompacted subgrade materials along the north face of the test. A sketch has been provided and Stantec will work with CP on the actual areas that require this detail.

6) **Expanded Decon Area on Swan Pond Road:** Stantec requests that all instrumentation currently installed not be impacted or modified by this activity. A minimum buffer of 10' should be maintained around these monitoring points. Slope inclinometer and piezometers at location 101 are to remain in place and the decon area will be situated around this installation.

7) **Access Road on the West Side of The Test Embankment:** A soft, wet area has developed at the southwest corner of the embankment, possibly the result of water seeping through from the relic's area. If the entrance road could be expanded or shifted north, it would alleviate the traffic through this area. CP has widened the roadway to the north and access issues have been improved.

8) **Additional Items:**

- Gary McDonald and Max Kirkpatrick are added to the distribution list.
- Steve Cherry is working on the final issues with the Connex and AC

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

September 1, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
MOE PAYNE	JACOBS	
Steve Cherry	TVA	
Jason Ward	jacobs	
[illegible]	Jacobs	
Max Kirkpatrick	CP	
Jim Robinson	CP	
John Miller	CP	
Gary MacDonald	TVA/OP	grmacdon@TVA.GOV
Richard Lynn	C.P	

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

September 8, 2009 - 8:15 AM

Old Business

1) **Review the minutes from the September 1, 2009 meeting**: Minutes approved without comment.

2) **Fill placement update:** Receiving ash from east side of Dike 2. Material is coming to the Test Embankment at 30% moisture as an average. Last week an estimated 20,000 C.Y. of material were placed and compacted, in spite of rain Monday and Tuesday and no hauling for 6 hours on Wednesday. Stantec will provide test volumes for the current footprint of Area "A".

3) **Data report:** The report is updated weekly and placed on the FTP site for review. Discussed the issue with displacement being skewed by numbers that are less than 1" and let everyone know that this would be ignored in the reporting.

4) **Jacobs Review of Connex:** Stantec is awaiting a written report for the files. Skip Layton to get with Sean Healy to resolve this.

5) **Armoring the Northern Toe of Area "A":** Stantec is providing a typical detail of the rock armoring for the subgrade beneath the toe along the northern boundary of the Embankment Area "A". This will protect the Test Embankment due to unstable and uncompacted subgrade materials along the north face of the test. Jim Andrew and Skip Layton have met with John Miller and established the limits of the armoring. CP to develop an estimate and order materials to be installed the week of 9-14-09.

New Business

6) **Stantec Recommendations for Proposed Wet Storage Areas:** Stantec requests a 100' buffer between the Test Embankment and the storage of wet ash. Also, all drainage leaving the Test Embankment is to be keep open.

7) **Additional Items:**
- Instruments in Area "B" will read on a daily basis to determine affects of relic placement
- A settlement plate will be set in Area "B" to provide data on fill placement
- Additional materials for the Test Embankment could be provided from the West Embankment and/or the Ball Field.
- CP will assist Stantec with repairs to Slope Inclinometer B-2 on Dike "D".
- Relic placement will extend to the northern boundary of Area "A" and will then be sloped into the Dredge Cell at a maximum slope of 5:1. The final elevation of the Relic Area was an estimate only and relic placement will stop when the conditions described have been met.

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

September 8, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Julie Pfeffer	Jacobs	JPfeffer@tva.gov
MAX KIRKPATRICK	CP	MKIRKPATRICK@TVA.GOV
John Miller	CP	Jhmiller@tva.gov
Reggie Hoffer	C.P.	
Steve Cherry	CP	SJcherry@TVA.gov
Larry Radford	TVA CP	ldradfor@TVA.gov
SKIP LAYTON	STANTEC	SLAYTON@STANTEC.COM
JIM ANDREW	STANTEC	JANDREW@STANTEC.COM

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

September 15, 2009 - 8:15 AM

Old Business

1) **Review the minutes from the September 8, 2009 meeting**: Minutes approved without comment.

2) **Fill placement update:** Receiving ash from east side of Dike 2. Material is coming to the Test Embankment at 30% moisture as an average. Last week an estimated 25,000 C.Y. of material were placed and compacted, including the Labor Day holiday. An updated grading plan using the current footprint has been developed indicating 250,000 C.Y. inplace fill volume. No comments

3) **Data report:** The report is updated weekly and placed on the FTP site for review

4) **Armoring the Northern Toe of Area "A":** Stantec has provided a detail for the armoring of ±600 L.F. of the west and north toe of the Test Embankment. Work began on the slope on September 17th.

New Business

5) Update Jacobs contacts for this project: Brian Jacobs will be replacing Don Givens as construction contact.

6) Boundary of Area "A" as it currently exists: Boundary is accepted as the total area with the rock subbase.

7) Rain for extended periods along with wet materials could stop the test for a few days: Severe rains have stopped placement activities.

8) Selection of ash for the Test Embankment. The project requires ash that is within the moisture limits and additional drying may be required before placement in the Test Embankment.

9) Access to AECOM instrumentation. Access is being developed by CP for all instruments within the Dredge Cell.

10) **Additional Items:** Not Addressed

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

September 15, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
John M. Miller	CPC	JMmiller@TVA.gov
[illegible]	[illegible]	[illegible]
Steve Cheezy	CP	SICherry@TVA.GOV
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
MAX KIRKPATRICK	CP	MKIRKPATRICK@TVA.GOV
JIM ROBINSON	CP	JROBINSON@TVA.GOV
Bruce Haas	Jacobs	bjhaas@TVA.GOV
SKIP LAYTON	STANTEC	
JIM ANDREW	STANTEC	
Tom SPURLOCK	TVA/CP	TTSPURLOCK@TVA.GOV.

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

September 22, 2009 - 8:15 AM

Old Business

1) **Review the minutes from the September 15, 2009 meeting**: Approved without comment.

2) **Fill placement update:** Based upon a field run topographic survey conducted by TVA of the Test Embankment, approximately 75,000 C.Y.'s of ash had been placed as of Tuesday, September 15, 2009. Discussed the total placement in the Test Embankment reflected 3,868 total loads. This equates to approx. 18 C.Y.'s of inplace compacted ash for each truck load delivered.

3) **Data report:** The report is updated weekly and placed on the FTP site for review Data is showing no significant changes and ultimately the embankment is stable.

4) **Armoring the Northern Toe of Area "A":** Work has begun on the armoring by creating an anchor trench and a uniform slope in the subgrade. Recent weather conditions have created washes in the work already performed and this work will have to be repaired. CP is looking into an alternate method for the handling stormwater and the armoring of the toe of the subgrade along the north and west edges of the Test Embankment. Mr. Jim Robinson, Mr. Jim Andrew, Mr. Jeff Clowers, and Mr. Reggie Norfleet met on 9-23-09 to discuss options.

New Business

5) Repairs to the erosion points in the Test Embankment. Actual repairs where started on 9-24-09 and final repairs have begun on 9-28-09.

6) Stormwater management. Stantec has provided a detailed sketch of a drainage system that is to be installed in the Test Embankment. This system will be permanent along the toe of the slope for the transitioning from the first bench to the second and will be temporary on the surface of the Test Embankment and will be raised as required as the fill heights adjacent to the north/south drainage channels exceed 3 feet of fill.

7) Monitoring equipment damages: SI-4, B-2, & AECOM 109. Stantec has made repairs to all equipment and will continue to monitor the instruments on the current schedules.

8) Destination of ash after de-watering in wet processing areas. Ash that has been placed in the ash processing area located in the area of the relic placement along Dike "C' will begin being brought to the Test Embankment and compacted. This will provide the Test Embankment with a source for ash meeting the moisture guidelines and allow for additional placement of wet ash in the relic placement area.

9) **Additional Items:** No additional items where discussed.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

September 22, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Jason Ward	Jacobs	Jason.Ward2@jacobs.com
Bruce Haas	Jacobs	bjhaas@tva.gov
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
Jim Robinson	Civil Projects	JROBINSON@TVA.GOV
John Miller	" "	JHmiller@TVA.gov
Tom Spurlock	" "	TTSPURLO@TVA.GOV
Jim Andrew	Stantec	jim.andrew@stantec.com
Skip Layton	Stantec	SKIP.LAYTON@STANTEC.COM
Joe Benedict	Civil Projects	JABENEDICT@TVA.GOV
Steve Cheery	Civil Projects	SJcheery@TVA.GOV

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

September 22, 2009 - 8:15 AM

Old Business

1) **Review the minutes from the September 22, 2009 meeting**: Minutes approved without comment.

2) **Fill placement update:** Fill placement will resume in the Test Embankment on 9-29-09. Ash from the wet ash processing area located in the relic placement are will be the source for ash. This material will be placed utilizing the tractor pulled pans that will be side loaded at the wet processing area. Ash was actually brought to the Test Embankment with off-road trucks from the east embayment. Additionally on Thursday, Oct. 1, the tractor pulled pans were added to the flow of ash being placed in the Test Embankment.

3) **Data report:** The report is updated weekly and placed on the FTP site for review. Current data with only 30% of the loading on the Test Embankment is showing no significant changes based upon the data being collected daily.

4) **Armoring the Northern Toe of Area "A":** Need a schedule for armoring of the toe below the rock working platform. Work on this area to begin as soon as erosion damage on the slopes is corrected.

5) **Repairs to the erosion points in the Test Embankment**: Compaction utilizing vibration is to be used in areas directed by Stantec. Stantec did not review the placement of fill in the stormwater runoff erosions and has run limited density testing at the surface of these areas.

6) **Stormwater management:** Installation of approved plan that contains toe drains and lined channels in the embankment. . CP wants Stantec to evaluate the spacing of the drainage channels to conform with the equipment, I.E. tractor pulled pans, to allow adequate working room for these tractors without impacting the stormwater modifications

New Business

7) **Additional Items:**

_____

_____

_____

_____

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

September 29, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Bruce Haas	Jacobs	bjhaas@tva.gov
Ricky Lynn	CP	RWLynn@TVA.GOV
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
Brian Jacobs	Jacobs	B.Jacobs@TVA.gov
Jim Robinson	CP	JROBINSON@TVA.GOV
John Miller	CP	JHmiller@TVA.gov
Larry Radford	TVA-CP	LJradford@TVA.gov
~~Jim Andrew~~		
Skip Layton	Stantec	skip.layton@stantec.com

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

October 6, 2009 - 8:15 AM

Old Business

1) **Review the minutes from the September 29, 2009 meeting**: Minutes approved without comment.

2) **Fill placement update:** Current ash delivery has been from the east embayment and the wet processing area adjacent to Dike "D". Need to evaluate the volumes of ash in the tractor pulled pans vs. ash in the off-road trucks. Mr. Skip Layton has observed that the side loading of the scraper pans with a 325 excavator required 4 to 5 bucket loads per pan for an average of 9 buckets to fill both pans. Alternately the same excavator was used to load off-road trucks and averaged 9 bucket loads for trucks without tailgates and 11 bucket loads for trucks with tailgates. The conclusion drawn is that the two pans pulled by the tractors are roughly equivalent to one off-road truck.

3) **Data report:** The report is updated weekly and placed on the FTP site for review. The website is up and running for the PZ automation. Full automation of PZ-1 and PZ-8 is shown on the website and updated on an hourly basis.

4) **Armoring the Northern Toe of Area "A":** Need a schedule for armoring of the toe below the rock working platform. This schedule is totally weather dependent and work will begin as soon as there is an adequate window of time relative to weather.

5) **Stormwater management:** Installation of the modified plan for channelizing the runoff on the Test Embankment. All of the lined channels have been installed and the contouring of the surface of the Test Embankment has begun to utilize these channels. The rains on Friday, Oct.9, did show the channels worked to protect the surface. Additional contouring and compacted lifts along with the permanent drainage structures that will be installed in the future will increase the effectiveness of these devices.

New Business

6) **Additional Items:**

- Stantec was notified by Jacobs that the priority for all dry ash was for shipping off site by rail. The Test Embankment would receive dry ash only if the ball field's needs are met.
- Stantec was asked to look at project modifications regarding moistures, placement, test size, etc. that would allow the test to move forward without having to rely on ash that does not exceed the 30% moisture numbers.
- Mr. Jim Andrew provided Ms. Julie Pfeiffer and Mr. Gary MacDonald with an outline of the moisture testing that Stantec is conducting onsite and a spreadsheet of all the test results to-date.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

October 6, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Jason Ward	Jacobs	jwardo@TVA.GOV
Reggie norfleet	C.P	
Steve Cherry	CP	SLcherry@TVA.gov
Gary MacDonald	CP	grmacdon@tva.gov
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
Richard Lynn	CP	RWLynn@TVA.GOV
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
Jim Andrew	Stantec	jim.andrew@stantec.com

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

October 13, 2009 - 8:15 AM

Old Business

1) **Review the minutes from the October 6, 2009 meeting**: No exceptions noted

2) **Fill placement update:** Current ash delivery has been from the east embankment and the wet processing area adjacent to Dike "D". Need to evaluate the volumes of ash in the tractor pulled pans vs. ash in the off-road trucks. Requested Jacobs permission utilized ash from the relic area. Stantec will also utilized ash from the relic placement area as moisture levels allow.

3) **Data report:** The report is updated weekly and placed on the FTP site for review. The website is up and running for the PZ automation.

4) **Armoring the Northern Toe of Area "A":** Need a schedule for armoring of the toe below the rock working platform. CP developing work plan and schedule.

5) **Stormwater management:** Installation of the modified plan for channelizing the runoff on the Test Embankment. CP began installation of drainage flumes as directed by Stantec during the following week.

New Business

6) **Additional Items:**

_____
_____
_____
_____

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

October 13, 2009 - 7:15 AM

NAME:	REPRESENTING:	EMAIL:
John Miller	CPG	jhmiller@TVA.gov
Bruce Haas	Jacobs	bjhaas@tva.gov
Jim Robinson	CP	JROBINSON@TVA.GOV
Gary MacDonald	CP	grmacdon@tva.gov
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
Jim Andrew	Stantec	jim.andrew@stantec.com
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
Richy Lynn	CP	RWLynn@TVA.GOV

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

October 20, 2009 - 8:15 AM

Old Business

1) **Review the minutes from the October 13, 2009 meeting**: No comments noted.

2) **Fill placement update:** need to find additional sources to increase placement volumes on every day when fill on the embankment can be utilized.. Stantec notified contact Don Thompson and work out material from the ball field and utilize CP articulated trucks as available the haul material to the Test Embankment. Jacobs notified Stantec that the priorities on this site were as follows: 1. Removal of ash from the River, 2. Removal of ash from the sluice trench, 3. Ash removal from the site by train, 4. Trucks utilized at the East embankment, 5. Stantec test embankment without time critical ash.

3) **Data report:** The report is updated weekly and placed on the FTP site for review. The website is up and running for the PZ automation. The report data was discussed in all parties were satisfied with the current results.

4) **Armoring the Northern Toe of Area "A":** Need a schedule for armoring of the toe below the rock working platform. CP is discussing a schedule for this work.

5) **Stormwater management:** Installation of the modified plan for channelizing the runoff on the Test Embankment. The first two channels have been installed and work has begun to crown the fill placement adjacent to these channels to create the drainage required.

New Business

6) **Additional Items:**

_____
_____
_____
_____

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

October 20, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
Jim Andrew	Stantec	jim.andrew@stantec.com
JH Miller	CP	JHmiller@TVA.gov
JIM ROBINSON	CP-TVA	JROBINSON@TVA.GOV
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
Gary MacDonald	CP-TVA	grmacdon@tva.gov
Richard Lynn	CP	RWLynn@TVA.GOV
MAX KIRKPATRICK	CP	MKIRKPATRICK@TVA.GOV

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

October 27, 2009 - 8:15 AM

Note: No formal agenda was developed for this meeting. Total meeting lasted 15 minutes.

1) **Review the minutes from the October 13, 2009 meeting**: No comments noted.

2) **Fill placement update:** need to find additional sources to increase placement volumes on every day when fill on the embankment can be utilized. Stantec notified Jacobs that the ash coming from the relic placement area had to have a moisture content less than 30%. Currently the processing in this area has not provided material that meets this criteria. Stantec again requested permission to remove material from the relic area and was told this could occur but that time critical ash had the highest priority. Stantec is looking for a fill rate of approximately 5000 $yd.^3$ per day for every day worked.

3) **Data report:** The report is updated weekly and placed on the FTP site for review. The website is up and running for the PZ automation. The report data was discussed in all parties were satisfied with the current results.

4) **Armoring the Northern Toe of Area "A":** Need a schedule for armoring of the toe below the rock working platform. This portion of the project is currently being investigated to determine its necessity.

5) **Stormwater management:** Installation of the modified plan for channelizing the runoff on the Test Embankment. The drainage channels that have been installed are working as they were intended. Due to higher rains the only area of the test pads that have been washing are the down slope directly underneath these channels. CP will make repairs as necessary to to 3 to 1 slope at these locations.

End of minutes

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

November 3, 2009 - 8:15 AM

Note: No formal agenda was developed for this meeting. Total meeting lasted 45 minutes.

1) **Work on the test embankment has been halted:** All fill placement on the test embankment was halted the evening of October 30, 2009. Multiple testing points on the Test Embankment had exceeded the 15% alarm level and no work will resume until a full stability analysis is conducted. Mr. Mike Scott with TVA was in attendance this meeting and is currently asking Stantec to look at the dread cell as a whole and conduct a stability analysis for the entire failed dread cell including the wet storage areas and the access roads. Mr. Jim Andrew with Stantec is studying the data regarding the drainage ramifications from the relic area, the relic placement area, and the wet storage areas. To obtain the data necessary Stantec will begin daily instrumentation readings throughout the failed dread cell. Jacobs will be required to provide projections for future wet storage needs and locations to assist in the stability analysis to be conducted by Stantec. Until the stability analysis is completed all wet processing of ash will be placed in the East Embankment that had previously been cleared.

2) **Review the minutes from the October 27, 2009 meeting**: No comments noted.

3) **Data report:** The report is updated weekly and placed on the FTP site for review. The website is up and running for the PZ automation. The report data was discussed to show the areas that had reached alarm level requiring the shutdown of the Test Embankment.

4) **Armoring the Northern Toe of Area "A":** Need a schedule for armoring of the toe below the rock working platform. No decision on this work has been reached.

5) **Stormwater management:** Installation of the modified plan for channelizing the runoff on the Test Embankment. The drainage channels that have been installed are working as they were intended. Due to higher rains the only area of the test pads that have been washing are the down slope directly underneath these channels. CP will make repairs as necessary to to 3 to 1 slope at these locations. None of this work will be completed until such time as the stability analysis determines it is safe to go back into the Test Embankment.

End of minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

November 3, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Gary MacDonald	CP TVA	grmacdon@tva.gov
Max Kirkpatrick	CP	MKIRKPATRICK@TVA.GOV
Bruce Haas	JACOBS	bjhaas@tva.gov
Jim Robinson	CP	JROBINSON@TVA.GOV
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
John Miller	CP	jhmiller@tva.gov
Reggie Turfleet	C.P.	
Steve Cherry	CP	SLcherry@TVA.gov
Jim Andrew	Stantec	jim.andrew.stantec
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
Mike Scott	TVA	mtscott2@tva.gov

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

November 10, 2009 - 8:15 AM

Note: No formal agenda was developed for this meeting.

1) **Work on the test embankment has been halted:** Work on the Test Embankment resumed Wednesday, November 4, 2009. A complete stability analysis was completed and all new data was reviewed to determine that it was safe to continue with this test. The stability analysis with the rest of the dredge cell is ongoing and data will be provided to TVA as soon as it is available.

2) **Review the minutes from the November 4, 2009 meeting**: No comments noted.

3) **Data report:** The report is updated weekly and placed on the FTP site for review. The website is up and running for the PZ automation. The report data was discussed to show the areas that had reached alarm level requiring the shutdown of the Test Embankment along with the stability analysis that was performed and the new data showing the pressure ratios subsiding across the test embankment except for the Eastern portion. No work will be performed in the east side of the test embankment until these ratios have gone below the alarm level.

4) **Armoring the Northern Toe of Area "A":** Need a schedule for armoring of the toe below the rock working platform. No decision on this work has been reached.

5) **Stormwater management:** Installation of the modified plan for channelizing the runoff on the Test Embankment. CP will begin repairs of the washes in the slope at the drainage channels. It was requested that they utilize excavators for trenching and compaction and materials.

End of minutes

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

November 17, 2009 - 7:30 AM

TOPICS FOR DISCUSSION:

1) **Test Embankment Stability Analysis:** Results of the stability analysis study that was conducted after the alarm level was reached in the Test Embankment in numerous areas. This caused activities in the Test Embankment to be suspended on the evening of October 30, 2009. Stantec to provide Mr. Bruce Hass with a copy of the preliminary report.

2) **Wet Storage Stockpiles on Dike "D":** Pending review of moistures of the existing stockpiles, these piles can be removed from Dike "D" and placed in the Test Embankment. Additional materials can not be placed in the area pending the completion of the Wet Storage Stability Analysis Ms. Julie Pheffer requested that Stantec provide a written statement that the Dike "D" stockpiles could be removed. Stantec does not have that authority and TVA would need to furnish that authorization.

3) **Ball Field Materials:** Discussion on the availability and specifications for the materials that can be utilized for the Test Embankment. Materials coming from the ball field have had high sand content and high moistures that have had a negative effect on the compacted surface of the Test Embankment. Stantec is requested to give priority to all time critical ash over the use of the relic area.

4) **Armoring the Northern Toe of the Test Embankment:** This work needs to be put on the fast track and construction should be reviewed by Stantec. Shaping of the 3:1 slope is to be completed before any armoring begins.

5) **Shaping the First Bench and Drainage Improvements:** Surveying is complete to rough grade the first bench of the Test Embankment. Additional surveying will be required to establish the finished grades. At that time the permanent drainage structures are to be installed on the bench. CP has begun roughing in the final shape of the first bench and has begun the second tier of the embankment. Surveying is complete until finish grades are required.

6) **Lime Modification Test:** Stantec can utilize the lime modified ash, pending moisture results, for placement in the Test Embankment without any modifications to the Test Permit. Ms. Julie Pheffer stated that the Test Embankment might be considered as a processing area if the testing with the lime is successful and accepted.

7) **Total Cubic Yards of Ash Placed:** Since October 26th, approx. 41,700 C.Y. of ash have been placed in the Test Embankment. The sources have been from Dike "D" wet processing area, the Ball Field, and the Relics Area. This covered only 11 days of ash placement. Ash was halted on October 30th due to limits being exceeded per the approved Test Permit and multiple days of rain also factored into the working days. There is currently approx. 122,000 C.Y.'s of ash in the Test Embankment. Based upon the current placement volumes, approx. 25 more days of ash placement are required to complete the required fill.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

November 17, 2009 - 7:30 AM

NAME:	REPRESENTING:	EMAIL:
Bruce Haas	JACOBS	bjhaas@tva.gov.
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
Jim Andrew	Stantec	jim.andrew
Gary MacDonald	CP	grmacdon@.tva.gov
John Miller	CP	Jhmiller@TVA.gov
Jim Robinson	CP	JROBINSON@TVA.GOV
Richard Lynn	CP	RWLynn@TVA.GOV
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
JIM ANDREW	STANTEC	JIM.ANDREW@STANTEC.COM

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

November 24, 2009 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Wet Storage Stockpiles on Dike "D":** Stockpiles have been spread across the replic placement area. Stantec will do periodic moisture checks on this material and will request scrapers to move the material to the Test Embankment as soon as the moisture levels are in range. Stantec informed to approximately 12,000 yd.^{3} of material has been spread in this area.

2) **Ball Field Materials:** Stantec will continue to utilize the material on the ball field for fill as long as it remains within the moisture range and the sand content does not create handling and placement problems during wet weather. Stantec has agreed to review material on a daily basis or as needed and Jacobs has agreed to allow Stantec to receive material equal to the material being moved to the trains.

3) **Armoring the Northern Toe of the Test Embankment:** The slope improvements for the Test Embankment have been completed and the armoring can begin. It's been agreed that in the short term the armoring at the toe of the slope along the embankment is on hold.

4) **Total Cubic Yards of Ash Placed:** A total of 22,400 C.Y. of ash where placed in the Test Embankment during the past week.

5) **Holiday Contacts:** In case of emergency or any questions please contact:
Skip Layton – Assist. Q.C. Manager Phone: 770-560-6992

6) **Additional Items:**

_____
_____
_____
_____

TEST EMBANKMENT
SIGN IN SHEET

Nov. 24, 2009 8:15

JH Miller	JH miller@tva.gov
Julie Pfeffer	jpfeffer@tva.gov
Bruce Haas	bjhaas@tva.gov
Jim Andrew	jim.andrew@stantec.com
SKIP LAYTON	SKIP.LAYTON@STANTEC.COM

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

December 1, 2009 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Wet Storage Stockpiles on Dike "D":** Stockpiles have been spread across the relic placement area. Stantec will do periodic moisture checks on this material and will request scrapers to move the material to the Test Embankment as soon as the moisture levels are in range. Jacobs asked that this be made a priority to allow space when the Valley Area can be utilized again for wet processing.

2) **Material Sources:** Stantec will continue to utilize the material on the ball field for fill as long as it remains within the moisture range required and the sand content does not create handling and placement problems during wet weather. Also material from the relic area will be utilized to complete the volumes required daily. Recently Stantec has only been able to get (4) trucks and (2) scrapers for hauling to the Test Embankment. On normal days (6) trucks and (3) scrapers are required to provide the minimum daily volumes needed to complete the Test Embankment. Ms. Julie Pheffer directed CP that trucks utilized to assist Sevenson with hauling from the drag line area could be diverted to the Test Embankment.

3) **Total Cubic Yards of Ash Placed:** A total of 27,500 C.Y. of ash have been placed in the Test Embankment Since November 17, 2009.

4) **Armoring the Northern Toe of the Test Embankment:** The slope improvements for the Test Embankment have been completed and the armoring can begin. Stantec will work with CP to develop a schedule for this work. This work has been put off until the slope work is complete for the first bench level and the permanent drainage improvements are installed.

5) **Finish Grading**: TVA surveying is being coordinated to provide finish grades for the first bench on the Test Embankment. When this work is complete the grading will be completed and all permanent drainage structures will be installed. This work is to be made a priority.

6) **Additional Items:** None

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

December 1, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
John Miller	CP	JHMiller@tva.gov
Bruce Haas	Jacobs	bjhaas@tva.gov
Richy Lynn	CP	RWLynn@TVA.GOV
Jim Andrew	Stantec	jim.andrew@stantec.com
Jim Robinson	CP	JROBINSON@TVA.GOV
MARK CADE	MACTEC	MSCADE@MACTEC.COM
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
Wes Templeton	CP-TVA	wjtempl1@tva.gov

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

December 8, 2009 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Wet Storage Stockpiles on Dike "D":** Stockpiles have been spread across the relic placement area. Stantec will do periodic moisture checks on this material and will request scrapers to move the material to the Test Embankment as soon as the moisture levels are in range. When CP begins processing wet ash in the Valley area again, the 12,000 C.Y. of material will be incorporated with the new ash and dried before being placed in the Test Embankment.

2) **Material Sources and Equipment Resources:** Stantec will continue to utilize the material on the ball field for fill as long as it remains within the moisture range required and the sand content does not create handling and placement problems during wet weather. Also material from the relic area will be utilized to complete the volumes required daily. On average for the last week, the Test Embankment has been delegated only (4) trucks and (2) scrapers for hauling to the Test Embankment. On normal days (6) trucks and (3) scrapers are required to provide the minimum daily volume (5,000 C.Y.) estimated to complete the current Test Embankment before the end of the year. CP has committed to providing (5) trucks as a minimum and the third tractor will be back in service next week when the operator will be available.

3) **Total Cubic Yards of Ash Placed:** A total of 16,500 C.Y. of ash have been placed in the Test Embankment Since December 1, 2009. This totaled four days of hauling with a single day high of 5,000 C.Y. It was noted that this production was actually over (4) working days with (2) days down due to weather and (1) non-working Sunday.

4) **Finish Grading and Permanent Drainage**: TVA surveying is being coordinated to provide finish grades for the first bench on the Test Embankment. .The first slope will be completed at that time, and it has been recommended that this slope be stabilized with the hydro-seeding. CP will begin this work as soon as the weather permits and the site foreman has returned from family leave.

5) **Data Report**: The Data Report from last week indicates all thresholds are at or below the first Action level. The current report was reviewed and discussed with no concerns noted.

6) **Additional Items:** A schedule for completion of the Test Embankment was discussed and it was understood that the Test Embankment would be considered complete when the final elevation of 803 is achieved. It was estimated that this elevation will be reached by the end of January.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

December 8, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
John Miller	CPC	Jrmiller@tva.gov
Jim Andrew	Stantec	jim.andrew@stantec.com
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
Rick Lynn	CP	RWLynn@TVA.gov
Bruce Haas	Jacobs	bjhaas@tva.gov

Meeting minutes

TVA – Kingston
Test Embankment Meeting

December 15, 2009 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Wet Storage Stockpiles on Dike "D":** Marginally wet material removed from the infill area of the Lateral Expansion was placed in this area on Saturday, December 12th. This material will be utilized in the Test Embankment, along with approximately 12K cubic yards of remaining wet processing ash that was spread across the Valley Area, as soon as it has dewatered sufficiently to meet the moisture requirements of the Test Embankment. CP was requested to read grade 12,000 yd.^{3} of wet processed ash and pile this ash so it can be water properly under the current weather conditions. All so the Valley area is being considered for placement of the additional wet materials for processing. The criteria for these materials will be a moisture level no higher than 35% and materials that can be utilized in the Test Embankment when properly dried. Stantec will test for moisture's on materials designated for the Valley area.

2) **Material Sources and Equipment Resources:** The minimum requirements for equipment and materials to complete the Test Embankment consists of all three tractors running from the relic area and six articulating trucks bringing dry material from the ball field on all days when material can be placed in Test Embankment.. Recently we have only been able to get a maximum of two tractors and four articulating trucks. CP agreed to provide all three tractors and a minimum of four trucks for the daily activities on the Test Embankment. Additional trucks may be utilized depending upon availability.

3) **Total Cubic Yards of Ash Placed:** A total of 16,000 C.Y. of ash have been placed in the Test Embankment Since December 5, 2009. This total was generated by three full days and two partial days of hauling. All work on the Test Embankment was halted by TVA Management from 9:30 AM Tuesday, December 8th until 1:30 PM on Thursday, December 10th. This shutdown was for overall site safety issues. The total in-place compacted ash is estimated at 173K cubic yards that equates to approximately 216K cubic yards of loose ash..

4) **Finish Grading and Permanent Drainage**: Stantec will coordinate with TVA surveying to provide finish grades for the first bench on the Test Embankment and to insure that the filling of the Test Embankment is consistent with the approved plans. The first bench should be completed and the permanent drainage structures installed and armored to prevent erosion along the controlled drainage routing. CP will begin cleanup from weather-related damage to the test embankment. As soon as cleanup is complete permanent drainage ruptures will be installed and armored.

5) **Slope Inclinometers and CPT's**: Stantec has scheduled the installation of two new slope inclinometers and five CPT's in the Test Embankment for the week of January 7, 2010. The CPT's will be performed at the same locations where CPT's were conducted prior to the beginning of the Test Embankment. Slope inclinometers to be installed according to the approved plans. Stantec will coordinate with TVA surveyors to locate all CPT and SI locations.

6) **Additional Items:** Stantec discussed additional items related to the stability of SI 4 on the Test Embankment. This instrument is showing movement due to erosion of the slope. This erosion is caused by the permanent drainage structures not being installed

End Of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

December 15, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
BRUCE HAAS	JACOBS	BJHMAS@TVA.COM.
Julie Pfeffer	Jacobs	jpfeffer@tva.com
Ricky Lynn	CP	RWLynn@TVA.gov

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

December 22, 2009 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Wet Storage Stockpiles on the Valley Area:** Stantec has reviewed materials from the sluice trench area for placement in the Valley. Two truck loads of material where brought to the Valley from two different locations along Dragline Road. These loads were sampled after they were delivered to the Valley and moisture tests were conducted. A third sample was taken from sluiced materials inside the Sevenson area and moisture testing was performed on this sample as well. All samples tested exceeded the 35% moisture level that is allowable in the Valley Area. Additionally ash/clay materials removed during the cleaning for the Dike "C" Buttress construction have been placed in the Valley Area and moisture testing has been performed on this material also. It was discussed that the ash/clay materials being removed from the area of the Dike "C" Buttress construction would be evaluated on a load by load basis and suitable material would be brought to the Valley area and segregated. Also sandy material from the ball field was not recommended for placement in the Valley area.

2) **Material Sources and Equipment Resources:** Stantec has been able to utilize all three tractors with pans over the last week but the availability of trucks has been limited to a maximum of four trucks on any given day. Additional trucks for Wednesday, December 23 have been requested to maximize production on the Test Embankment.

3) **Total Cubic Yards of Ash Placed:** A total of 12,000 C.Y. of ash have been placed in the Test Embankment Since December 15, 2009. This total was generated by three full days of hauling. The total in-place compacted ash is estimated at 182K cubic yards that equates to approximately 228K cubic yards of loose ash. The current CP estimate for in-place material is 215 $yd.^3$ of ash.

4) **Finish Grading and Permanent Drainage**: Stantec will coordinate with TVA surveying to provide finish grades for the first bench on the Test Embankment and to insure that the filling of the Test Embankment is consistent with the approved plans. The first bench should be completed and the permanent drainage structures installed and armored to prevent erosion along the controlled drainage routing.

5) **Installation of New Slope Inclinometers and CPT's**: Stantec has rescheduled the installation of two new slope inclinometers and five CPT's in the Test Embankment for the week of January 11, 2010. The CPT's will be performed at the same locations where CPT's were conducted prior to the beginning of the Test Embankment. Slope inclinometers to be installed according to the approved plans. Installation of the new piezometers in the relic area was discussed for scheduling purposes only. This is a Mactec installation and Mactec has decided to wait until all equipment is available and do their installation at one time.

6) **Additional Items:** It was discussed with CP and Jacobs regarding the possibility of moving wet ash already in place on the test embankment up the north face of the relic slopes to

assist in the drying of the material and also to fill washes, riles and erosion in that exist on the north face. Jacobs stated that time critical material (i.e. test embankment fill) should not be used to fill the voids in the relics slope. These voids should be filled with the non-time critical relics material.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

December 22, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
Julie Pfeffer	Jacobs	JPfeffer@tva.gov
BRUCE HAAS	Jacobs	bjhaas@tva.gov.
Jim Andrew	Stantec	jim.andrew@stantec.com
MAX KIRKPATRICK	TVA-CP	MKIRKPATRICK@TVA.GOV
John Miller	TVA-CP	JHmiller@TVA.gov
JIM ROBINSON	TVA CP	JROBINSON@TVA.COM

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

December 29, 2009 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Wet Storage Stockpiles on the Valley Area:** Ash/clay materials removed during the cleaning for the Dike "C" Buttress construction have been placed in the Valley Area, and at least one load was observed that appeared to be at moisture content above saturation. Moisture content tests will be conducted on this material, however the 30% saturated criteria is not applicable due to the high clay content of this material. A recommendation will be made regarding the suitability of this material after the moisture content tests are completed. Stantec Requested that no ash material form the Dike "C" Buttress project be placed in the Valley Area due to high moistures and differing soil (clay/sand) components. CP asked to use rock that is excavated from the haul road along Dike "C" Buttress for the construction of BMP's in the Valley Area. Stantec concurs with this use.

2) **Material Sources and Equipment Resources:** Stantec has been able to utilize all three tractors with pans over the last week but the availability of trucks is still limited. Ms. Julie Pheffer requested CP to shift their trucks in the Ball Field from the trains to the Test Embankment.

3) **Total Cubic Yards of Ash Placed:** A total of 10,660 C.Y. of ash have been placed in the Test Embankment Since December 22, 2009. This total consists of 3,100 C.Y. of material from the ballfield and 7,560 C.Y. from the relic area. This total was generated in two days of hauling. The total in-place compacted ash is estimated at 191K cubic yards that equates to approximately 239K cubic yards of loose ash. Ms. Julie Pheffer requested a timeline from the completion of the Test Embankment to a time when the Embankment could be utilized to provide a quality ash source to the trains. Stantec will be reading instruments daily for a minimum period of four weeks after the completion of the filling operations. After this monitoring period is finished the Embankment would be available for any TVA approved activity.

4) **Finish Grading and Permanent Drainage**: Rough grade has been completed for the first bench of the Test Embankment, and this bench is approximately 2 feet above the original proposed elevation. The slope below this bench has been sprayed with Terraflex by the hydroseed contractor. Stantec will work with CP to field design drainage structures to help control the slope washes.

5) **Installation of New Slope Inclinometers and CPT's**: The installation of two new slope inclinometers and drilling of five Cone Penetrometer Tests (CPT's) in the Test Embankment is scheduled for the week of January 11, 2010. The CPT's will be performed at the same locations where CPT's were conducted prior to the beginning of the Test Embankment. Slope inclinometers will be installed on the first bench in accordance with the proposed layout. This schedule may concur with Mactec's installation of PZ's in the Relic Area. Stantec drillers can provide assistance with this installation if requested.

6) **Additional Items:** No additional items where disucssed.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

December 29, 2009 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Julie Pfeffer	Jacobs	
Max Kirkpatrick	TVA-CP	
Jim Robinson	TVA-CP	
Skip Layton	Stantec	
Jim Andrew	Stantec	

Agenda

TVA – Kingston
Test Embankment Meeting

January 5, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Wet Storage Stockpiles on the Valley Area:** Since saturated materials from the Dike "C" ash removal where placed in the Valley Area last week, pressures on the east side of the Test Embankment have risen above the Alarm Level of the test guidelines. A Stability Analysis has been initiated regarding this condition.

2) **Material Sources and Equipment Resources:** Stantec has been able to utilize all three tractors with pans over the last week and the availability of trucks is slowly improving. With the current weather conditions, it may be necessary to side load the tractor pulled pans with an excavator to handle the ground freeze issues.

3) **Total Cubic Yards of Ash Placed:** A total of 11,630 C.Y. of ash have been placed in the Test Embankment Since December 28, 2009. This total consists of 3,600 C.Y. of material from the ball field and 8,030 C.Y. from the relics area. This total was generated in three days of hauling. The total in-place compacted ash is estimated at 200K cubic yards that equates to approximately 250K cubic yards of loose ash.

4) **Finish Grading and Permanent Drainage**: Rough grade has been completed for the first bench of the Test Embankment, and this bench is approximately 2 feet above the original proposed elevation. The slope below this bench has been sprayed with Terraflex by the hydroseed contractor. Slope repairs and permanent drainage system installation needs to be a priority to prevent undermining of the working platform.

5) **Installation of New Slope Inclinometers and CPT's**: The installation of two new slope inclinometers and drilling of five Cone Penetrometer Tests (CPT's) in the Test Embankment is scheduled for January 11, 2010. The CPT's will be performed at the same locations where CPT's were conducted prior to the beginning of the Test Embankment. Slope inclinometers will be installed on the first bench in accordance with the proposed layout.

6) **Additional Items:**

_____

_____

_____

_____

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

January 5, 2010 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Julie Pfeiffer	Jacobs	
Bruce Haas	Jacobs	bjhaas@tva.com
Richard Lynn	CP	RWLynn@TVA.GOV
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
JIM ANDREW	STANTEC	

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

January 12, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Wet Storage Stockpiles on the Valley Area:** No additional placement of ash has occurred over the last week; however aggregate materials are being stockpiled in the Valley Area. Materials that were out of spec for the Dike "C" Buttress project are being placed on the south end of the Valley Area for future use by CP.

2) **Material Sources and Equipment Resources:** Stantec has been provided all the equipment resources necessary over the last week. Stantec utilized two side-loaded tractors w/ double pans from the Relic Area every working day and averaged eight articulated trucks from the Ball Field every working day.

3) **Instrumentation Data:** Current values for the instrumentation are below the alarm levels at all locations. The alarm threshold for the upper two vibrating wire piezometers in the ash material at each location has been reduced from 15% to 10% through the completion of the test, as per the request of AECOM. Mr. Bruce Haas stated that these alarm limits should not be lowered but pushed safely to the current limits to produce data at the high side of the testing.

4) **Total Cubic Yards of Ash Placed:** A total of 40,000 C.Y. of ash have been placed in the Test Embankment Since January 4, 2010. This total consists of 18,000 C.Y. of material from the ball field and 22,000 C.Y. from the relic's area. This total was generated in six days of hauling. The total in-place compacted ash is estimated at 230K cubic yards that equates to approximately 290K cubic yards of loose ash. The current record daily placement of ash in the Test Embankment was established on January 11, 2010 with a volume placed of approx. 9000 C.Y. After checking with CP the Jan. 11 load counts from the tractors had accidently been multiplied by four. This lowered the daily total to less than 5,000 C.Y.'s for the date.

5) **Finish Grading and Permanent Drainage**: Rough grade has been completed for the first bench of the Test Embankment, and this bench is approximately 2 feet above the original proposed elevation. The slope below this bench has been sprayed with Terraflex by the hydroseed contractor. Slope repairs and permanent drainage system installation needs to be a priority to prevent undermining of the working platform. The second bench is approx. 2' from the original design elevation at the north end of the embankment. Stantec is to provide TVA surveying with coordinates for stakeout of the final bench. Stantec will coordinate this survey with TVA.

6) **Installation of New Slope Inclinometers and CPT's**: The installation of two new slope inclinometers and drilling of five Cone Penetrometer Tests (CPT's) in the Test Embankment is scheduled to begin today. The Drill Rig Inspection has been completed and all documents are in place and have been approved by the Jacobs review team. The CPT's will be performed at the same locations where CPT's were conducted prior to the beginning of the

Test Embankment. Slope inclinometers will be installed on the first bench in accordance with the proposed layout.

7) **Additional Items:** No additional items were discussed.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

January 12, 2010 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Julie Pfeffer	Jacobs	
Ricky Lynn	CP	RWLynn@TVA.GOV
Bruce Haas	Jacobs	bjhaas@tva.gov
Gary MacDonald	TVA/CP	grmacdon@tva.gov
Mark Cade	Mactec	MSCade@MACTEC.com
Skip Layton	Stantec	skip.layton@stantec.com
Jim Robinson	Civil Projects	JRobinson@TVA.GOV
Jim Andrew	Stantec	jim.andrew@stantec.com
Max Kirkpatrick	TVA/CP	

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

January 19, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Wet Storage Stockpiles on the Valley Area:** No additional placement of ash has occurred over the last week; however aggregate materials are being stockpiled in the south end of the Valley Area. Ms. Julie Pheffer made a brief statement regarding starting back with placement of material to be processed in the Valley Area. No time table for this to begin was mentioned.

2) **Material Sources and Equipment Resources:** Stantec has been provided adequate equipment resources necessary over the last week. Current schedule and material required where discussed and Mr. Ricky Lynn, with CP, agreed to provide all trucks necessary for completing the Test Embankment within the proposed window even if he had to stop using CP trucks for moving ash to the trains in the Ball Field.

3) **Instrumentation Data:** Current values for the instrumentation are below the action levels at all locations with the exception of the Displacement Ratio for Section 3 and Section 4. The Displacement Ratio along these two sections is above the action threshold but below the alarm threshold. The alarm threshold for the upper two vibrating wire piezometers in the ash material at each location has been reduced from 15% to 10% through the completion of the test, as per the request of AECOM. The current conditions where reported and all participants stated their acceptance of this data.

4) **Total Cubic Yards of Ash Placed:** A total of 32,200 C.Y. of ash have been placed in the Test Embankment Since January 11, 2010. This total consists of 17,800 C.Y. of material from the ball field and 14,400 C.Y. from the relic's area. This total was generated in five days of hauling. Monday, January 18, no material was placed due to wet conditions from the rain on Sunday, January 17. The total in-place compacted ash is estimated at 250K cubic yards that equates to approximately 312K cubic yards of loose ash. Mr. Max Kilpatrick, with CP, stated he was opposed to extending this project beyond January 31st, when the current budget for this work expires. Currently with expected weather, the completion date has been estimated to be February 15th to reach the 802 elev. for the final tier.

5) **Finish Grading and Permanent Drainage**: Rough grade has been completed for the first bench of the Test Embankment, and this bench is approximately 2 feet above the original proposed elevation. The slope below this bench has been sprayed with Terraflex by the hydroseed contractor. Slope repairs and permanent drainage system installation needs to be a priority to prevent undermining of the working platform. The second bench is at the design elevation and TVA surveying has staked out the second bench once and will be onsite again today to stake out this bench for the second time. Mr. Jim Andrew, with Stantec, stated that as soon as it is possible the permanent drainage improvements must be installed and all washed repaired to assure the integrity of the Test Embankment.

6) **Installation of New Slope Inclinometers and CPT's**: The installation of two new slope inclinometers and drilling of four Cone Penetrometer Tests (CPT's) in the Test Embankment is complete. The drill rig will be removed from the site today and Stantec will begin reading the two new slope inclinometers immediately. All work has been completed and the drill rig and crew left the site on 1-19-2010.

7) **Additional Items:** No additional items where discussed and the meeting was ended.

End of Meeting Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

January 19, 2010 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Julie Pfeffer	Jacobs	
Richa Lynn	CP	RW Lynn@tva.gov
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
Jim Andrew	Stantec	jim.andrew@stantec.com
MARK CADE	MACTEC/TVA	MSCADE@TVA.GOV
Gary MacDonald	TVA/CP	grmacdon@tva.gov

Agenda

TVA – Kingston
Test Embankment Meeting

January 26, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Material Sources and Equipment Resources:** Due to the wet conditions no equipment was required this past week. Moving forward we do need the resources for cleanup to resume operations. CP will provide dozers and excavators to assist with slope maintenance.

2) **Instrumentation Data:** Based upon criteria set by AECOM, the stability of the West side of the Test Embankment has been determined to be less than the 1.5 safety factor established by TVA. Improvements at the toe of this area are being designed to get this are back in compliance. Design of required improvements to be submitted to Mr. Mike Scott by the week of Feb. 1st.

3) **Total Cubic Yards of Ash Placed:** No ash has been placed over the last week due to weather conditions. A preliminary mention of lime stabilization on the Test Embankment was made for Stantec to consider.

4) **Finish Grading and Permanent Drainage**: Drainage improvements and repairs to the slopes need to begin ASAP. Drainage improvements need to be expanded to include piping to move runoff water down the slopes without allowing the flow to go directly on the surface and continue erosion. CP was provided with a sketch of drainage sumps to be constructed on the benches at current low points. Inlet and outlet piping from these sumps will utilize abandoned 10" HDPE dredge pipe to prevent slope erosion. CP will modify their current erosion work package to incorporate this work and begin as soon as the weather allows.

5) **Installation of new PZ's in the Relic Area**: Six new piezometer installations are being installed by Mactec in the Relic Area. Stantec will review the installation and calibration of the new PZ's. Stantec will be responsible for acquiring the data daily from these instruments. Stantec has been notified that the installation of the new PZ's is approx. a two week project. As instruments are available Stantec will begin collecting data immediately.

6) **Additional Items:** Ms. Julie Pheffer requested Stantec to provide Jacobs with a value for additional professional services that would extend the Test Embankment program to the end of February. Mr. Max Kirkpatrick will address the allocation of the additional funds in his budget amendment. Mr. Andrews assist in providing this information.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

January 26, 2010 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Jim Andrew	Stantec	jim.andrew@stantec.com
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
MARK CADE	TVA	MSCADE@TVA.GOV
BRUCE HAAS	Jacobs	bjhaas@TVA.gov
MAX KIRKPATRICK	TVA-CP	MKIRKPATRICK@TVA.GOV
Richard Lynn	CP	RWLynn@TVA.GOV
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
JIM ROBINSON	CP	JROBINSON@TVA.GOV

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

February 2, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Material Sources and Equipment Resources:** Equipment and manpower for the repairs to the slopes and installation of drainage improvements has been available and completing the required work. The available ash resources are scarce. Due to current weather the ash that can be accepted on the embankment should be at the optimum moistures. Working with Jacobs and CP, Stantec is attempting to find materials in the Ball Field that can be utilized. Weather has made work on the Test Embankment impractical. Work will resume as soon as weather and available materials exist simultaneously.

2) **Instrumentation Data:** Based upon criteria set by AECOM, the stability of the West side of the Test Embankment has been determined to be less than the 1.5 safety factor established by TVA. Improvements at the toe of this area are being designed to get this area back in compliance. All Pressure Ratios and Displacement Ratios are currently below the established Action Thresholds. A design for a berm along the toe of the Test Embankment has been submitted to Mr. Mike Scott with TVA.

3) **Total Cubic Yards of Ash Placed:** No ash has been placed over the last week due to weather conditions.

4) **Finish Grading and Permanent Drainage**: Clean-up operations have begun with the repair of slopes and the installation of drainage collection swales and piping to manage stormwater runoff. Completion of the drainage improvements currently underway will be handled as soon as access is available for this work.

5) **Installation of new PZ's in the Relic Area**: Six new piezometer installations are being installed by Mactec in the Relic Area. PZ's R1 and R3 have been installed and Stantec has begun reading these two installations. Stantec is reviewing the installation and calibration of the new PZ's. Stantec will be responsible for acquiring the data daily from these instruments. Stantec is reviewing the boring logs for these installations to give concurrence with the elevations of each piezometer being installed.

6) **Wet Processing in the Valley Area**: Ash from the embayment east of Dike "T-2" is being hauled to the Valley Area. Jacobs has provided Stantec with moisture testing data regarding this material and all moistures listed for the ash are under the 35% limit set for this area. Stantec has also been requested to evaluate materials in the same area that are a mixture of ash, clay and sand. This material will be reviewed for suitability of placement in the Valley Area. Stantec will begin to perform moisture testing as needed to determine if the materials being placed in the Valley Area are in accordance with moisture content guidelines.

7) **Additional Items:** Mr. Mark Cade with TVA has requested access to the FTP site where the instrumentation data for the Test Embankment is available. Mr. Jim Andrew will provide Mr. Cade with that information.

END OF MINUTES

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

February 2, 2010 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Vicki Pfeffer		
Ricky Lynn	CP	RWLynn@TVA.Gov
Jim Robinson	CP	
MARK CADE	TVA	MSCADE@TVA.GOV
BRUCE HAAS	JACOBS	bjhaas@TVA.GOV
Jim Andrew	Stantec	jim.andrew@stantec.com
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM

Agenda

TVA – Kingston
Test Embankment Meeting

February 9, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Material Sources and Equipment Resources:** Equipment and manpower for the repairs to the slopes and installation of drainage improvements has been limited due to the severe weather conditions. The available ash resources with a moisture content not exceeding 30% are very limited. Stantec is working with Jacobs and CP in an attempt to find time critical materials in the Ball Field that can be utilized. This is an ongoing operation and is coordinated with Ricky Lynn and Ken Hastings.

2) **Embankment Stability Modifications:** Based upon criteria established by TVA, the stability of the West side of the Test Embankment is less than the acceptable level. Improvements at the toe of this area have been designed and submitted to TVA. The berm will start on the west side of the embankment at the existing 758 contour and move north and east along the toe of the embankment until it ties back into the existing 758 contour. Surveying is complete locating the 758 contour along the toe of the embankment where the berm is to be constructed. No work on the Test Embankment west of the instrument line that includes SI-4 to PZ-8 can be performed until this berm has been constructed. Jacobs and CP are working on drainage improvements that will be installed concurrent with the construction of the berm. Mike Steele will coordinate with Butch Parton to get an approved work plan. Stantec verified that all instruments located along the berm construction are above the 758 elevation and no adjustments will be required.

3) **Total Cubic Yards of Ash Placed:** No ash has been placed over the last week due to weather conditions.

4) **Finish Grading and Permanent Drainage**: As soon as weather allows, the completion of the drainage swale on the north side of the first bench should be completed. Repairs to the second bench should begin immediately afterward and the installation of the piping and permanent structure at this level should also be constructed. Additional surveying may be required to establish the final grades along the second bench. CP confirms that as weather allows and access to the west is allowed they will complete the repairs and permanent drainage.

5) **Wet Processing in the Valley Area**: Ash from the embayment east of Dike “T-2” is being hauled to the Valley Area. Jacobs has provided Stantec with moisture testing data regarding this material and all moistures listed for the ash are under the 35% limit set for this area. Stantec has also been requested to evaluate materials in the same area that are a mixture of ash, clay and sand. This material will be reviewed for suitability of placement in the Valley. Materials hauled to the Valley during night operations have had to be removed due to excessive moisture. Stantec will conduct random moisture testing for materials being processed in the Valley.

6) **Lime Stabilization of the Test Embankment**: Jacobs has asked Stantec to consider lime modification of the working surface of the Test Embankment. Stantec has reviewed this request and has no objections to lime modification of the Test Embankment; however there are safety and material identification (moisture content) concerns with conducting the lime modification on the night shift. Julie Pfeffer to coordinate with the Plant Environmental staff. Stantec requested that all operations on the Test Embankment be performed during daylight hours only.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

February 9, 2010 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Julie Pfaff	Jacobs	
MARK CADE	TVA/[illegible]	MSCADE@TVA.GOV
Jim Andrew	Stantec	jim.andrew@stantec.com
Bruce Haas	Jacobs	bjhaas@tva.gov
Jim Robinson	CP	
JMiller	CP	JhmillerC@tva.gov
Ricky Lynn	CP	RWLynn@TVA.GOV
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

February 16, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Material Sources and Equipment Resources:** Equipment and manpower for the repairs to the slopes and installation of drainage improvements has been limited due to the severe weather conditions. The available ash resources with a moisture content not exceeding 30% are very limited. Stantec is working with Jacobs and CP in an attempt to find time critical materials in the Ball Field that can be utilized. This is an ongoing activity that is weather dependent and CP will continue to work the east side of the Test Embankment to help remove water from the surface.

2) **Embankment Stability Modifications:** Based upon criteria established by TVA, the stability of the West side of the Test Embankment is less than the acceptable level. A berm at the toe of this area has been designed and the design submitted. Work on the west half of the Test Embankment is on hold pending construction of this berm. The berm design has been submitted to TDEC for review and approval. Construction will begin as soon as TDEC concurs with this work.

3) **Total Cubic Yards of Ash Placed:** A total of. 4175 C.Y.'s of ash from the Ball Field were placed on the east side of the embankment for the days 2/12 thru 2/14. Due to wet surface conditions and moisture in the ash from the Ball Field, placement was halted after lunch on 2/14/10. Compaction of this area will be required before additional lifts are placed. Stantec will test the entire surface of the Test Embankment to determine current density and moistures and identify any areas that do not meet the test requirements.

4) **Finish Grading and Permanent Drainage**: As soon as weather allows, the completion of the drainage swale on the north side of the first bench should be completed. Repairs to the second bench east of piezometer PZ-3 have begun. Additional surveying may be required to establish the final grades along the second bench. Stantec will contact TVA surveying and schedule a new stakeout of the second bench and toe of the final tier.

5) **Wet Processing in the Valley Area**: Ash from the embayment east of Dike "T-2" and from the Ball Field is being hauled to the Valley Area. Guidelines have been established for this processing area. Out slopes are to be 6:1 and the height of this area is not to exceed 10' above Dike "D". The moisture content is 35% maximum depending on the composition of the material. The boundaries of this processing area are from Dike "D" to the Relic Area east to west and from the current northern face of the placement area south. Stantec will conduct random moisture sampling and provide placement review. Stantec is observing this work and TVA surveying has been contacted to provide up to date cross sections of the current operations. Random moisture testing will be provided by Stantec.

6) **Lime Stabilization of the Test Embankment**: Jacobs has asked Stantec to consider lime modification of the working surface of the Test Embankment. Stantec has reviewed this request and has no objections to lime modification of the Test Embankment. Stantec would

like a schedule for this activity. Additional truck-loads of lime are being brought to the site later in the week. CP will test the surface mixing process in the West Embankment and then attempt to perform these operations on the surface of the Test Embankment.

7) **Additional Issues**: No other issues where discussed.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

February 16, 2010 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
G.A. "SKIP" LAYTON, JR.	STANTEC	SKIP.LAYTON@STANTEC.COM
BRUCE HAAS	JACOBS	BJHAAS@TVA.GOV
Julie Pfeffer	Jacobs	jpfeffer@tva.gov
Richy Lynn	CP	RWLynn@TVA.GOV
JIM ROBINSON	CP	JROBINSON@TVA.GOV
Jim Andrew	Stantec	jim.andrew@stantec.com
MAX KIRKPATRICK	TVA/CP	MKIRKPATRICK@@TVA.GOV
MARK CADE	TVA/MACTEC	MSCADE@TVA.GOV

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

February 23, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Material Sources and Equipment Resources:** The available ash resources with moisture content <30% are very limited. Stantec is working with Jacobs and CP in an attempt to find time critical materials in the Ball Field that can be utilized. Stantec has also tested materials east of Dike T-2 and will assess them frequently. Stantec will continue to search for suitable materials with the assistance of CP and Jacobs.

2) **Embankment Stability Modifications:** Based upon criteria established by TVA, the stability of the West side of the Test Embankment is less than the acceptable level. A berm at the toe of this area has been designed and is being reviewed by TDEC. Work on the west half of the Test Embankment is on hold pending approval and construction of this berm. Currently it is not possible to place ash materials in the Test Embankment on a daily basis due to the limited area of the east side of the Embankment, weather conditions, and moisture of the ash materials from the Ball Field. Stantec will assist as requested with discussions with TDEC. Jacobs will be notified of any conversations. Stantec will also look at alternate materials that can be used to construct the berm in lieu of dredged sand.

3) **Total Cubic Yards of Ash Placed:** A total of. 3550 C.Y.'s of ash from the Ball Field was placed on the east side of the embankment on Sunday 2/21/10. Due to moisture in the ash from the Ball Field, Stantec and CP rejected multiple loads and CP shifted their operations in the Ball Field three times to locate suitable materials. Compaction of this area will be required before additional lifts are placed. Weather and available materials are holding up the completion of this test.

4) **Finish Grading and Permanent Drainage**: The completion of the drainage swale on the north side of the first bench should be completed this week. Repairs to the second bench east of piezometer PZ-3 have begun and rework of the slope should commence as soon as weather allows. Additional drainage improvements on the east side of the embankment may be required. CP will repair the slopes and washes as soon as weather permits. Additional permanent drainage improvements are to be installed on the second bench.

5) **Wet Processing in the Valley Area**: Ash from the embayment east of Dike "T-2" and from the Ball Field was being hauled to the Valley Area. Guidelines have been established for this processing area. Out slopes are to be 6:1 and the height of this area is not to exceed 10' above Dike "D". Also material should be placed in this area by means of horizontal lifts that are walked in with dozers to provide some compactive effort. The moisture content is 35% maximum depending on the composition of the material. The boundaries of this processing area are from Dike "D" to the Relic Area east to west and from the current northern face of the placement area south. Stantec will conduct random moisture sampling and provide placement review. Currently filling activities in this area have halted. CP will begin filling washes in the Valley Area and contouring this area for drainage as part of their ongoing maintenance issues. A grading plan will be generated to maximize processing in the Valley Area.

6) **Lime Stabilization of the Test Embankment**: This activity is on hold pending development and acceptance of a plan that will minimize dust in the treated area. This could occur by the middle of next week. Discussions would have to be held with Steve Cherry with CP to proceed.

7) **Additional Issues**: No additional Items were discussed.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

February 23, 2010 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Julie Pfaff	Jacobs	
Ricky Lynn	CP	RWLynn@TVA.gov
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
John Miller	CP	JHmiller@TVA.gov
Jim Andrew	Stantec	jim.andrew@stantec.com

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

March 2, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Material Sources and Equipment Resources:** Materials in the Ball Field and from the Sluice Trench continue to be too wet for placement in the Test Embankment. Due to freeze thaw issues, limited placement area and wet weather the Test Embankment needs material at optimum moistures to allow placement daily. Currently the east side of the Test Embankment is approx. four vertical feet below finish grade.

2) **Embankment Stability Modifications:** Work on the west half of the Test Embankment is on hold pending approval and construction of this berm. . We are approx. four days from having to stop work until TDEC gives their approval for the buttress construction on the west side of the Test Embankment.

3) **Total Cubic Yards of Ash Placed:** A total of. 12,428 C.Y.'s of ash from the Ball Field and the Relic Area was placed on the east side of the embankment over five working days from 2/25/10 to 3/1/10. Due to moisture in the ash from the Ball Field, Stantec and CP rejected multiple loads and CP shifted their operations to the Relic Area. Compaction testing is ongoing to allow for the small surface area that is currently being utilized. Stantec is continuing to test materials as they are being placed to allow for uninterrupted ash placement on a day to day basis.

4) **Finish Grading and Permanent Drainage**: The completion of the drainage swale on the north side of the first bench should be completed. Repairs to the second bench east of piezometer PZ-3 and rework of the slope should commence right away. Additional drainage improvements on the east side of the embankment may be required. CP has agreed to complete the drainage improvements as soon as the weather and site conditions allow. Stantec will review this construction.

5) **Wet Processing in the Valley Area**: CP has been utilizing amphibious excavators and dozers to shift the current ash processing area to the west abutting the Relic Area and stopped placing additional ash until 3/1/10. Stantec has worked with TVA surveying to monitor the placement. The piezometers in the Valley and on the east side of the Test Embankment have begun to climb regarding pressure. It was requested that Stantec do a stability analysis to determine the actual conditions related to the Valley Area placement of ash.

6) **Lime Stabilization of the Test Embankment**: This activity is on hold pending development and acceptance of a plan that will minimize dust in the treated area. Lime stabilization is now off the table and will not be performed on the Test Embankment. Lime stabilized materials for the East Embayment operations may be placed in the Test Embankment.

7) **Additional Issues**:
   - Jim Kilby, with CP, has now been promoted and is the person in charge of the construction of the Test Embankment. Ricky Lynn, with CP, will phase out of this roll but will remain a resource that Stantec can utilize if the need arises.
   - Bruce Haas, with Jacobs, has asked that the final Test Embankment report include detailed information on lessons learned during the construction of the Test Embankment. Focus of this area is to be the methods and means attempted during this test for both successful and failed construction.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

March 2, 2010 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
Joni Kirtley	CP	
Richard Lynn	CP	RWLynn@TVA.GOV
Julie Pfeffer	Jacobs	
Bruce Haas	Jacobs	bjhaas@tva.gov
Max Kirkpatrick	CP	MKIRKPATRICK@TVA.GOV
Jim Robinson	CP	
Skip Layton	Stantec	skip.layton@stantec.com

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

March 9, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Material Sources and Equipment Resources:** Civil Projects has hauled material to the Test Embankment from the east embayment and the Relics area. Sevenson has hauled material from the Ball Field and Dragline Road. Relics material is typically moist but not saturated. East embayment material is slightly above optimum moisture content. The moisture content of the lime modified material from the Ball Field and Dragline Road varies widely, and some truckloads have been rejected. Jacobs will provide a review of all materials delivered to the Test Embankment from the Ball Field and Dragline Road to assure conformance with the project guidelines. CP will work with the Mt. Carmel contractor to provide material from the East Embayment within specified requirements. Stantec and CP will continue to review materials being delivered to the Test Embankment and notify the responsible group if the material delivered is out of the acceptable range regarding moisture.

2) **Embankment Stability Modifications:** Work on the west half of the Test Embankment is on hold pending construction of the stabilization berm. Construction of a haul road for this berm is underway, and the berm construction should commence today. TDEC has given their approval and CP has the required work package. This work is estimated to be competed by the end of this work week and placement of ash on the west side of the Test Embankment can resume as soon as an as-built survey is preformed to assure that the work is in accordance with the recommendations for this construction.

3) **Total Cubic Yards of Ash Placed:** A total of. 26,000 C.Y.'s of ash from the Ball Field, Dragline Road, the east embayment and the Relic Area was placed on the east side of the embankment over six working days from 3/2/10 to 3/8/10. Compaction testing is continuous due to the small surface area that is currently being utilized. Ash placement will be halted after the east side of the Test Embankment has reached its final elevation in the next few days.

4) **Finish Grading and Permanent Drainage**: The drainage swale on the north side of the first bench has not been completed. Repairs to the second bench east of piezometer PZ-3 needs to be re-shaped. Wet material from the surface of the embankment has been pushed off into this area to facilitate the further placement of fill. Repairing the bench adjacent to PZ-3 will begin when the buttress construction is complete and ash placement on the west side of the Test Embankment is resumed.

5) **Wet Processing in the Valley Area**: Civil Projects has nearly completed moving material from the east side to the west side in the southern portion of the Valley area, and will shortly begin to place material north of the existing valley stockpile. Pressures along the interface between the Test Embankment and the Valley Area have begun to subside as have the pressures on the north end of the Valley Area processing operations.

6) **Additional Issues**:
No additional items were discussed.

End of Minutes

Stantec

3/9/10

Jim Kelly	CP	
Richard Lynn	CP	RWLynn@TVA.GOV
Jim Robinson	CP	JROBINSON@TVA.GOV
Julie Pfeffer	Jacobs	
Bruce Haas	Jacobs	bghaas@tva.gov
John Miller	CP	JHmiller@TVA.GOV

Designed by: Checked by:

Printed on FSC-certified and 100 percent recycled postconsumer waste paper.

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

March 16, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Embankment Stability Modifications:** Work on the west half of the Test Embankment is on hold pending construction of the stabilization berm. Utilization of ash in lieu of sand for the construction of the buttress has been reviewed and is accepted as an alternate. The ash being used for this buttress construction will be material that is adjacent to the project area. This material will be placed in lifts along the toe of the Test Embankment utilizing amphibious excavators and dozers to place and shape the material.

2) **Total Cubic Yards of Ash Placed:** A total of. 5,600 C.Y.'s of ash from the Ball Field and the Relic Area was placed on the east side of the embankment over two working days from 3/9/10 to 3/10/10. This brought the east side of the Test Embankment to the final elevation. Ms. Julie Pheffer, with Jacobs, stated that the completion of the Test Embankment had the highest priority. The Test Embankment is to be given the materials and equipment necessary to minimize the time required to complete this test. Relic material and all suitable time-critical ash will be utilized to complete the fill.

3) **Finish Grading and Permanent Drainage**: The drainage swale on the north side of the first bench has not been completed. During recent rainfall events the installed piping has been undermined and needs to be repaired and the required rock installed in the sump. All slopes and benches on the east side of the Test Embankment can be final dressed and hydroseeded. CP will provide ongoing repairs and final grading on slopes and benches as the weather allows.

4) **Wet Processing in the Valley Area**: Civil Projects has completed moving material from the east side to the west side in the southern portion of the Valley area, and will shortly begin to place material north of the existing valley stockpile. Jacobs requested an Email regarding the processing area in the Valley and the related placement of ash. An informal meeting will be scheduled with Jacobs, CP, and Stantec to discuss schedule and requirements.

5) **Additional Issues**:

- Mr. Bruce Haas, with Jacobs, requested that the final report for the Test Embankment be considered as an agenda item for future meetings.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

March 16, 2010 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
John H Miller	CP	jhmiller@tva.gov
Bruce Haas	Jacobs	bjhaas@tva.gov
Julie Pfeiffer	Jacobs	
Ricky Lynn	CP	RW Lynn@TVA.GOV
MAX KIRKPATRICK	CP	MKIRKPATRICK@TVA.GOV
Jim Kilby	CP	
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC.COM
Jim Andrew	Stantec	jim.andrew@stantec.com

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

March 23, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Embankment Stability Modifications:** Work on the west half of the Test Embankment resumed on Friday, March 19th. This work was allowed after the construction and review of the ash berm that was constructed at the 758 contour on the toe of the Test Embankment. Stantec has received an as-built survey received from CP and performed by TVA Surveyors to confirm the required elevations and area in the buttress recommendations.

2) **Total Cubic Yards of Ash Placed:** A total of. 14,400 C.Y.'s of ash from the East Embayment and the Relic Area was placed on the west side of the embankment over three working days from 3/19/10 to 3/21/10. Approx. 14,000 C.Y. of material is required to bring the west side of the Test Embankment to final elevation and complete the project. Material will be utilized from the Relic Area as the primary source of ash. Additional materials will be supplied from the lime stabilization efforts in the East Embayment and from Dragline Road.

3) **Finish Grading and Permanent Drainage**: At the completion of the placement of fill, new drainage collection swales should be constructed on the final tier that ties into the structures constructed on the intermediate bench. All slopes and benches on the east side of the Test Embankment can be final dressed and hydroseeded. The new structures on the intermediate bench will be constructed as part of ongoing maintenance for the Test Embankment.

4) **Wet Processing in the Valley Area**: Civil Projects has completed moving material from the east side to the west side in the southern portion of the Valley area and has begun to place material north of the existing valley stockpile per the Stantec recommended geometry. Stantec will be reviewing the placement of material in the Valley Area and will obtain samples for moisture testing as required. Jacobs and CP will coordinate with TVA Surveyors to have the grade staking done in accordance with the overall grading plan for this area. This staking will be kept current to allow the filling operations to conform to the grading plan.

5) **Additional Issues**:
No additional items were discussed.

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

March 23, 2010 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
SKIP LAYTON	STANTEC	SKIP.LAYTON@STANTEC
TYLER TRUDEL	STANTEC	TYLER.TRUDEL@STANTEC
John Miller	CP	JHMiller@tva.gov
Bruce Haas	Jacobs	bjhaas@tva.gov
Jim Kilby	CP	
Jim Robinson	CP	
Julia Pfeffer	Jacobs	
Richard Lynn	CP	RWLynn@TVA.GOV

Meeting Minutes

TVA – Kingston
Test Embankment Meeting

March 30, 2010 - 8:15 AM

TOPICS FOR DISCUSSION:

1) **Total Cubic Yards of Ash Placed:** A total of. 9,000 C.Y.'s of ash from the East Embayment and the Relic Area was placed on the west side of the Test Embankment over two working days from 3/23/10 to 3/24/10. Approx. 12,000 C.Y. of material is required to bring the west side of the Test Embankment to final elevation and complete the project. It is estimated that the Test Embankment will be complete with all filling operations by the end of the work day on Thursday. Final grading and shaping will begin as soon as filling operations have ceased.

2) **Finish Grading and Permanent Drainage**: At the completion of the placement of fill, new drainage collection swales should be constructed on the final tier that ties into the structures constructed on the intermediate bench. All slopes and benches on the east side of the Test Embankment can be final dressed and hydroseeded. Jacobs has been notified to be prepared on Friday to begin hydroseeding on the East side of the Test Embankment and continue to the West as conditions allow. Drainage structures in the final tier of the Test Embankment will not be installed. It was determined that they could be removed and any washes would be handled as a maintenance issue. The drainage structures on the intermediate bench are to be constructed and tied into the structures that currently exist on the primary bench. A meeting has been scheduled with Stantec, Jacobs and Gibbons Farms to discuss the schedule and requirements for the hydroseeding of the finished Test Embankment.

3) **Wet Processing in the Valley Area**: Excessive pressures created by fill activities have dissipated and placement in the Valley Area in accordance with the recommendations can now continue There has been a correction of improper filling practices employed by personnel on the night shift and the fill has been reconfigured to meet the recommendations regarding geometry, Stantec will continue to review issues related to moisture, placement and geometry for the ongoing operations for processing ash in the Valley Area.

4) **Additional Issues**:

- **No further formal meetings will be held regarding the construction of the Test Embankment.**

End of Minutes

Sign-In Sheet

TVA – Kingston
Test Embankment Meeting

March 30, 2010 - 8:15 AM

NAME:	REPRESENTING:	EMAIL:
[illegible]	CPA	
Julie Pfeffer	Jacobs	
Jim Robinson	CP	
Skip Layton	Stantec	
Jim Andrew	Stantec	

Appendix I

Material Reference / Conformance Data

Standard Proctors

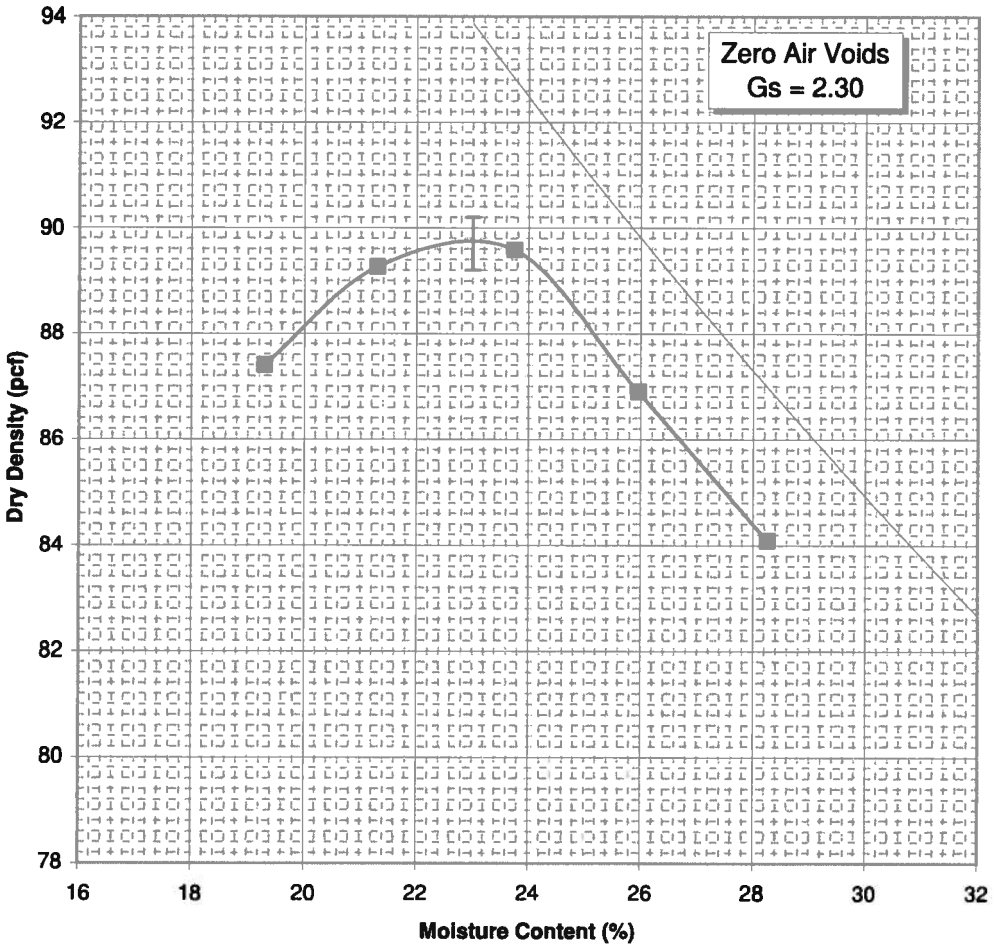
Stantec

Moisture-Density Data Sheet

Project: TVA: KIF Test Embankment
Source: Test Embankment, Bulk Sample
Sample Description: Silt (ML), dark gray
Visual Notes: fly ash
Prepared: Moist Oversized Fraction: < 5 % Rammer: Mechanical

Project No.: 175669015
Sample No.: 1
Test Method: ASTM D 698 - Method A
Gs - Fines: Assumed

Mold Weight 4215 grams		Moisture Determination				
Wet Weight plus Mold (grams)	Wet Weight minus Mold (grams)	Wet Soil and Can Weight (grams)	Dry Soil and Can Weight (grams)	Can Weight (grams)	Water Content (%)	Dry Density (pcf)
5868	1653	619.64	506.48	70.65	26.0	86.9
5844	1629	646.68	519.47	69.22	28.3	84.1
5889	1674	546.04	455.01	71.60	23.7	89.6
5850	1635	584.73	494.63	71.57	21.3	89.3
5790	1575	594.32	509.65	70.95	19.3	87.4



Maximum Dry Density 89.7 PCF
Optimum Moisture Content 23.0 %

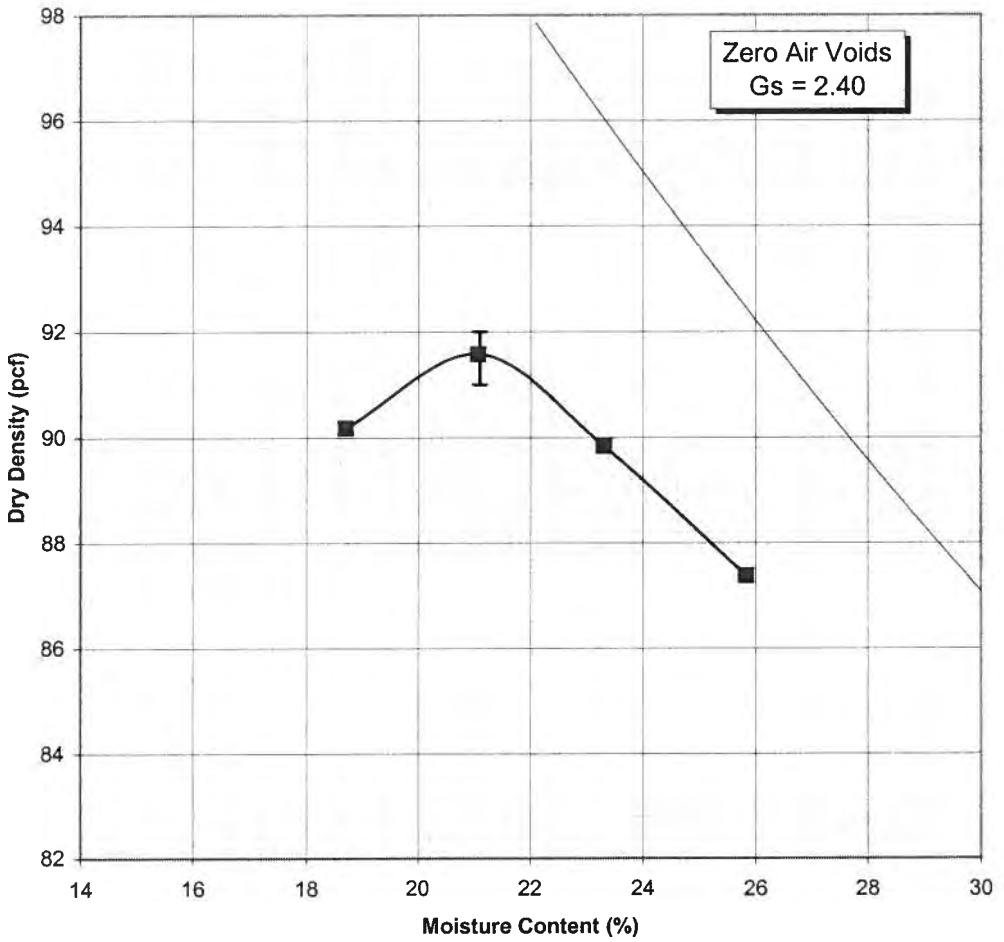
Stantec

Moisture-Density Data Sheet

Project: TVA: KIF Test Embankment
Source: BF & Relic
Sample Description: Silt (ML), gray
Visual Notes:
Prepared: Moist Oversized Fraction: < 5 % Rammer: Mechanical

Project No.: 175669015
Sample No.: 3
Test Method: ASTM D 698 - Method B
Gs - Fines: Assumed

Mold Weight 4213.3 grams		Moisture Determination				
Wet Weight plus Mold (grams)	Wet Weight minus Mold (grams)	Wet Soil and Can Weight (grams)	Dry Soil and Can Weight (grams)	Can Weight (grams)	Water Content (%)	Dry Density (pcf)
5888	1675	305.58	260.28	45.30	21.1	91.6
5886	1673	586.44	489.48	73.46	23.3	89.8
5874	1661	591.88	485.60	74.26	25.8	87.4
5830	1617	628.98	541.78	75.48	18.7	90.2



Maximum Dry Density 91.5 PCF
Optimum Moisture Content 21.1 %

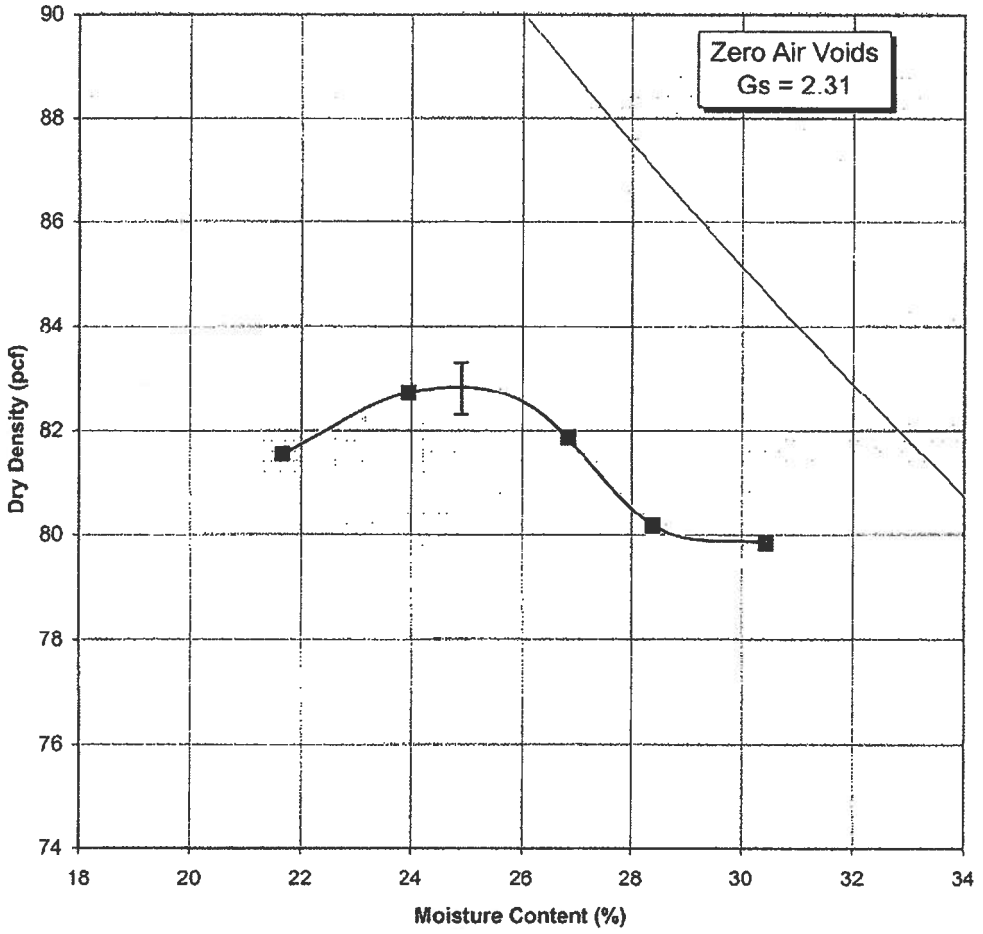
Stantec

Moisture-Density Data Sheet

Project: TVA Kingston Plant Dike Failure
Source: Kingston Fly Ash
Sample Description: Sandy Silt (ML), dark gray
Visual Notes: Bottom Ash
Prepared: Moist Oversized Fraction: 4 % Rammer: Mechanical

Project No.: 171468117
Sample No.: 30
Nmc: 19.2 %
Test Method: ASTM D 698 - Method B
Gs - Fines: ASTM D 854

Mold Weight 4215 grams		Moisture Determination				
Wet Weight plus Mold (grams)	Wet Weight minus Mold (grams)	Wet Soil and Can Weight (grams)	Dry Soil and Can Weight (grams)	Can Weight (grams)	Water Content (%)	Dry Density (pcf)
5783	1568	577.31	469.82	69.32	26.8	81.9
5770	1555	657.65	527.47	69.14	28.4	80.2
5788	1573	713.81	563.33	68.95	30.4	79.8
5764	1549	490.94	410.58	74.94	23.9	82.7
5714	1499	492.63	418.60	76.86	21.7	81.5



Maximum Dry Density 82.8 PCF
Optimum Moisture Content 24.9 %

Drive Cylinder Density Tests

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA -Kingston Test Embankment
Source 53', 281 degrees W of PZ-1
Depth 4"
Description Test No. 001 WD=108.2 M%=28.4
Correlates with Nuclear Density Test # 001 WD=108.2pcf MC=28.4%

Project Number 175669015
Lab ID DT-001

Tested By DB, RM
Test Date 8/12/2009

Drive Cylinder Test Results:
WD = 112.7 pcf
MC = 24.7 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-16	234.73	2.7485	2.8556	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	755.5
Moisture Content (%)	24.7
Wet Soil Mass (g)	520.77
Dry Soil Mass (g)	417.62
Dry Soil Mass (lb)	0.92069
Soil Dry Density (pcf)	90.4

Comments Hot Plate Method
Obtained from Lift 1 of test embankment. Location is approximate.

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source 54', 345 degrees N of PZ-1
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 002 WD=107.9pcf MC=28.1%

Project Number 175669015
Lab ID DT-002

Tested By DB, RM
Test Date 8/12/2009

Drive Cylinder Test Results:
WD = 108.7 pcf
MC = 25.8 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-12	231.90	2.7494	2.8553	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	734
Moisture Content (%)	25.8
Wet Soil Mass (g)	502.10
Dry Soil Mass (g)	399.13
Dry Soil Mass (lb)	0.87992
Soil Dry Density (pcf)	86.4

Comments Hot Plate Method
Obtained from lift 1 of test embankment. Location is approximate.

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source 95', 250 degrees W of PZ-1
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 003 WD=109.7 MC=27.6%

Project Number 175669015
Lab ID DT-003

Tested By DB, RM
Test Date 8/12/2009

Drive Cylinder Test Results:

WD = 108.6 pcf
MC = 22.3 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	737
Moisture Content (%)	22.3
Wet Soil Mass (g)	502.16
Dry Soil Mass (g)	410.60
Dry Soil Mass (lb)	0.90521
Soil Dry Density (pcf)	88.8

Comments Hot Plate Method
Obtained from Lift 1 of test embankment. Location is approximate.

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source 210', 248 degrees W of PZ-1
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 004 WD=109.7pcf MC=28.5%

Project Number 175669015
Lab ID DT-004

Tested By DB, RM
Test Date 8/12/2009

Drive Cylinder Test Results:

WD = 108.3 pcf
MC = 27.6 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-20	235.80	2.7520	2.8530	17.59	0.01018

Moisture Content Method

Wet Soil and Cylinder Mass (g)	736
Moisture Content (%)	27.6
Wet Soil Mass (g)	500.20
Dry Soil Mass (g)	392.01
Dry Soil Mass (lb)	0.86423
Soil Dry Density (pcf)	84.9

Comments Hot Plate Method
Obtained from Lift 1 of test embankment. Location is approximate.

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source 129', 322 degrees W of PZ-7
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 005 WD=110.0pcf MC=29.3%

Project Number 175669015
Lab ID DT-005

Tested By DB, RM
Test Date 8/12/2009

Drive Cylinder Test Results:

WD = 109.3 pcf
MC = 24.9 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-19	235.49	2.7526	2.8551	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	741
Moisture Content (%)	24.9
Wet Soil Mass (g)	505.51
Dry Soil Mass (g)	404.73
Dry Soil Mass (lb)	0.89228
Soil Dry Density (pcf)	87.5

Comments Hot Plate Method
Obtained from lift 1 of test embankment. Location is approximate.

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source 95, 130 degrees E of PZ-1
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 006 WD=110.9pcf MC=29.6%

Project Number 175669015
Lab ID DT-006

Tested By DB, RM
Test Date 8/12/2009

Drive Cylinder Test Results:
WD = 108.4 pcf
MC = 24.5 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-10	236.34	2.7506	2.8535	17.59	0.01018

Moisture Content Method

Wet Soil and Cylinder Mass (g)	737
Moisture Content (%)	24.5
Wet Soil Mass (g)	500.66
Dry Soil Mass (g)	402.14
Dry Soil Mass (lb)	0.88656
Soil Dry Density (pcf)	87.1

Comments Hot Plate Method
Obtained from lift 1 of test embankment. Location is approximate.

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA Kingston Test Embankment
Source 36', 120 degrees E of PZ-7
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 009 WD=108.6pcf MC=29.4%

Project Number 175669015
Lab ID DT-007

Tested By JWA
Test Date 8/14/2009

Drive Cylinder Test Results:
WD = 108.9 pcf
MC = 27 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	738.5
Moisture Content (%)	27
Wet Soil Mass (g)	503.66
Dry Soil Mass (g)	396.58
Dry Soil Mass (lb)	0.87432
Soil Dry Density (pcf)	85.8

Comments Hot Plat Method
Obtained from Lift 1 of embankment. Location is approximate.

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source 65', 160 degrees E of PZ-4
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 010 WD=106.4pcf MC=29.1%

Project Number 175669015
Lab ID DT-008

Tested By JWA
Test Date 8/14/2009

Drive Cylinder Test Results:

WD = 104.2 pcf
MC = 27.1 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-20	235.80	2.7520	2.8530	17.59	0.01018

Moisture Content Method

Wet Soil and Cylinder Mass (g)	717
Moisture Content (%)	27.1
Wet Soil Mass (g)	481.20
Dry Soil Mass (g)	378.60
Dry Soil Mass (lb)	0.83467
Soil Dry Density (pcf)	82.0

Comments Hot Plate Method
Obtained from Lift 1 of test embankment. Location is approximate.

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 3, N 35 degrees 54.703' W 084 degrees 30.838'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 015 WD=114.4pcf MC=28.9%

Project Number 175669015
Lab ID DT-009

Tested By JWA
Test Date 8/18/2009

Drive Cylinder Test Results:
WD = 107.4 pcf
MC = 25.7 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-12	231.90	2.7494	2.8553	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	728
Moisture Content (%)	25.7
Wet Soil Mass (g)	496.10
Dry Soil Mass (g)	394.67
Dry Soil Mass (lb)	0.87010
Soil Dry Density (pcf)	85.4

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 3, N 35 degrees 54.701' W 084 degrees 30.807'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 022 WD=108.6pcf MC=28.2%

Project Number 175669015
Lab ID DT-010

Tested By JWA
Test Date 8/18/2009

Drive Cylinder Test Results:

WD = 106.6 pcf
MC = 25.6 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-16	234.73	2.7485	2.8556	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	727.1
Moisture Content (%)	25.6
Wet Soil Mass (g)	492.37
Dry Soil Mass (g)	392.01
Dry Soil Mass (lb)	0.86424
Soil Dry Density (pcf)	84.8

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 3, N 35 degrees 54.730' W 084 degrees 30.824'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 030 WD=107.5pcf MC=27.8%

Project Number 175669015
Lab ID DT-011

Tested By JWA
Test Date 8/14/2009

Drive Cylinder Test Results:
WD = 106.5 pcf
MC = 26.8 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-19	235.49	2.7526	2.8551	17.62	0.01020

Moisture Content M

Wet Soil and Cylinder Mass (g)	728.1
Moisture Content (%)	26.8
Wet Soil Mass (g)	492.61
Dry Soil Mass (g)	388.49
Dry Soil Mass (lb)	0.85648
Soil Dry Density (pcf)	84.0

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 1, N 35 degrees 54.683' W 084 degrees 30.750'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 019 WD=103.5pcf MC=26.2%

Project Number 175669015
Lab ID DT-012

Tested By RM
Test Date 8/24/2009

Drive Cylinder Test Results:
WD = 101.0 pcf
MC = 24.84 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content M

Wet Soil and Cylinder Mass (g)	702
Moisture Content (%)	24.84
Wet Soil Mass (g)	467.16
Dry Soil Mass (g)	374.21
Dry Soil Mass (lb)	0.82499
Soil Dry Density (pcf)	80.9

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 1, N 35 degrees 54.672' W 084 degrees 30.734'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 028 WD=105.8pcf MC=29.0%

Project Number 175669015
Lab ID DT-013

Tested By RM
Test Date 8/24/2009

Drive Cylinder Test Results:

WD = 106.6 pcf
MC = 28.66 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-16	234.73	2.7485	2.8556	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	727.5
Moisture Content (%)	28.66
Wet Soil Mass (g)	492.77
Dry Soil Mass (g)	383.00
Dry Soil Mass (lb)	0.84437
Soil Dry Density (pcf)	82.9

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 1, N 35 degrees 54.654' W 084 degrees 30.704'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 039 WD=101.1pcf MC=25.0%

Project Number 175669015
Lab ID DT-014

Tested By RM
Test Date 8/24/2009

Drive Cylinder Test Results:
WD = 93.4 pcf
MC = 23.81 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-10	236.34	2.7506	2.8535	17.59	0.01018

Moisture Content Method

Wet Soil and Cylinder Mass (g)	667.8
Moisture Content (%)	23.81
Wet Soil Mass (g)	431.46
Dry Soil Mass (g)	348.49
Dry Soil Mass (lb)	0.76828
Soil Dry Density (pcf)	75.5

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 1, N 35 degrees 54.666' W 084 degrees 30.796'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 050 WD=102.3pcf MC=29.5%

Project Number 175669015
Lab ID DT-016

Tested By RM
Test Date 8/26/2009

Drive Cylinder Test Results:

WD = 110.4 pcf
MC = 25.04 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-9	233.22	2.7513	2.8490	17.54	0.01015

Moisture Content Method

Wet Soil and Cylinder Mass (g)	741.7
Moisture Content (%)	25.04
Wet Soil Mass (g)	508.48
Dry Soil Mass (g)	406.65
Dry Soil Mass (lb)	0.89652
Soil Dry Density (pcf)	88.3

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 1, N 35 degrees 54.666' W 084 degrees 30.796'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 066 WD=112.0pcf MC=29.2%

Project Number 175669015
Lab ID DT-016

Tested By RM/RC
Test Date 8/26/2009

Drive Cylinder Test Results:

WD = 110.3 pcf
MC = 27.93 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-9	233.22	2.7513	2.8490	17.54	0.01015

Moisture Content Method

Wet Soil and Cylinder Mass (g)	741.1
Moisture Content (%)	27.93
Wet Soil Mass (g)	507.88
Dry Soil Mass (g)	397.00
Dry Soil Mass (lb)	0.87523
Soil Dry Density (pcf)	86.2

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 1, N 35 degrees 54.643' W 084 degrees 30.797'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 082 WD=106.7pcf MC=28.9%

Project Number 175669015
Lab ID DT-017

Tested By RM/RC
Test Date 8/26/2009

Drive Cylinder Test Results:

WD = 106.5 pcf
MC = 26.41 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	727.3
Moisture Content (%)	26.41
Wet Soil Mass (g)	492.46
Dry Soil Mass (g)	389.57
Dry Soil Mass (lb)	0.85886
Soil Dry Density (pcf)	84.2

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 2, N 35° 54.660' W 084° 30.750'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 130 WD=104.4pcf MC=26.2%

Project Number 175669015
Lab ID DT-018

Tested By DB
Test Date 8/27/2009

Drive Cylinder Test Results:

WD = 106.7 pcf
MC = 24.7 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	728.5
Moisture Content (%)	24.7
Wet Soil Mass (g)	493.66
Dry Soil Mass (g)	395.88
Dry Soil Mass (lb)	0.87276
Soil Dry Density (pcf)	85.6

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 2, N 35° 54.663' W 084° 30.709'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 141 WD=107.2pcf MC=23.9%

Project Number 175669015
Lab ID DT-019

Tested By RM/RC
Test Date 8/27/2009

Drive Cylinder Test Results:
WD = 105.6 pcf
MC = 19.1 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-12	231.90	2.7494	2.8553	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	720
Moisture Content (%)	19.1
Wet Soil Mass (g)	488.10
Dry Soil Mass (g)	409.82
Dry Soil Mass (lb)	0.90351
Soil Dry Density (pcf)	88.7

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 3, N 35° 54.644' W 084° 30.718'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 159 WD=108.8pcf MC=30.5%

Project Number 175669015
Lab ID DT-020

Tested By RM/RC
Test Date 8/31/2009

Drive Cylinder Test Results:
WD = 107.7 pcf
MC = 27.67 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	733
Moisture Content (%)	27.67
Wet Soil Mass (g)	498.16
Dry Soil Mass (g)	390.19
Dry Soil Mass (lb)	0.86023
Soil Dry Density (pcf)	84.4

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 4, N 35° 54.712' W 084° 30.815'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 171 WD=102.3pcf MC=24.2%

Project Number 175669015
Lab ID DT-021

Tested By RM/RC
Test Date 8/31/2009

Drive Cylinder Test Results:
WD = 101.6 pcf
MC = 21.58 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	704.8
Moisture Content (%)	21.58
Wet Soil Mass (g)	469.96
Dry Soil Mass (g)	386.54
Dry Soil Mass (lb)	0.85218
Soil Dry Density (pcf)	83.6

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 3, N 35° 54.683' W 084° 30.770'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 193 WD=103.9pcf MC=27.3%

Project Number 175669015
Lab ID DT-022

Tested By RM/RC
Test Date 8/31/2009

Drive Cylinder Test Results:

WD = 102.9 pcf
MC = 26.5 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-19	235.49	2.7526	2.8551	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	711.6
Moisture Content (%)	26.5
Wet Soil Mass (g)	476.11
Dry Soil Mass (g)	376.37
Dry Soil Mass (lb)	0.82976
Soil Dry Density (pcf)	81.4

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 3, N 35° 54.662' W 084° 30.746'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 214 WD=104.7pcf MC=29.3%

Project Number 175669015
Lab ID DT-023

Tested By RM/RC
Test Date 8/31/2009

Drive Cylinder Test Results:

WD = 106.6 pcf
MC = 29.4 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-16	234.73	2.7485	2.8556	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	727.4
Moisture Content (%)	29.4
Wet Soil Mass (g)	492.67
Dry Soil Mass (g)	380.73
Dry Soil Mass (lb)	0.83938
Soil Dry Density (pcf)	82.4

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 6, N 35° 54.696' W 084° 30.831'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 233 WD=113.1pcf MC=27.1%

Project Number 175669015
Lab ID DT-024

Tested By RM
Test Date 9/3/2009

Drive Cylinder Test Results:

WD = 112.6 pcf
MC = 20.44 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-12	231.90	2.7494	2.8553	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	752.3
Moisture Content (%)	20.44
Wet Soil Mass (g)	520.40
Dry Soil Mass (g)	432.08
Dry Soil Mass (lb)	0.95258
Soil Dry Density (pcf)	93.5

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 6, N 35° 54.722' W 084° 30.817'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 237 WD=110.1pcf MC=29.3%

Project Number 175669015
Lab ID DT-025

Tested By RM
Test Date 9/3/2009

Drive Cylinder Test Results:

WD = 107.5 pcf
MC = 26.03 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-19	235.49	2.7526	2.8551	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	733
Moisture Content (%)	26.03
Wet Soil Mass (g)	497.51
Dry Soil Mass (g)	394.76
Dry Soil Mass (lb)	0.87029
Soil Dry Density (pcf)	85.3

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 7, N 35° 54.678' W 084° 30.799'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 256 WD=104.4pcf MC=28.9%

Project Number 175669015
Lab ID DT-026

Tested By RM
Test Date 9/4/2009

Drive Cylinder Test Results:

WD = 105.6 pcf
MC = 24.36 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-12	231.90	2.7494	2.8553	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	719.8
Moisture Content (%)	24.36
Wet Soil Mass (g)	487.90
Dry Soil Mass (g)	392.33
Dry Soil Mass (lb)	0.86494
Soil Dry Density (pcf)	84.9

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 2, N 35° 54.668' W 084° 30.822'
Depth 4"
Description Fly ash w/ coal fragments and rock
Correlates with Nuclear Density Test # 271 WD=111.1pcf MC=25.5%

Project Number 175669015
Lab ID DT-027

Tested By RM
Test Date 9/4/2009

Drive Cylinder Test Results:
WD = 108.8 pcf
MC = 19.41 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-19	235.49	2.7526	2.8551	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	738.7
Moisture Content (%)	19.41
Wet Soil Mass (g)	503.21
Dry Soil Mass (g)	421.41
Dry Soil Mass (lb)	0.92906
Soil Dry Density (pcf)	91.1

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 7, N 35 degrees 54.695' W 084 degrees 30.855'
Depth 4"
Description Fly ash w/ coal and rock fragments
Correlates with Nuclear Density Test # 281 WD=113.2pcf MC=28.3%

Project Number 175669015
Lab ID DT-028

Tested By DB
Test Date 9/8/2009

Drive Cylinder Test Results:

WD = 115.8 pcf
MC = 25.15 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-12	231.90	2.7494	2.8553	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	767
Moisture Content (%)	25.15
Wet Soil Mass (g)	535.10
Dry Soil Mass (g)	427.57
Dry Soil Mass (lb)	0.94262
Soil Dry Density (pcf)	92.5

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 2, N 35 degrees 54.634' W 084 degrees 30.784'
Depth 4"
Description Fly ash w/ coal and rock fragments
Correlates with Nuclear Density Test # 295 WD=106.0pcf MC=24.2%

Project Number 175669015
Lab ID DT-029

Tested By DB
Test Date 9/8/2009

Drive Cylinder Test Results:

WD = 112.1 pcf
MC = 20.39 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-19	235.49	2.7526	2.8551	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	754
Moisture Content (%)	20.39
Wet Soil Mass (g)	518.51
Dry Soil Mass (g)	430.69
Dry Soil Mass (lb)	0.94951
Soil Dry Density (pcf)	93.1

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 7, N 35° 54.703' W 084° 30.795'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 305 WD=106.0pcf MC=27.5%

Project Number 175669015
Lab ID DT-030

Tested By DB
Test Date 9/10/2009

Drive Cylinder Test Results:
WD = 111.3 pcf
MC = 28.5 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-2	235.17	2.7500	2.8518	17.56	0.01016

Moisture Content Method

Wet Soil and Cylinder Mass (g)	748.5
Moisture Content (%)	28.5
Wet Soil Mass (g)	513.33
Dry Soil Mass (g)	399.48
Dry Soil Mass (lb)	0.88070
Soil Dry Density (pcf)	86.6

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 7, N 35° 54.689' W 084° 30.828'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 311 WD=105.9pcf MC=27.8%

Project Number 175669015
Lab ID DT-031

Tested By DB
Test Date 9/10/2009

Drive Cylinder Test Results:
WD = 111.4 pcf
MC = 26.9 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	750
Moisture Content (%)	26.9
Wet Soil Mass (g)	515.16
Dry Soil Mass (g)	405.96
Dry Soil Mass (lb)	0.89498
Soil Dry Density (pcf)	87.8

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 8, N 35° 54.685' W 084° 30.782'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 351 WD=109.2pcf MC=32.4%

Project Number 175669015
Lab ID DT-032

Tested By DB
Test Date 9/14/2009

Drive Cylinder Test Results:

WD = 114.6 pcf
MC = 27.09 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	765
Moisture Content (%)	27.09
Wet Soil Mass (g)	530.16
Dry Soil Mass (g)	417.15
Dry Soil Mass (lb)	0.91967
Soil Dry Density (pcf)	90.2

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 3, N 35° 54.633' W 084° 30.784'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 399 WD=101.9pcf MC=25.7%

Project Number 175669015
Lab ID DT-033

Tested By DB
Test Date 9/15/2009

Drive Cylinder Test Results:
WD = 104.9 pcf
MC = 25.2 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-19	235.49	2.7526	2.8551	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	720.9
Moisture Content (%)	25.2
Wet Soil Mass (g)	485.41
Dry Soil Mass (g)	387.71
Dry Soil Mass (lb)	0.85475
Soil Dry Density (pcf)	83.8

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 10, N 35° 54.683' W 084° 30.810'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 405 WD=102.8pcf MC=26.5%

Project Number 175669015
Lab ID DT-034

Tested By RM/DB
Test Date 9/30/2009

Drive Cylinder Test Results:
WD = 106.9 pcf
MC = 24.82 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-12	231.90	2.7494	2.8553	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	725.8
Moisture Content (%)	24.82
Wet Soil Mass (g)	493.90
Dry Soil Mass (g)	395.69
Dry Soil Mass (lb)	0.87235
Soil Dry Density (pcf)	85.6

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 10, N 35° 54.710' W 084° 30.845'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 426 WD=112.7pcf MC=29.0%

Project Number 175669015
Lab ID DT-035

Tested By RM/DB
Test Date 9/30/2009

Drive Cylinder Test Results:
WD = 115.3 pcf
MC = 25.89 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	768.2
Moisture Content (%)	25.89
Wet Soil Mass (g)	533.36
Dry Soil Mass (g)	423.67
Dry Soil Mass (lb)	0.93404
Soil Dry Density (pcf)	91.6

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 10, N 35° 54.700' W 084° 30.777'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 430 WD=114.p5cf MC=29.1%

Project Number 175669015
Lab ID DT-036

Tested By RM/DB
Test Date 10/1/2009

Drive Cylinder Test Results:
WD = 119.5 pcf
MC = 23.25 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	787.5
Moisture Content (%)	23.25
Wet Soil Mass (g)	552.66
Dry Soil Mass (g)	448.41
Dry Soil Mass (lb)	0.98857
Soil Dry Density (pcf)	97.0

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 10, N 35° 54.664' W 084° 30.787'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 441 WD=112.3pcf MC=28.8%

Project Number 175669015
Lab ID DT-037

Tested By RM/DB
Test Date 10/1/2009

Drive Cylinder Test Results:
WD = 115.6 pcf
MC = 25.44 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-12	231.90	2.7494	2.8553	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	766
Moisture Content (%)	25.44
Wet Soil Mass (g)	534.10
Dry Soil Mass (g)	425.78
Dry Soil Mass (lb)	0.93869
Soil Dry Density (pcf)	92.1

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 10, N 35° 54.689' W 084° 30.777'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 458 WD=110.4pcf MC=28.6%

Project Number 175669015
Lab ID DT-038

Tested By RM/DB
Test Date 10/8/2009

Drive Cylinder Test Results:
WD = 113.1 pcf
MC = 25.1 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	758
Moisture Content (%)	25.1
Wet Soil Mass (g)	523.16
Dry Soil Mass (g)	418.19
Dry Soil Mass (lb)	0.92196
Soil Dry Density (pcf)	90.4

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source Lift 10, N 35° 54.666' W 084° 30.723'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 484 WD=108.2pcf MC=31.1%

Project Number 175669015
Lab ID DT-039

Tested By RM/DB
Test Date 10/8/2009

Drive Cylinder Test Results:
WD = 109.9 pcf
MC = 29.9 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	743
Moisture Content (%)	29.9
Wet Soil Mass (g)	508.16
Dry Soil Mass (g)	391.19
Dry Soil Mass (lb)	0.86243
Soil Dry Density (pcf)	84.6

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source WP 887, N 35°54.711' W 084°30.815'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 1 WD=105.6pcf MC=30.7%

Project Number 175669015
Lab ID DT-040

Tested By DB
Test Date 10/30/2009

Drive Cylinder Test Results:

WD = 107.7 pcf
MC = 35.49 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	733
Moisture Content (%)	35.49
Wet Soil Mass (g)	498.16
Dry Soil Mass (g)	367.67
Dry Soil Mass (lb)	0.81058
Soil Dry Density (pcf)	79.5

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source WP 885, N 35°54.720' W 084°30.821'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test # 2 WD=107.4pcf MC=32.5%

Project Number 175669015
Lab ID DT-041

Tested By DB
Test Date 10/30/2009

Drive Cylinder Test Results:

WD = 105.6 pcf
MC = 35.45 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-15	234.84	2.7508	2.8556	17.62	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	723
Moisture Content (%)	35.45
Wet Soil Mass (g)	488.16
Dry Soil Mass (g)	360.40
Dry Soil Mass (lb)	0.79454
Soil Dry Density (pcf)	77.9

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source N 35°54.636' W 084°30.752'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test WD=112.9 pcf MC=29.1%

Project Number 175669015
Lab ID DT-042

Tested By RC
Test Date 12/22/2009

Drive Cylinder Test Results:
WD = 110.6 pcf
MC = 27.97 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-7	233.16	2.7479	2.8499	17.53	0.01014

Moisture Content Method

Wet Soil and Cylinder Mass (g)	742
Moisture Content (%)	27.97
Wet Soil Mass (g)	508.84
Dry Soil Mass (g)	397.62
Dry Soil Mass (lb)	0.87661
Soil Dry Density (pcf)	86.4

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source N 35°54.622' W 084°30.740'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test WD=114.5 pcf MC=26.5%

Project Number 175669015
Lab ID DT-043

Tested By RC
Test Date 12/22/2009

Drive Cylinder Test Results:

WD = 114.6 pcf
MC = 23.86 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-20	235.80	2.7520	2.8530	17.59	0.01018

Moisture Content Method

Wet Soil and Cylinder Mass (g)	765
Moisture Content (%)	23.86
Wet Soil Mass (g)	529.20
Dry Soil Mass (g)	427.26
Dry Soil Mass (lb)	0.94194
Soil Dry Density (pcf)	92.5

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source N 35°54.676' W 084°30.846'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test WD=100.7pcf MC=35.2%

Project Number 175669015
Lab ID DT-044

Tested By RC
Test Date 12/22/2009

Drive Cylinder Test Results:
WD = 106.0 pcf
MC = 34.34 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-2	235.17	2.7500	2.8518	17.56	0.01016

Moisture Content Method

Wet Soil and Cylinder Mass (g)	724
Moisture Content (%)	34.34
Wet Soil Mass (g)	488.83
Dry Soil Mass (g)	363.88
Dry Soil Mass (lb)	0.80221
Soil Dry Density (pcf)	78.9

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source N 35°54.667' W 084°30.835'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test WD=106.8pcf MC=33.7%

Project Number 175669015
Lab ID DT-045

Tested By RC
Test Date 12/22/2009

Drive Cylinder Test Results:

WD = 106.3 pcf
MC = 33.7 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-12	231.90	2.7494	2.8553	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	723
Moisture Content (%)	33.7
Wet Soil Mass (g)	491.10
Dry Soil Mass (g)	367.31
Dry Soil Mass (lb)	0.80979
Soil Dry Density (pcf)	79.5

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source N 35°54.676' W 084°30.840'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test WD=107.9pcf MC=28.5%

Project Number 175669015
Lab ID DT-046

Tested By RC
Test Date 1/15/2010

Drive Cylinder Test Results:

WD = 112.2 pcf
MC = 23.21 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-16	234.73	2.7485	2.8556	17.60	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	753
Moisture Content (%)	23.21
Wet Soil Mass (g)	518.27
Dry Soil Mass (g)	420.64
Dry Soil Mass (lb)	0.92735
Soil Dry Density (pcf)	91.0

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source N 35°54.634' W 084°30.737'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test WD=99.3pcf MC=32.2%

Project Number 175669015
Lab ID DT-045

Tested By RC
Test Date 1/15/2010

Drive Cylinder Test Results:

WD = 96.1 pcf
MC = 31.23 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-10	236.34	2.7506	2.8535	17.59	0.01018

Moisture Content Method

Wet Soil and Cylinder Mass (g)	680
Moisture Content (%)	31.23
Wet Soil Mass (g)	443.66
Dry Soil Mass (g)	338.08
Dry Soil Mass (lb)	0.74533
Soil Dry Density (pcf)	73.2

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source N 35°54.634' W 084°30.801'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test WD=117.6pcf MC=24.2%

Project Number 175669015
Lab ID DT-048

Tested By RC
Test Date 2/23/2010

Drive Cylinder Test Results:
WD = 115.6 pcf
MC = 21.61 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-1	232.89	2.7525	2.8555	17.63	0.01020

Moisture Content Method

Wet Soil and Cylinder Mass (g)	768
Moisture Content (%)	21.61
Wet Soil Mass (g)	535.11
Dry Soil Mass (g)	440.02
Dry Soil Mass (lb)	0.97008
Soil Dry Density (pcf)	95.1

Comments Hot Plate Method

Reviewed By

Stantec

Density of Soil in Place by the Drive-Cylinder Method

ASTM D 2937

Project Name TVA-Kingston Test Embankment
Source N 35°54.650' W 084°30.787'
Depth 4"
Description Fly ash
Correlates with Nuclear Density Test WD=120.9pcf MC=22.4%

Project Number 175669015
Lab ID DT-049

Tested By RC
Test Date 2/23/2010

Drive Cylinder Test Results:
WD = 120.8 pcf
MC = 18.03 %

Drive Cylinder Dimensions

Drive Cylinder ID	Cylinder Mass (g)	Cylinder Height (in)	Cylinder Diameter (in)	Cylinder Volume (in^3)	Cylinder Volume (ft^3)
DC-4	235.16	2.7530	2.8544	17.62	0.01019

Moisture Content Method

Wet Soil and Cylinder Mass (g)	794
Moisture Content (%)	18.03
Wet Soil Mass (g)	558.84
Dry Soil Mass (g)	473.47
Dry Soil Mass (lb)	1.04383
Soil Dry Density (pcf)	102.4

Comments Hot Plate Method

Reviewed By

Moisture Calibration Tests

ASTM D 2216-05, Moisture Content
Laboratory Test Results
Oven Dry and Nuclear Moisture Correlation
TVA Kingston Ash Recovery
MACTEC Project
3043091005

Sample Number	Sample Type	Oven Dry Moisture	Nuclear Gage Moisture	Location, Depth
001	Grab	28.8	20.8	Kingston Test Embankment, DNS, grade
002	Grab	27.8	20.8	Same, DNS, grade
003	Grab	33.6	19.4	Same, 80 degrees E, 50' E of SI-4, 6"
004	Grab	24.0	14.7	Same, 85 degrees E, 128' E of SI-9, 6"
005	Grab	29.9*	20.7	Same, 350 degrees N, 21' N of PZ 2, 6"

Sampled by STANTEC.
STANTEC Job 175669015
Sampled on 8/6/2009.
* Sample bag was open when the sample arrived at the lab.
Equipment: Oven: OHT-1; Scale: 119601

Tested by: _____ Checked by: _____

ASTM D 2216-05, Moisture Content
Laboratory Test Results
Hot Plate, Oven Dry and Nuclear Moisture Correlation
TVA Kingston Ash Recovery
MACTEC Project
3043091005

Sample Number	Hot Plate,%	Oven Dry Moisture,%	Nuclear Gage Moisture,%	GPS Location, Depth
DT.009	28.9	27.6	18.9	N 35 54.703' W 084 30.838', 4"
DT.010	28.4	27.4	18.2	N 35 54.701' W 084 30.807', 4"
DT.011	30.2	29	17.8	N 35 54.730' W 084 30.824', 4"

Sampled by STANTEC.
STANTEC Job 175669015
Sampled on 8/19/2009.
Equipment: Oven: OHT-1; Scale: 119601

Tested by: _____ Checked by: _____

Moisture Content Testing of Random Ash Samples

Moisture Content Testing of Random Ash Samples

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Sample Number	Tare + Wet Sample Weight (grams)	Tare + Dry Sample Weight (grams)	Moisture Content (%)	Date Taken	Date Tested	Comments
1	477.9	410.06	33.00	8/7/2009	8/7/2009	
2	473.9	407.2	33.13	8/7/2009	8/8/2009	
3	469.8	406.4	31.62	8/7/2009	8/8/2009	
4	458.6	399.8	30.06	8/7/2009	8/7/2009	
5	450.03	394.8	29.53	8/7/2009	8/8/2009	
6	452.5	399.6	27.07	8/7/2009	8/7/2009	
7	461.3	401.85	30.08	8/7/2009	8/7/2009	
8	462.5	401.6	30.87	8/7/2009	8/7/2009	
9	465.7	407.2	29.06	8/7/2009	8/8/2009	
10	469.4	410	29.35	8/7/2009	8/8/2009	
11	463.8	406.5	28.56	8/7/2009	8/8/2009	
SP1-012	457.5	396.7	32.17	8/11/2009	8/12/2009	
SP1-013	485.4	420	30.58	8/11/2009	8/12/2009	
SP-014	450.1	390.05	32.97	8/10/2009	8/12/2009	
DT-001	459.9	410	24.67	8/10/2009	8/12/2009	
DT-002	462.7	410	25.83	8/10/2009	8/12/2009	
DT-003	460.6	414.2	22.26	8/10/2009	8/12/2009	
DT-004	465.3	409.6	27.57	8/11/2009	8/12/2009	
DT-005	460.6	409.8	24.90	8/11/2009	8/12/2009	
DT-006	467.3	416.2	24.50	8/11/2009	8/12/2009	
SP-015	356	321.9	29.37	8/13/2009	08/13/09	
SP-016	362.6	325.7	31.22	8/13/2009	8/13/2009	
DT-007	485.6	425.8	27.02	8/14/2009	8/14/2009	
DT-008	464.2	409.1	27.12	8/14/2009	8/14/2009	
SP-017	454.1	397.7	29.24	8/13/2009	8/14/2009	LIFT #2 OF TEST EMBANKMENT
SP-018	469	410.2	28.78	8/18/2009	8/18/2009	
SP-019	464.6	403.2	30.96	8/18/2009	8/18/2009	
DT-009	477	421.6	25.70	8/18/2009	8/18/2009	LIFT #3 OF TEST EMBANKMENT
DT-010	520.2	456.4	25.63	8/18/2009	8/18/2009	LIFT #3 OF TEST EMBANKMENT
DT-011	424.9	378.6	26.83	8/18/2009	8/18/2009	LIFT #3 OF TEST EMBANKMENT
SP-020	460.3	404.5	28.11	8/19/2009	8/19/2009	Taken from delivered stockpile on test embankment
SP-021	497.6	428.4	31.33	8/19/2009	8/19/2009	Taken from delivered stockpile on test embankment

Moisture Content Testing of Random Ash Samples

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Sample Number	Tare + Wet Sample Weight (grams)	Tare + Dry Sample Weight (grams)	Moisture Content (%)	Date Taken	Date Tested	Comments
SP-022	432	379.6	30.47	8/20/2009	8/20/2009	Taken from delivered stockpile on test embankment
SP-023	436.4	381.7	31.10	8/20/2009	8/20/2009	Taken from delivered stockpile on test embankment
SP-024	447.4	391.7	29.95	8/21/2009	8/21/2009	Taken from delivered stockpile on test embankment
SP-025	450.6	395.1	29.57	8/21/2009	8/21/2009	Taken from delivered stockpile on test embankment
SP-026	442.4	392.8	26.75	8/24/2009	8/24/2009	Taken from delivered stockpile on test embankment
SP-027	434.3	381.1	30.37	8/24/2009	8/24/2009	Taken from delivered stockpile on test embankment
DT-012	445.1	415.8	14.06	8/24/2009	8/24/2009	Lift 1, N 35 degrees 54.683' W 084 degrees 30.750'
DT-013	460	403.4	28.66	8/24/2009	8/24/2009	Lift 1, N 35 degrees 54.672' W 084 degrees 30.734'
DT-014	454.4	406.9	23.81	8/24/2009	8/24/2009	Lift 1, N 35 degrees 54.654' W 084 degrees 30.704'
DT-015	448.1	399.6	25.04	8/24/2009	8/24/2009	Lift 1, N 35 degrees 54.674' W 084 degrees 30.833'
SP-028	407.8	360.7	30.37	8/25/2009	8/25/2009	Taken from delivered stockpile on test embankment
SP-029	450.1	392.9	30.84	8/25/2009	8/25/2009	Taken from delivered stockpile on test embankment
SP-030	439.1	396.5	22.53	8/25/2009	8/25/2009	Taken from delivered stockpile on test embankment
DT-012A	503.7	444.4	24.84	8/24/2009	8/26/2009	Retest of DT-012
SP-031	498.7	436.2	27.30	8/26/2009	8/26/2009	Taken from delivered stockpile on test embankment
SP-032	511.7	446.6	27.00	8/26/2009	8/26/2009	Taken from delivered stockpile on test embankment
DT-016	457.3	402.7	27.93	8/26/2009	8/26/2009	Lift 1, N 35 degrees 54.666' W 084 degrees 30.796'
DT-017	443.9	394.1	26.41	8/26/2009	8/26/2009	Lift 1, N 35 degrees 54.643' W 084 degrees 30.797'
SP-033	526.5	472.9	20.04	8/27/2009	8/27/2009	Taken from delivered stockpile on test embankment
SP-034	471.4	423.2	22.33	8/27/2009	8/27/2009	Taken from delivered stockpile on test embankment
DT-018	466.6	414.9	24.68	8/27/2009	8/27/2009	Lift 2, N 35 degrees 54.660' W 084 degrees 30.750'
DT-019	496.1	449.7	19.13	8/27/2009	8/27/2009	Lift 2, N 35 degrees 54.663' W 084 degrees 30.709'
SP-035	587.2	502.3	28.77	8/28/2009	8/28/2009	Taken from delivered stockpile on test embankment
SP-036	577.8	490.4	30.67	8/28/2009	8/28/2009	Taken from delivered stockpile on test embankment
DT-020	473.9	415.7	27.67	8/29/2009	8/29/2009	Lift 3, N 35° 54.644' W 084° 30.718'
DT-021	466.5	420.5	21.58	8/29/2009	8/29/2009	Lift 3, N 35° 54.712' W 084° 30.715'
SP-037	476.9	427.4	24.79	8/31/2009	8/31/2009	Taken from delivered stockpile on test embankment
SP-038	463.9	413.9	26.88	8/31/2009	9/1/2009	Taken from delivered stockpile on test embankment
DT-022	464.4	410.03	26.54	8/31/2009	9/1/2009	Lift 3, N 35° 54.683' W 084° 30.770'
DT-023	459.2	402	29.35	8/31/2009	9/1/2009	Lift 3, N 35° 54.662' W 084° 30.746'
SP-039	494.1	446.5	21.75	9/1/2009	9/1/2009	Taken from delivered stockpile on test embankment
SP-040	598.2	518.3	25.66	9/1/2009	9/1/2009	Taken from delivered stockpile on test embankment

Moisture Content Testing of Random Ash Samples

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Sample Number	Tare + Wet Sample Weight (grams)	Tare + Dry Sample Weight (grams)	Moisture Content (%)	Date Taken	Date Tested	Comments
SP-040	540.1	454.1	34.80	9/1/2009	9/1/2009	Retest of SP-040
SP-041	529.6	466.2	24.29	9/3/2009	9/3/2009	Taken from delivered stockpile on test embankment
SP-042	523	481.3	16.39	9/3/2009	9/3/2009	Taken from delivered stockpile on test embankment
DT-024	484.3	435.2	21.36	9/3/2009	9/3/2009	Lift 6, N 35° 54.696' W 084° 30.831'
DT-025	481.9	429.4	26.03	9/3/2009	9/3/2009	Lift 6, N 35º 54.722' W 084º 30.817'
SP-043	596.8	512.7	27.51	9/4/2009	9/4/2009	Taken from delivered stockpile on test embankment
SP-044	530.07	455.7	32.49	9/4/2009	9/4/2009	Taken from delivered stockpile on test embankment
DT-024	492.8	444	20.44	9/3/2009	9/4/2009	Retest
SP-042	448.6	398.8	25.95	9/3/2009	9/4/2009	Retest
DT-026	547.8	480.7	24.36	9/4/2009	9/8/2009	Lift 7, N 35°54.678' W 084°30.799'
DT-027	522	470.8	19.41	9/4/2009	9/8/2009	Lift 2, N 35°54.668' W 084°30.822'
SP-045	577.5	501	27.83	9/8/2009	9/8/2009	Taken from delivered stockpile on test embankment
SP-046	586.2	505.5	26.88	9/8/2009	9/8/2009	Taken from delivered stockpile on test embankment
DT-028	583.6	507.9	25.15	9/8/2009	9/8/2009	Lift 7, N 35°54.695' W 084°30.855'
DT-029	517.9	468.4	20.39	9/8/2009	9/9/2009	Lift 2, N 35°54.634' W 084°30.784'
SP-047	547	474.7	27.01	9/9/2009	9/9/2009	Taken from delivered stockpile on test embankment
SP-048	558.4	473.1	31.85	9/9/2009	9/9/2009	Taken from delivered stockpile on test embankment
SP-049	587	507.6	26.40	9/10/2009	9/10/2009	Taken from delivered stockpile on test embankment
SP-050	579.9	501.2	26.59	9/10/2009	9/10/2009	Taken from delivered stockpile on test embankment
DT-030	529.2	461.9	28.50	9/10/2009	9/10/2009	Lift 7, N 35°54.703' W 084°30.795'
DT-031	565.1	489.1	26.90	9/10/2009	9/10/2009	Lift 7, N 35°54.689' W 084°30.828'
SP-051	575.2	504.2	23.87	9/11/2009	9/11/2009	Taken from delivered stockpile on test embankment
SP-052	597.7	509.9	30.92	9/11/2009	9/11/2009	Taken from delivered stockpile on test embankment
SP-053	562.5	482.5	31.16	9/12/2009	9/12/2009	Taken from delivered stockpile on test embankment
SP-054	538.7	467.2	27.44	9/12/2009	9/12/2009	Taken from delivered stockpile on test embankment
SP-055	520.09	452.5	27.46	9/14/2009	9/14/2009	Taken from delivered stockpile on test embankment
SP-056	551.57	479.51	28.38	9/14/2009	9/14/2009	Taken from delivered stockpile on test embankment
DT-032	489.8	428	27.73	9/14/2009	9/14/2009	Lift 8, N 35°54.685' W 084°30.782' (*NOTE:Switched from gauge #16 to gauge #26)
DT-032	534.53	464.58	27.09	9/14/2009	9/14/2009	Retest for verification
DT-033	475.9	425.5	25.16	9/14/2009	9/15/2009	Lift 2, N 35° 54.633' W 084° 30.784'
SP-057	565	480	31.08	9/15/2009	9/15/2009	Taken from delivered stockpile on test embankment
SP-058	530.07	454.4	30.34	9/15/2009	9/15/2009	Taken from delivered stockpile on test embankment

Moisture Content Testing of Random Ash Samples

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Sample Number	Tare + Wet Sample Weight (grams)	Tare + Dry Sample Weight (grams)	Moisture Content (%)	Date Taken	Date Tested	Comments
SP-059	574.9	501.3	26.64	9/15/2009	9/15/2009	Density test taken for comparison, MC =17.7%, sample sent to MACTEC
SP-060	524	452.7	28.75	9/15/2009	9/15/2009	Density test taken for comparison, MC =16.5%, sample sent to MACTEC
SP-061	446.9	398	25.31	9/15/2009	9/15/2009	Density test taken for comparison, MC =17.5%, sample sent to MACTEC
SP-062	441.8	390.07	31.06	9/29/2009	9/29/2009	Taken from stockpile in the relic placement area
SP-063	499.8	433.6	29.07	9/29/2009	9/29/2009	Taken from stockpile in the relic placement area
Test 1	414.8	376.2	22.63	9/29/2009	9/29/2009	Random spot-checks in the test embankment area
Test 2	445.9	404.1	23.12	9/29/2009	9/29/2009	Random spot-checks in the test embankment area
Test 3	422.3	383	22.07	9/29/2009	9/29/2009	Random spot-checks in the test embankment area
SP-064	506.6	437.8	29.50	9/30/2009	9/30/2009	Taken from delivered stockpile on test embankment
SP-065	489.8	437.7	24.30	9/30/2009	9/30/2009	Taken from delivered stockpile on test embankment
DT-034	525.5	461.7	24.82	9/30/2009	9/30/2009	Lift 10, N 35°54.683' W 084°30.810'
DT-035	498.5	441.9	25.89	9/30/2009	9/30/2009	Lift 10, N 35°54.710' W 084°30.845'
SP-066	505.2	444.5	27.42	10/1/2009	10/1/2009	Taken from delivered stockpile on test embankment
SP-067	500.03	438.9	26.22	10/1/2009	10/1/2009	Taken from delivered stockpile on test embankment
DT-036	560.05	493	23.25	10/1/2009	10/1/2009	Lift 10, N 35°54.700' W 084°30.777'
DT-037	583.1	510.03	25.44	10/1/2009	10/1/2009	Lift 10, N 35°54.664' W 084°30.787'
SP-068	552.8	488.2	22.86	10/8/2009	10/8/2009	Taken from stockpile in the relic placement area
SP-069	576.2	506.2	24.70	10/8/2009	10/8/2009	Taken from stockpile in the relic placement area
DT-038	498.9	440.03	25.08	10/8/2009	10/8/2009	Lift 10, N 35°54.689' W 084°30.777'
DT-039	591.9	506.9	29.86	10/8/2009	10/8/2009	Lift 10, N 35°54.666' W 084°30.723'
SP-070	560	490.8	24.26	10/9/2009	10/9/2009	Taken from delivered stockpile on test embankment
SP-071	519.9	457.5	24.67	10/9/2009	10/9/2009	Taken from delivered stockpile on test embankment
BF-001	590.4	553.2	10.70	10/20/2009	10/20/2009	Taken from stockpile 1 in the ball field
BF-002	591.6	520.3	22.58	10/20/2009	10/20/2009	Taken from stockpile 2 in the ball field
BF-003	596.7	548.9	14.63	10/20/2009	10/20/2009	Taken from stockpile 2 in the ball field
BF-004	470.8	401.9	34.97	10/23/2009	10/23/2009	Taken from Stockpile 3
BF-005	515.2	467.3	18.24	10/23/2009	10/23/2009	Taken from Stockpile 4
BF-005	500.7	461.7	16.28	10/23/2009	10/23/2009	Rerun of BF-005
SP-072	478.5	417.7	28.50	10/26/2009	10/26/2009	Taken from stockpile on Dike D
SP-073	435.1	391.8	25.49	10/26/2009	10/26/2009	Taken from stockpile on Dike D
SP-074	422.4	374.6	28.18	10/26/2009	10/26/2009	Taken from stockpile on Dike D
SP-075	576	490.05	32.09	10/28/2009	10/28/2009	Taken from stockpile on Dike D

Moisture Content Testing of Random Ash Samples

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Sample Number	Tare + Wet Sample Weight (grams)	Tare + Dry Sample Weight (grams)	Moisture Content (%)	Date Taken	Date Tested	Comments
DT-040	531	450.04	35.49	10/30/2009	10/30/2009	WP 887, N 35°54.711' W 084°30.815' (MT MC=29.76%)
DT-041	543.1	454.5	35.45	10/30/2009	10/30/2009	WP 885, N 35°54.720' W 084°30.821' (MT MC=32.39%)
BF-006	459.3	398.6	31.37	10/30/2009	10/30/2009	BF 20-T1, T2 & T3, Rear Stockpile (MT MC=30.05%)
BF-007	490.06	424.6	32.26	10/30/2009	10/30/2009	BF, Right Slick Stockpile (MT MC=30.90%)
BF-008	552.4	472	30.03	10/30/2009	10/30/2009	BF, Left Slick Stockpile (MT MC=28.21%)
RS-001	435.7	377.5	33.62	11/2/2009	11/2/2009	Taken from relic structure 5"
RS-002	444.2	391.2	31.34	11/2/2009	11/2/2009	Taken from relic structure 5"
RS-003	447.4	391.8	29.76	11/2/2009	11/2/2009	Taken from relic structure 5"
RS-004	463.1	399.5	32.58	11/2/2009	11/2/2009	Taken from relic structure 12"
RS-005	472.3	412.3	28.93	11/2/2009	11/2/2009	Taken from relic structure 12"
SP-076	495.5	432.7	29.72	11/4/2009	11/4/2009	East stockpile on section 4 of test embankment
SP-077	564	479.1	30.88	11/4/2009	11/4/2009	East stockpile on section 4 of test embankment
SP-078	500.03	455.7	17.65	11/5/2009	11/5/2009	Delivered to test embankment from stockpile located in the Ballfield
SP-079	429.2	368.7	36.76	11/5/2009	11/5/2009	Delivered to test embankment from stockpile located in the Relic area
SP-080	508.9	422	39.97	11/6/2009	11/6/2009	Delivered to test embankment from stockpile located in the Relic area
SP-081	430.05	390.04	21.53	11/6/2009	11/6/2009	Delivered to test embankment from stockpile located in the Ballfield
SP-082	434.2	393.2	21.74	11/9/2009	11/9/2009	Taken from stockpile on the north side of ballfield
SP-083	517.2	459	22.85	11/9/2009	11/9/2009	Taken from stockpile on the south side of ballfield
SP-084	433.5	373.3	35.60	11/12/2009	11/12/2009	3' below grade where Settlement Plate-3 was excavated
SP-085	422.7	381.1	23.57	11/12/2009	11/12/2009	5' below grade where Settlement Plate-3 was excavated
SP-086	467.2	409.7	30.52	11/12/2009	11/12/2009	6' below grade where Settlement Plate-3 was excavated
SP-087	496.2	437.9	24.95	11/12/2009	11/12/2009	8' below grade where Settlement Plate-3 was excavated
SP-088	386.2	339.9	34.19	11/16/2009	11/16/2009	Delivered to test embankment from Relic Structure area
SP-089	400.06	350.05	34.29	11/16/2009	11/16/2009	Delivered to test embankment from Relic Structure area
SP-090	451.4	398.3	27.39	11/16/2009	11/16/2009	Dike D, Stockpile 1, Eastern
SP-091	490.03	423.7	30.22	11/16/2009	11/16/2009	Dike D, Stockpile 1, Western
SP-092	506.6	443.9	28.17	11/16/2009	11/16/2009	Dike D, Stockpile 2, Eastern
SP-093	492.3	425.9	29.98	11/16/2009	11/16/2009	Dike D, Stockpile 2, Western
DT-042	414.3	372.1	27.97	12/21/2009	12/22/2009	N35°54.636', W084°30.752'
DT-043	422.5	380.5	23.86	12/21/2009	12/22/2009	N35°54.622', W084°30.740'
DT-044	435.4	376.3	34.34	12/21/2009	12/22/2009	N35°54.676', W084°30.846'
DT-045	427.1	375.2	33.70	12/21/2009	12/22/2009	N35°54.667', W084°30.835'

Moisture Content Testing of Random Ash Samples

Test Embankment Program
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Sample Number	Tare + Wet Sample Weight (grams)	Tare + Dry Sample Weight (grams)	Moisture Content (%)	Date Taken	Date Tested	Comments
DT-046	445.9	400.4	23.21	1/14/2010	1/15/2010	N35°54.676', W084°30.840'
DT-047	439.3	383.3	31.23	1/14/2010	1/15/2010	2/18/2010
SPV-001	442.1	387.8	32.55	2/16/2010	2/16/2010	Taken from south end of stockpile in the valley area. Material from dragline road
SPV-002	453.3	395.3	30.32	2/16/2010	2/16/2010	Taken from south end of stockpile in the valley area. Material from dragline road
SPV-003	406.1	360.2	29.42	2/17/2010	2/17/2010	Taken from fly ash/sand placed in the washouts of the valley area. Material from the ball field
SPV-004	424.1	375.9	31.40	2/17/2010	2/17/2010	Taken from fly ash/sand placed in the washouts of the valley area. Material from the ball field
SPV-005	363.9	328.5	28.48	2/18/2010	2/18/2010	Taken from fly ash/sand placed in the washouts of the valley area. Material from the ball field
SPV-006	374.1	337.9	30.94	2/18/2010	2/18/2010	Taken from fly ash/sand placed in the washouts of the valley area. Material from the ball field
SPV-007	340.8	313.4	28.75	2/19/2010	2/19/2010	Taken from south end of stockpile in the valley area. Material from dragline road
SPV-008	359.8	324.3	29.88	2/19/2010	2/19/2010	Taken from south end of stockpile in the valley area. Material from dragline road
SPV-009	412.3	365.7	28.96	2/20/2010	2/20/2010	Taken from fly ash/sand placed in the washouts of the valley area. Material from the ball field
SPV-010	375.6	338.9	30.81	2/20/2010	2/20/2010	Taken from south end of stockpile in the valley area. Material from dragline road
T2-001	400.9	357.2	34.85	2/21/2010	2/21/2010	Taken from stockpile in T2 area.
T2-002	346.4	310.2	32.97	2/21/2010	2/21/2010	Taken from stockpile in T2 area
DT-048	218.8	192.2	21.61	2/20/2010	2/23/2010	N35°54.634', W084°30.801'
DT-049	225.9	202.3	18.03	2/20/2010	2/23/2010	N35°54.650', W084°30.787'

Appendix J

Contractor Submittals

Gradation Test Report

Plant 0007-Roane Co
Product 000057-#57 - 1"
Specification TNDOT 57

1522754406

Sample Information

Sample No 1522754406
Date Sampled 03/17/2010 14:14
Date Completed 03/17/2010 14:14
Sampled By BRIAN WANAMAKER
Tested By BRIAN WANAMAKER
Type Shipping
Method Bucket Blend
Location Production Pile
Process
Ledge
Other

Weather
Temp
Split Sample ☐
Resample ☐
Borehole
Depth Top/Bottom

Sequence
Code

Test Note

Gradation Results

Unit	Moist Mass	Dry Mass	Wash Mass	Moisture %	Wash Loss %	Procedure
g		12793.00				

Sieve	Mass Retained	Cum Mass Retained	Ind % Retained	% Retained	% Passing	Target	Specification	Comment
1 1/2" (37.5mm)	0.0	0.0	0	0	100	100-100	100-100	
1" (25mm)	414.0	414.0	3	3	97	97-100	95-100	
3/4" (19mm)	1857.0	2271.0	15	18	82	75-100	70-100	
1/2" (12.5mm)	5314.0	7585.0	42	59	41	30-55	25-60	
3/8" (9.5mm)	2606.0	10191.0	20	80	20	0-25	0-30	
#4 (4.75mm)	1998.0	12189.0	16	95	5	0-8	0-10	
#8 (2.36mm)	211.0	12400.0	2	97	3	0-3	0-5	
PAN (0um)	393.0	12793.0	3.1	100.0	0.0			

Gradation Test Report

Plant 0007-Roane Co
Product 001215-#10 - SCREENINGS
Specification TNDOT 10

1522800166

Sample Information

Sample No 1522800166
Date Sampled 03/17/2010 14:16
Date Completed 03/17/2010 14:16
Sampled By BRIAN WANAMAKER
Tested By BRIAN WANAMAKER
Type Shipping
Method Bucket Blend
Location Production Pile
Process
Ledge
Other

Weather
Temp
Split Sample ☐
Resample ☐
Borehole
Depth Top/Bottom

Sequence
Code

Test Note

Gradation Results

Unit	Moist Mass	Dry Mass	Wash Mass	Moisture %	Wash Loss %	Procedure
g		778.00				

Sieve	Mass Retained	Cum Mass Retained	Ind % Retained	% Retained	% Passing	Target	Specification	Comment
3/8" (9.5mm)	0.0	0.0	0.0	0.0	100.0	100-100	100-100	
#4 (4.75mm)	111.0	111.0	14.3	14.3	85.7	85-100	80-100	
#8 (2.36mm)	287.0	398.0	36.9	51.2	48.8	45-55	40-60	
#16 (1.18mm)	176.0	574.0	22.6	73.8	26.2	25-35	20-40	
#30 (0.6mm)	95.0	669.0	12.2	86.0	14.0	10-25	5-30	
#50 (0.3mm)	33.0	702.0	4.2	90.2	9.8	10-25	5-30	OT
#100 (0.15mm)	12.0	714.0	1.5	91.8	8.2	10-25	5-30	OT
#200 (75um)	6.0	720.0	0.77	92.54	7.46	2-18	0-20	
PAN (0um)	58.0	778.0	7.46	100.00	0.00			

Gradation Test Report

Plant 0007-Roane Co
Product 000233-CRUSHER RUN
Specification CRUSHER RUN

Sample Information

Sample No 1522682167
Date Sampled 03/17/2010 14:07
Date Completed 03/17/2010 14:07
Sampled By BRIAN WANAMAKER
Tested By BRIAN WANAMAKER
Type Shipping
Method Bucket Blend
Location Stockpile
Process
Ledge
Other

Weather
Temp
Split Sample ☐
Resample ☐
Borehole
Depth Top/Bottom

Sequence
Code

Test Note

Gradation Results

Unit	Moist Mass	Dry Mass	Wash Mass	Moisture %	Wash Loss %	Procedure
g		12419.00				

Sieve	Mass Retained	Cum Mass Retained	Ind % Retained	% Retained	% Passing	Target	Specification	Comment
1 1/2" (37.5mm)	0.0	0.0	0.0	0.0	100.0	100-100	100-100	
1" (25mm)	98.0	98.0	0.8	0.8	99.2	85-100	80-100	
3/4" (19mm)	359.0	457.0	2.9	3.7	96.3	65-95	60-100	OT
3/8" (9.5mm)	2305.0	2762.0	18.6	22.2	77.8	50-85	45-90	
#4 (4.75mm)	2668.0	5430.0	21.5	43.7	56.3	35-60	30-65	
#16 (1.18mm)	3801.0	9231.0	30.6	74.3	25.7	15-35	10-40	
#100 (0.15mm)	2132.0	11363.0	17.2	91.5	8.5	7-18	5-20	
PAN (0um)	1056.0	12419.0	8.50	100.00	0.00			

Geogrid
Secugrid® 30/30 Q1

NAUE
info@naue.com www.naue.com

***Secugrid*® geogrids are the next generation of geogrids produced with state of the art manufacturing technology, unlike any other geogrid on the marketplace today. The reinforcement element is a highly oriented polypropylene strap that is extruded and drawn to achieve high modulus and strength at low elongations. This is combined with NAUE patented vibratory welding technology to provide a structurally sound and stable geogrid.**

The following table lists properties of ***Secugrid*® *30/30 Q1*** Geogrid

Property	**Test Method**	**Units**	**md**	**cmd**
Polymer Type			**PP**	
Structure			**welded straps**	
pH range			**2-13**	
Tensile strength				
Ultimate	ASTM D 6637	kN/m	30	30
		lbs/ft	**2,055**	**2,055**
Elongation @ ultimate*	ASTM D 6637	**%**	**8**	**8**
Strength @1%	ASTM D 6637	kN/m	6.6	6.6
		lbs/ft	**453**	**453**
Strength @2%	ASTM D 6637	kN/m	10	10
		lbs/ft	**686**	**686**
Strength @5%	ASTM D 6637	kN/m	21.5	21.5
		lbs/ft	**1,475**	**1,475**
Modulus				
Tensile modulus @ 1%*		kN/m	660	660
		lbs/ft	**45,300**	**45,300**
Tensile modulus @ 2%*		kN/m	500	500
		lbs/ft	**34,300**	**34,300**
Geometry*	Micrometer	mm	32	32
Aperture size*		**Inches**	**1.26**	**1.26**
Structural integrity				
Flexural rigidity*	ASTM D 1388	**mg-cm**	**500,000**	**500,000**
Junction strength*	GRI-GG2	kN/m	9	9
		lbs/ft	**617**	**617**
Aperture stability*	Kinney (COE)	**kg-cm/deg**	**11.4**	
Durability				
UV Resistance*	EN ISO 12224	%	95%	
Roll Properties				
Roll Dimensions*	meters / **ft**		4.75 x 100 / **15.58 x 328**	
Roll Area*	sq. mtrs / **sq. yds**		475 / **568**	
Roll weight*	kg / **lbs**		103 / **227** **	

MARV values shown unless otherwise indicated * Nominal value **The weight of the core may vary about approx. ± 2 kg / 4.4 lbs

The above mentioned technical values are average values over the roll width. These data are guiding values achieved in our laboratories and/or independent testing institutes. Our products can be subject to changes without prior notice.

Appendix K

Stability Analyses

November 9, 2009 Report

Assessment of Current Stability

Dredge Cell Test Embankment
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Stantec Consulting Services Inc.
One Team. Infinite Solutions
1409 North Forbes Road
Lexington KY 40511-2050
Tel: (859) 422-3000 • Fax: (859) 422-3100
www.stantec.com

Prepared for:
Tennessee Valley Authority
Chattanooga, Tennessee

November 9, 2009

Stantec Consulting Services Inc.
1409 North Forbes Road
Lexington KY 40511-2050
Tel: (859) 422-3000
Fax: (859) 422-3100

November 9, 2009 rpt_001_kif_175669015

Mr. Michael T. Scott, PE
General Manager
TVA Kingston Fossil Ash Recovery Operations
1134 Swan Pond Road, KFP 1T-KST
Harriman, Tennessee 37748

Re: Assessment of Current Stability
Dredge Cell Test Embankment
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Dear Mr. Scott:

In response to the elevated instrument readings in the Kingston test embankment, filling operations were temporarily halted from October 30 until November 3, 2009. During that time, Stantec re-assessed the instrument readings and initiated an updated engineering evaluation of the embankment stability. The results of this effort, which are documented in the attached report, show that the test embankment is currently stable. Filling operations may continue, with continued monitoring of the installed instrumentation in accordance with the approved test embankment plan.

Please let us know if you have additional questions.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Alan F. Rauch, PhD, PE
Geotechnical Engineer

Michael J. Steele, PE
Associate

/rdr

cc: Stephen H. McCracken, PE, Barry S. Snider, PE, William H. Walton, PE, Don W. Fuller II, PE, James W. Andrew, PE

Assessment of Current Stability

Dredge Cell Test Embankment
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Prepared for:
Tennessee Valley Authority
Chattanooga, Tennessee

November 9, 2009

Assessment of Current Stability

Dredge Cell Test Embankment
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Overview

The test embankment within the Kingston dredge cell is being constructed to obtain field data that will support design of the selected closure plan. The design, instrumentation, and monitoring plan for the test embankment are described in an approved document by Stantec Consulting Services Inc. (Stantec) dated June 3, 2009. Roughly 250,000 cubic yards of compacted ash are planned for placement to a height of about 45 feet, which corresponds to a peak elevation of about 805 feet. Between August 5 and November 1, 2009, between 5 and 12 feet of material was placed within this footprint. Conditions within and beneath the embankment are being monitored using data from 32 vibrating wire piezometers (installed at eight locations), four settlement plates, and five slope inclinometer installations.

The placement of fill in the test embankment was halted on October 30, 2009 due to piezometric pressure ratios that were above pre-selected trigger limits. Stantec has completed an engineering evaluation of the instrument readings and analyzed the stability of the test embankment in its current state. These engineering analyses indicate that adequate factors of safety exist for stability of the embankment slopes, and filling operations were allowed to resume on November 3, 2009. The routines used to analyze and plot the daily instrument readings were also evaluated, and improvements were implemented to better represent conditions within the embankment as construction progresses.

The temporary stop in field operations and the re-evaluation of stability followed the written plans for the test embankment. Continued monitoring and evaluation of data from the on-site instrumentation should continue in accordance with the test plan. If excessive readings are recorded in the future, the stability evaluations should be updated again to provide for the continued, safe construction of the test embankment.

Sequence of Events

Construction of the test embankment commenced the first week of August 2009, with the placement of geogrid and coarse stone in the working platform. Fly ash from various areas of the Kingston dredge cell and recovery effort were placed in the test embankment in August, September, and October 2009. The filling process has not been continuous, with interruptions due to rainfall and wet surface conditions. At other times, the available ash was too wet to be compacted in the embankment. No fill was placed on the test embankment from October 10 to 28, 2009. Filling operations resumed on Thursday and Friday, October 29 and 30, 2009. However, high readings on several of the installed piezometers indicated that a re-evaluation of the embankment stability was needed. Filling operations were thus suspended at roughly 7:00 pm on Friday, October 30, 2009.

The available site data was then re-evaluated and engineering analyses were initiated to assess the stability of the test embankment in its current state. This re-evaluation is documented in the remainder of this report. A closer examination of the field data revealed that the pressure ratios computed from the piezometer data were somewhat lower than had

been previously reported. Preliminary engineering analyses also showed that factors of safety for slope stability were adequate. Based on these findings, filling operations for the western half of the test embankment footprint were cleared to resume on the evening of Tuesday, November 3, 2009. Continued monitoring of the site instrumentation is being carried out according to the test plan.

Review of Field Data

Data from the test embankment instruments, collected through November 2, 2009 are plotted in Attachment A. These plots show:

- Height of fill placed in the vicinity of the eight piezometer installation locations.
- The elevation of Watts Bar Lake during construction of the test embankment.
- The pressures measured in 32 piezometers (at eight site locations), where the pressures are plotted as total hydraulic head.
- Maximum horizontal displacement measured in the five slope inclinometer installations.
- Vertical displacement measured with four settlement plates.

The locations of these instruments are shown on the drawings in Attachment B, as well as the aerial photograph in Attachment D.

Seepage moves in the direction of decreasing total hydraulic head or gradient. The piezometer data thus show which way water is draining within the test embankment. Comparing the measured heads from the eight piezometer installations, the seepage appears to be moving in a lateral direction toward the northwest. That is, seepage water is moving from the dredge cell relic and valley areas (located immediately to the south and east) across the area of the test embankment.

At each piezometer installation, there are four instruments at different elevations: the ‘a’ and ‘b’ instruments are in the ash beneath the test fill, while the ‘c’ and ‘d’ instruments are in the foundation clay and silty sands. Almost without exception, the instruments measured heads that are about 1 to 2 feet higher in the ash; this indicates downward drainage of water into the alluvial foundation soils.

During the period of August through October, 2009, the surface of Watts Bar Lake fluctuated about 2.5 feet. The lower alluvial sands underlying the dredge cell are probably connected hydraulically to the lake. However, based on the data plotted in Attachment A, the measured piezometric response in the area of the test embankment does not correlate with the modest variations in lake level.

Examining the piezometer data plotted in Attachment A, there is a general trend of pressures gradually increasing with time in nearly all of the installations. The changes in pressure are subtle and partially masked by variations related to measurement precision. A correlation between pore pressure generation and the placement of fill is difficult to observe.

Considering the conditions and activities across the site, the pore pressures within and beneath the test embankment are believed to be influenced by:

(1) Placement of fill in the test embankment.

(2) Placement of wet ash stockpiles in the valley area (adjacent to and east of the test embankment), which may lead to both the infiltration of water and excess pressures due to loading.

(3) Infiltration of surface water from rainfall and runoff.

(4) Infiltration of water sprayed to control dust on haul roads and other areas adjacent to the test embankment.

(5) Continued drainage of water from the relic dredge cell adjacent to and south of the test embankment.

(6) Fluctuations in the level of Watts Bar Lake.

While examining the piezometer data, an error was discovered in the data reduction software. Specifically, a correction for barometric pressure variations was not properly applied to the pressures measured with sealed transducers at the site. Further complicating this adjustment, the nearby weather station (KTNROCKW2, Joiner Hollow Road, Rockwood, Tennessee) reports an elevation-corrected barometric pressure. The appropriate adjustments to the piezometer data have now been instituted and verified, and the pore pressures plotted in Attachments A and D are properly corrected for barometric pressure effects. This update to the data processing routines does not affect the previously reported pressure ratios, because barometric pressures cancels out of the pressure ratio calculation.

Data from the slope inclinometers (Attachment A) clearly show that lateral deformations have accumulated at the toe of the slope as the test embankment has been built. This behavior is expected, as the foundation materials beneath the embankment squeeze laterally as the fill is placed. These displacements correlate with the placement of fill and do not otherwise accelerate with time. Moreover, the full profiles (plotted in Attachment D) do not show the formation of a sliding plane. Overall, the inclinometer data do not indicate an incipient slope failure.

Measured settlements beneath the fill are also plotted in Attachment A. The settlements have increased with time, as the underlying ash and soils have consolidated under the weight of the fill. About 2.5 inches of settlement have been measured at SP-1. The settlement data exhibits significant scatter, related to measurement precision and occasional heaving, which may occur in areas adjacent to where fill is being placed.

Stability Analyses

While the filling operations were temporarily halted due to high pressure ratios, the stability of the fill was assessed through engineering analyses. Conditions within the test embankment are monitored along the four cross sections shown on the drawings in Attachment B. Vertical sections through the subsurface were created to understand the conditions along Sections 1 through 4. The drawings depict initial and current ground surface topography, based on site survey data. The subsurface stratigraphy is based on data from several of the geotechnical explorations completed at the site. Elevations for strata interfaces within the test embankment were obtained from boring logs collected during installation of the instruments.

Two-dimensional, limit equilibrium stability calculations were completed using Spencer's method and the SLOPE/W software (from Geo-Slope International). Output from the

completed analyses are included in Attachment C. Drained, effective stress conditions were assumed. Pore water pressures throughout the cross section were estimated based on data from piezometers in the test embankment and surrounding areas. Two piezometric lines were established for each cross section: an upper line for pore pressures within the existing ash, and a second, lower line for the native foundation soils. The piezometric lines are depicted on the stability sections in Attachment C.

The unit weights and drained, effective stress strength properties of each material were previously determined. These properties, and the supporting laboratory and field data, are documented in a draft report prepared by Stantec. That report was submitted to Tennessee Valley Authority (TVA), subjected to review by TVA and AECOM, and discussed at a design team meeting on October 8, 2009. Based on those discussions and subsequent review comments, there is a general consensus that the engineering parameters listed in Table 1 are appropriate for representing the ash materials and foundation soils within the Kingston dredge cell. These properties were thus adopted for this analysis of the test embankment stability.

Results from the stability analyses are presented in Attachment C and summarized in Table 2. For each of the four cross sections through the test embankment, three potential failure modes were assessed: (1) shallow failures through the toe, (2) sloughing of the slope face, and (3) deep failures.

- The shallow failures would involve a slip surface that passes near the toe of the embankment slope. This failure mechanism is considered potentially dangerous, because the sliding mass would involve a significant width of the embankment near the crest of the slope face. Sliding of the material along this surface would create a safety risk for construction equipment operating near the top of an unstable slope.

- The lowest factors of safety would be computed for shallow sloughing of material parallel to the slope face (infinite slope type failure). Observed at various times in the field, these failures pose little risk to the overall embankment or the safety of construction activities. Hence, these mechanisms were not analyzed and corresponding results are not compiled in Table 2.

- The stability analyses also evaluated the potential formation of deep failures along surfaces that would pass through the bottom of the ash deposits. If a deep failure were to develop in the test embankment, there is a potential for triggering a retrogressive failure that could destabilize the relic areas. The deep sliding mechanism would thus have the worst possible consequences. However, the factor of safety increases with the depth of the failure circle in these frictional materials.

The results in Table 2 show that all four sections through the test embankment exhibit factors of safety of 1.5 or greater. Considering the deeper potential slip surfaces, the computed factors of safety are not less than 1.8. These numbers compare to design criteria requiring a factor of safety of 1.3 or greater for slope stability during construction. This criteria, as used by the U.S. Army Corps of Engineers (USACE EM 1110-2-1902) was adopted by TVA for the Kingston dredge cell project.

Table 1. Soil Parameters used in Stability Analyses

Material	Unit Weight		Drained, Effective Stress Strength Parameters	
	γ_m (pcf)	γ_{sat} (pcf)	ϕ' (deg.)	c' (psf)
Landfilled Ash	109	111	30	0
Hydraulically Placed Ash	100	107	25	0
Sensitive Silt/Clay	100	107	28	0
Lean Clay Foundation Soil	--	130	32	0
Sandy Silt to Silty Sand	--	128	30	0
Coarse Stone	115	128	38	0

Table 2. Summary of Results from Stability Analysis

Test Embankment Section	Factor of Safety for Shallow Slope Failure	Factor of Safety for Deep Slope Failure
Section 1	1.8	2.0
Section 2	1.5	1.8
Section 3	1.9	2.3
Section 4	1.6	3.0

Revised Test Embankment Data Report

Filling operations on the test embankment were stopped on October 30, 2009 based on the data presented in the weekly test embankment data report. During the re-assessment of the field data, a number of improvements were implemented so that the data report will be more useful as construction of the test embankment continues. The data report for the week ending November 6, 2009, is presented here in Attachment D with new plot formats.

Changes to the data report plot formats include:

- Previously, the pressure ratio plots represented the maximum pressure change from any one of the four instruments in a piezometer installation. In the revised format, the pressure ratio is computed and plotted for each individual instrument.
- Measured pore water pressures are now plotted using the total hydraulic head (= instrument elevation + measured pressure / unit weight of water). Plotting the data in this manner allows a visual interpretation of the data to understand the direction of groundwater seepage.
- Plots of ΔU (change in pore pressure) versus ΔZ (fill height), and H_{max} (cumulative horizontal displacement) versus S_{max} (cumulative vertical settlement), have been deleted from the data report. Initially, it was hoped that these plots would indicate data trends useful for understanding the soil response. However, these plots exhibited significant scatter for a variety of reasons and were not helpful in monitoring the stability of the embankment.

The pressure ratio and displacement ratio are used as indicators of when filling operations should be halted or re-assessed. The pressure ratio (PR) is defined as:

$$PR = \frac{\Delta U}{\Delta Z} = \frac{\text{Change in Measured Pore Water Pressure}}{\text{Change in Surface Pressure}}$$

The change in surface pressure is computed as the average height of fill placed within 50 feet of the piezometer installation, times 110 pcf (unit weight of compacted ash fill). The displacement ratio (DR) is defined as:

$$DR = \frac{H_{max}}{S_{max}} = \frac{\text{Cumulative Horizontal Displacement}}{\text{Cumulative Verical Settlement}}$$

Horizontal displacements are obtained from the slope inclinometer data, while the settlements are obtained from the nearest settlement plate on a given cross section. Trigger limits were established in the test embankment plan, corresponding to an "ACTION" condition when PR > 10% or DR > 20%, and an "ALARM" condition when PR > 15% or DR > 30%.

The values of PR and DR are based on changes in conditions over a specified period of time. During the initial stages of construction, it was difficult to select a meaningful starting point. With minor fill heights in place, the noise in the data caused substantial swings in the computed values of DR and PR. In an attempt to make sense of this early data, different baseline dates were selected for the various instruments. Now, with the benefit of having data from the first one-third of the planned fill height in place, the data makes better sense if viewed consistently as the change in pressure or displacement since the day filling began. Hence, the revised test embankment data report plots values of DR and PR computed using August 5 (just before construction of the working platform began) as the initial baseline data.

Current Readings and Trigger Limits

The revised plots of pressure ratio (for readings from 32 piezometer instruments) and displacement ratio (from three slope inclinometer – settlement plate pairs) are presented in Attachment D. The data up through about mid-September exhibit significant variations, with some occasional peaks well above the trigger limits. These peaks correspond to individual data records, and can be attributed to data noise. When the fill height was relatively low, small changes in the instrument readings often lead to wild swings in the computed ratios. There was little concern for stability during most of this period, due to the low fill height. In reality, the pressure and displacement ratios are probably meaningful only in the last half the monitored period.

The latest data show PR and DR values exceeding the action limit on several of the cross sections. This condition lead to the temporary shut-down of filling operations, the re-assessment of the field data, and the analysis of slope stability presented herein. Based on the adequate factors of safety for slope stability that have been computed, it is safe to continue building the test embankment while the ratios remain above the 'ACTION' trigger limit. In this manner, the appropriate actions have been taken in accordance with the monitoring plan.

On Section 4 through the test embankment, the instruments (PZ-6 and SI-5) continue to exhibit pressure and displacement ratios above the 'ALARM' limit. Looking at all of the available information, the elevated pore pressures at this location are only partly the result of fill placement. The placement of wet ash stockpiles in the valley area east of the test embankment may be causing much of the higher pressures under Section 4. Regardless of the cause of the elevated readings, the stability analyses show that the embankment currently has a factor of safety of 1.6 for slope failure. Based on this finding, filling operations may resume in the vicinity of Section 4, but continued observation and assessment of the measured pore pressures is needed.

Conclusions and Recommendations

(1) Slope stability analyses, using the piezometric levels currently being measured under the test embankment, indicate that the embankment slopes are stable. Filling operations may resume across the full footprint of the test embankment.

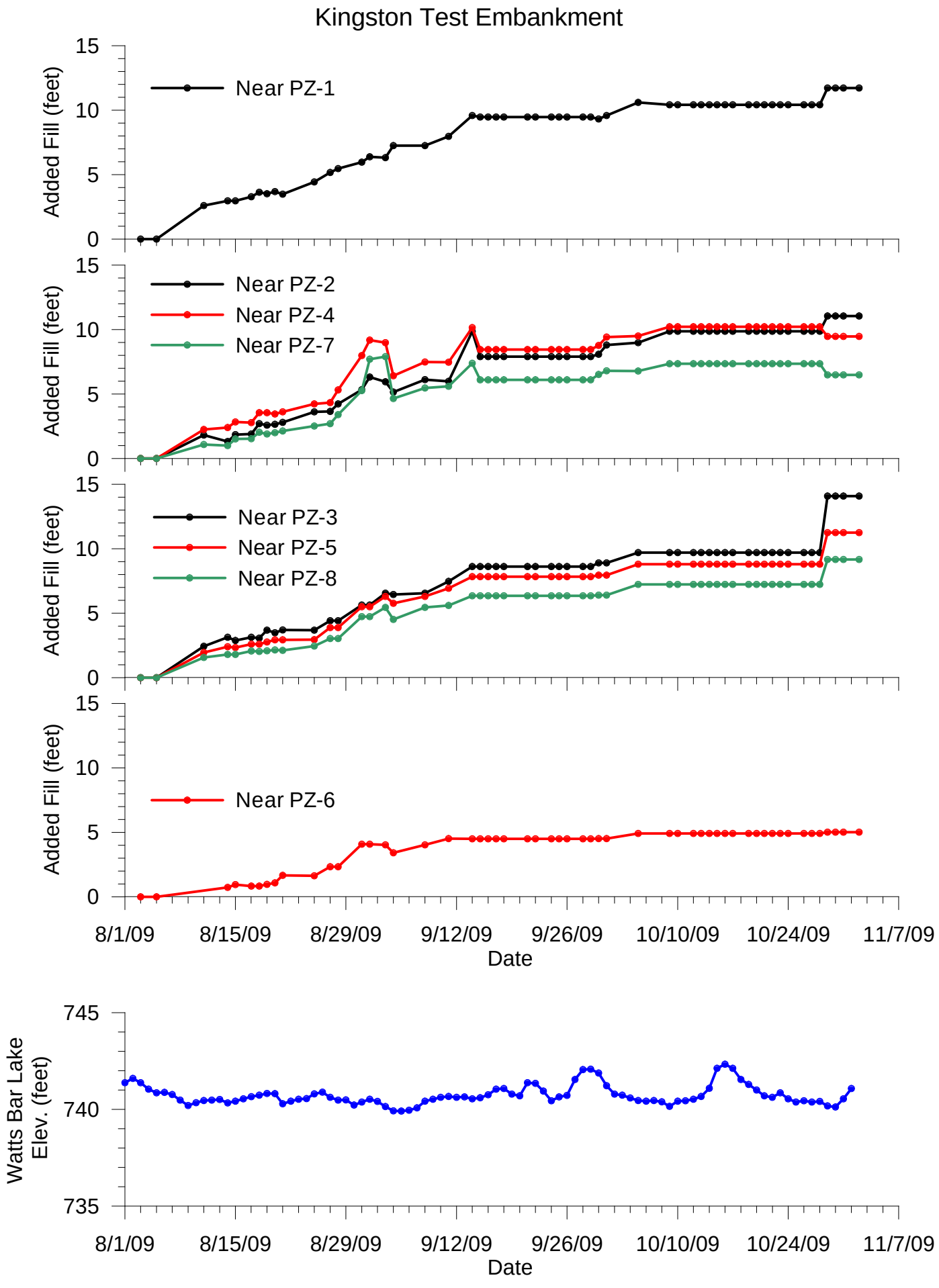
(2) High pressure ratios continue to be observed in the vicinity of Section 4. The elevated pressures appear to result from site activities adjacent to the test embankment. The analyses show the embankment is stable in this area, so filling may resume.

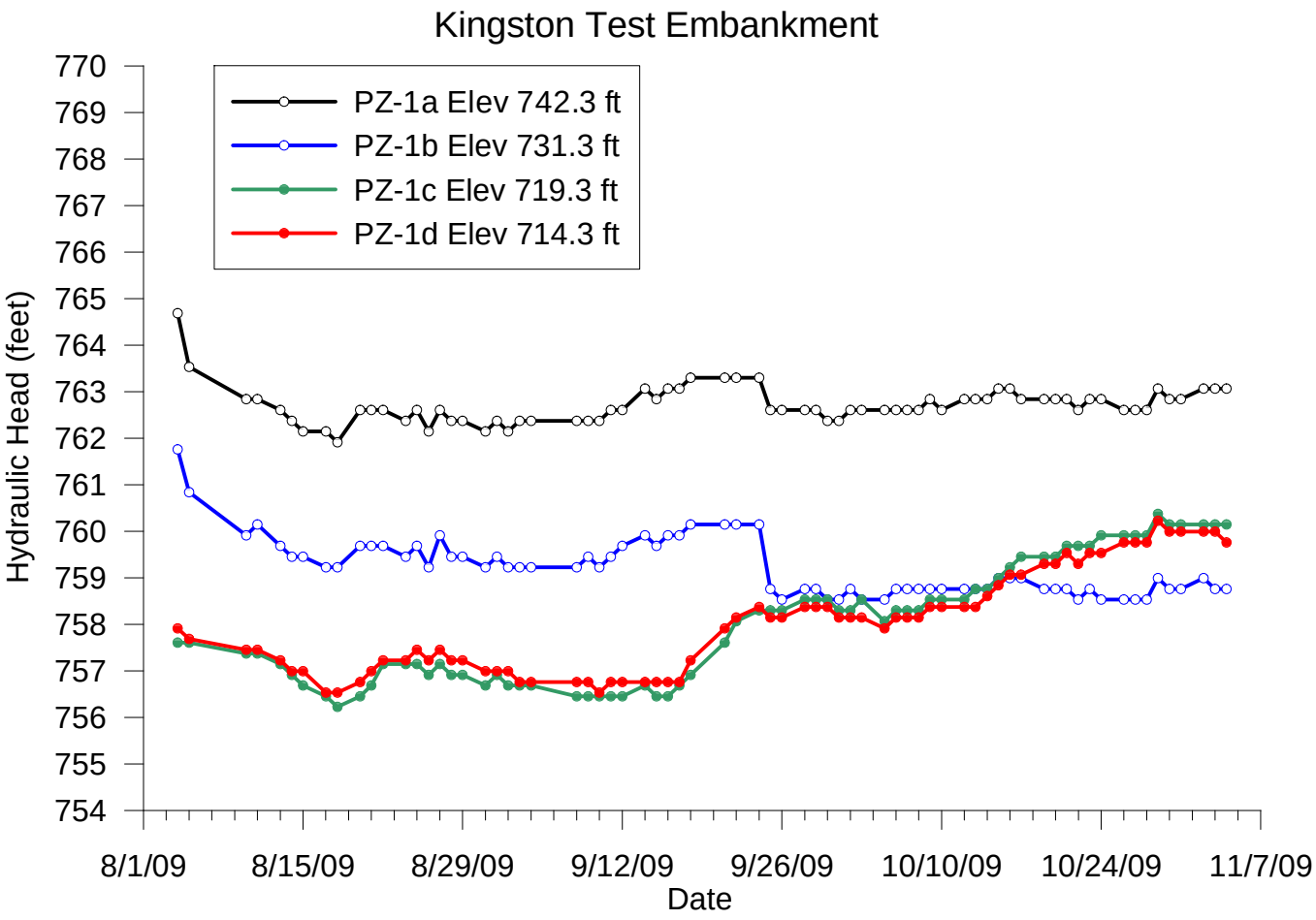
(3) Monitoring of the test embankment instrumentation must continue as additional fill is placed. The added weight of the fill increases the shear stresses in the underlying soil, such that the slope may become less stable with increasing fill heights. Continued diligence is needed to provide for the safe completion of the test embankment. Periodic updates to the stability analyses may be warranted if the instruments continue to record high pressure or displacement ratios.

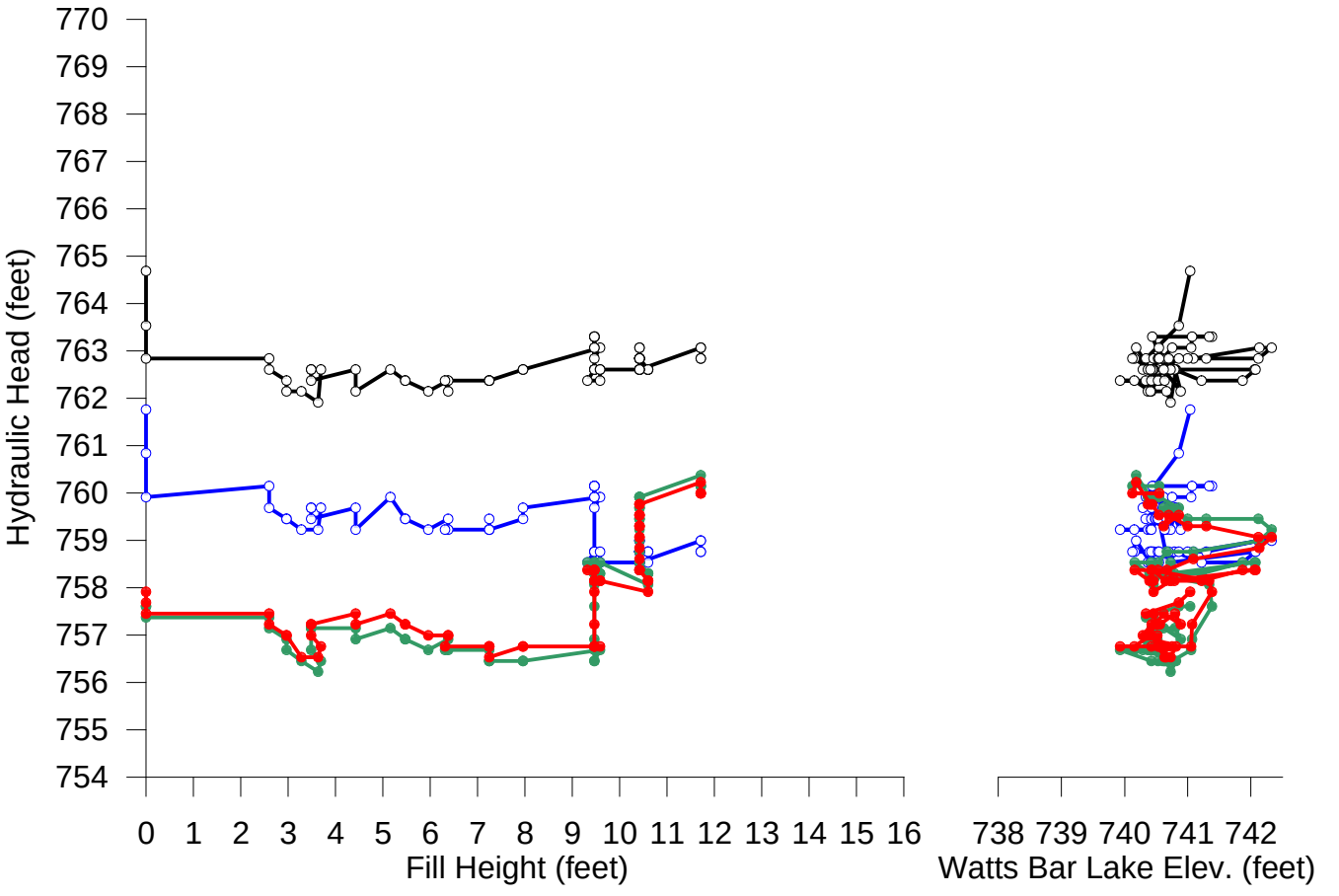
(4) The monitoring system laid out in the test embankment plan was successfully implemented in this incident. Due to observed pressure ratios above the established triggering limits, work was temporarily halted while the data and slope stability were re-assessed.

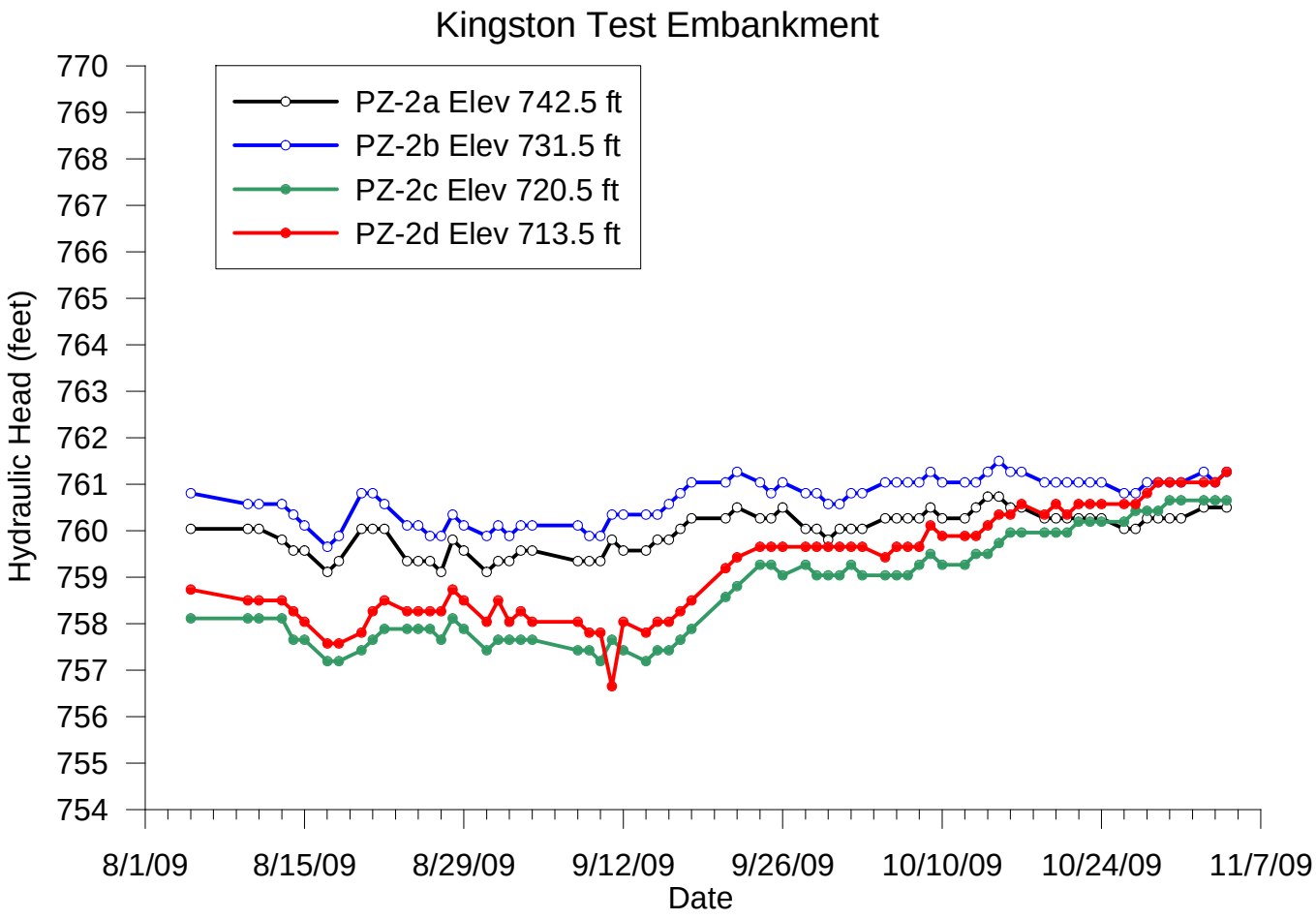
Appendix A

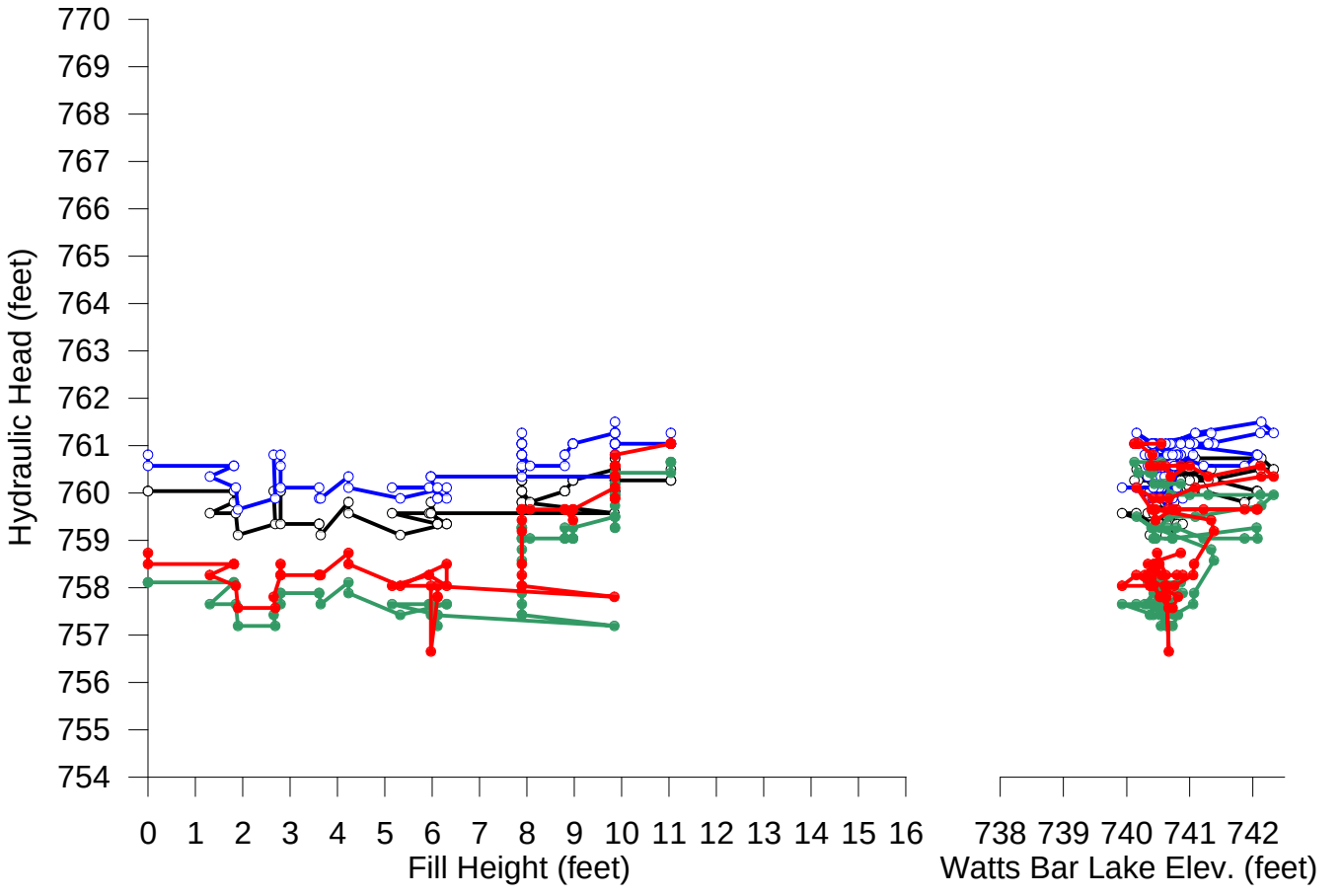
Plots of Field Data

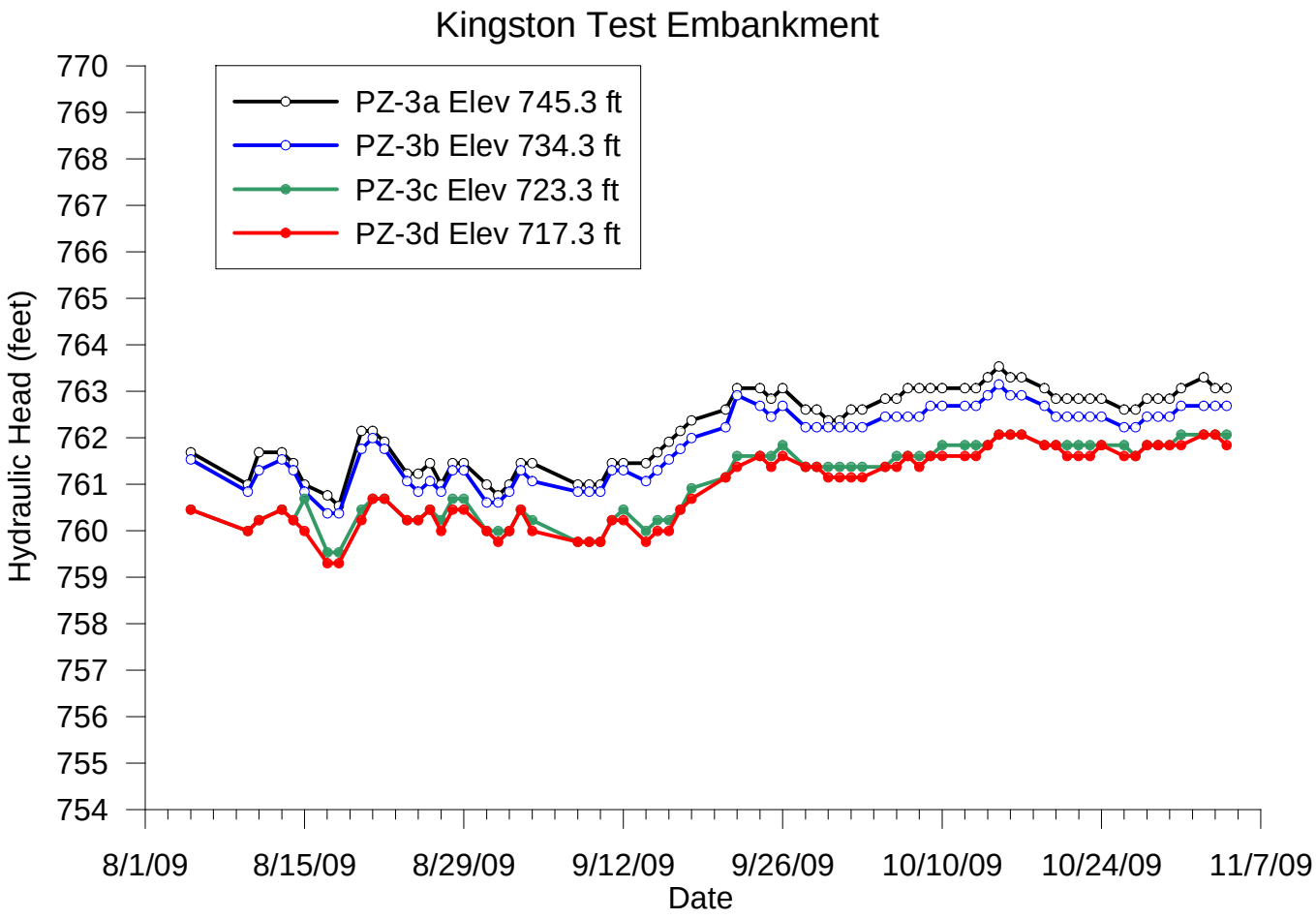

Kingston Test Embankment
Added Fill (feet)
15
10
5
0
Near PZ-1
Near PZ-2
Near PZ-4
Near PZ-7
Near PZ-3
Near PZ-5
Near PZ-8
Near PZ-6
8/1/09
8/15/09
8/29/09
9/12/09
9/26/09
10/10/09
10/24/09
11/7/09
Date
Watts Bar Lake Elev. (feet)
745
740
735

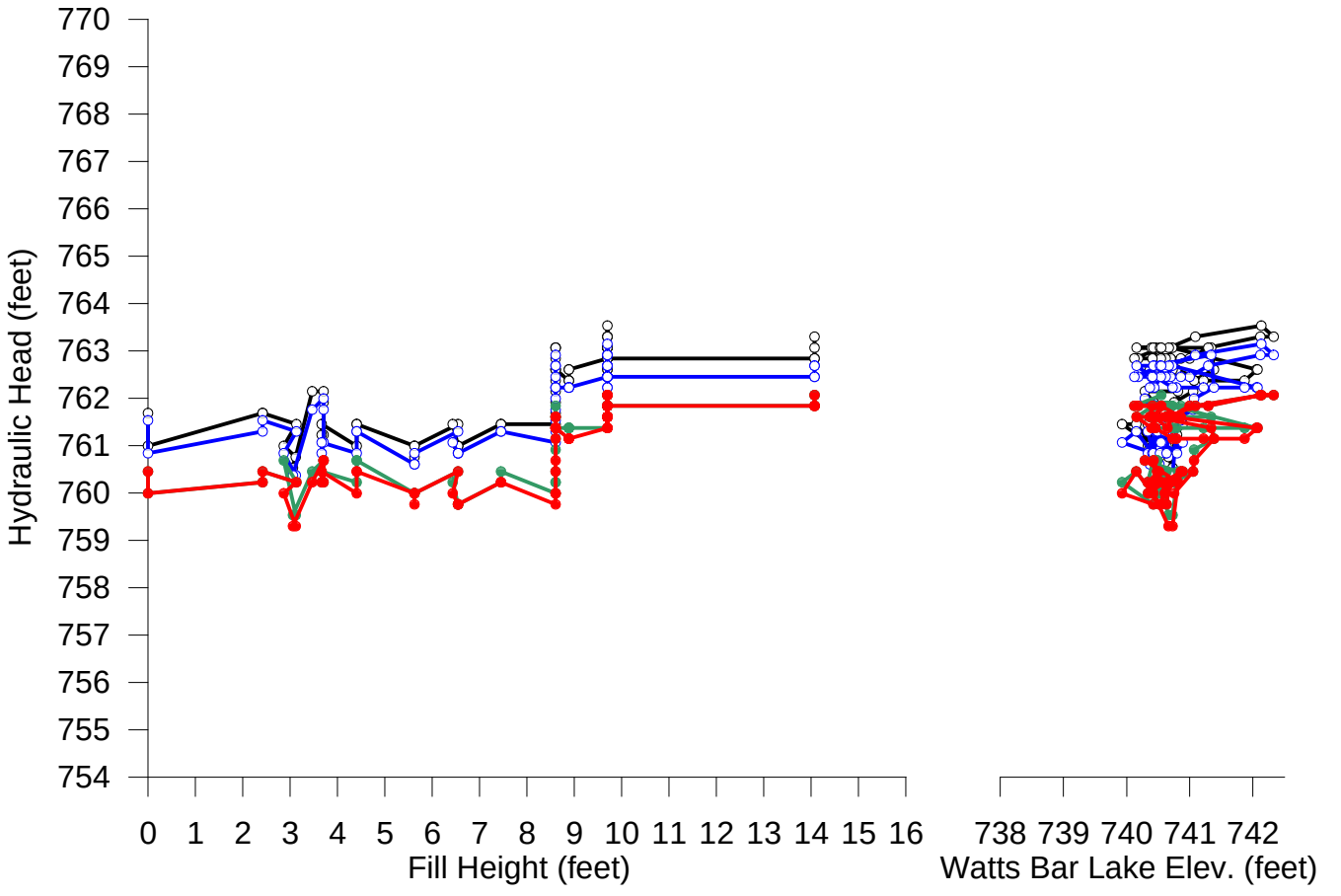

Kingston Test Embankment
PZ-1a Elev 742.3 ft
PZ-1b Elev 731.3 ft
PZ-1c Elev 719.3 ft
PZ-1d Elev 714.3 ft
Hydraulic Head (feet)
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
754
8/1/09
8/15/09
8/29/09
9/12/09
9/26/09
10/10/09
10/24/09
11/7/09
Date

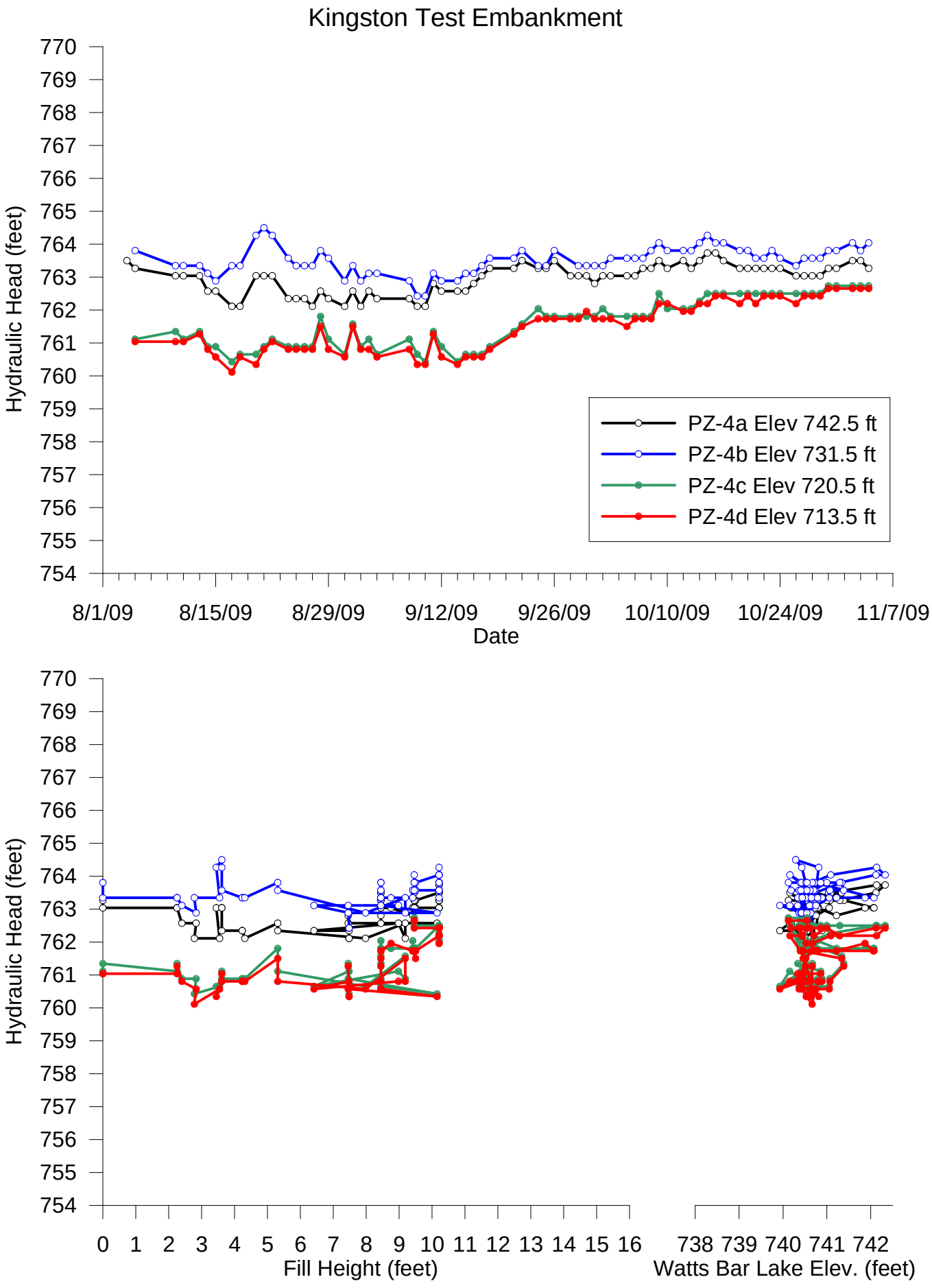

Hydraulic Head (feet)
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
754
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Fill Height (feet)
738 739 740 741 742
Watts Bar Lake Elev. (feet)

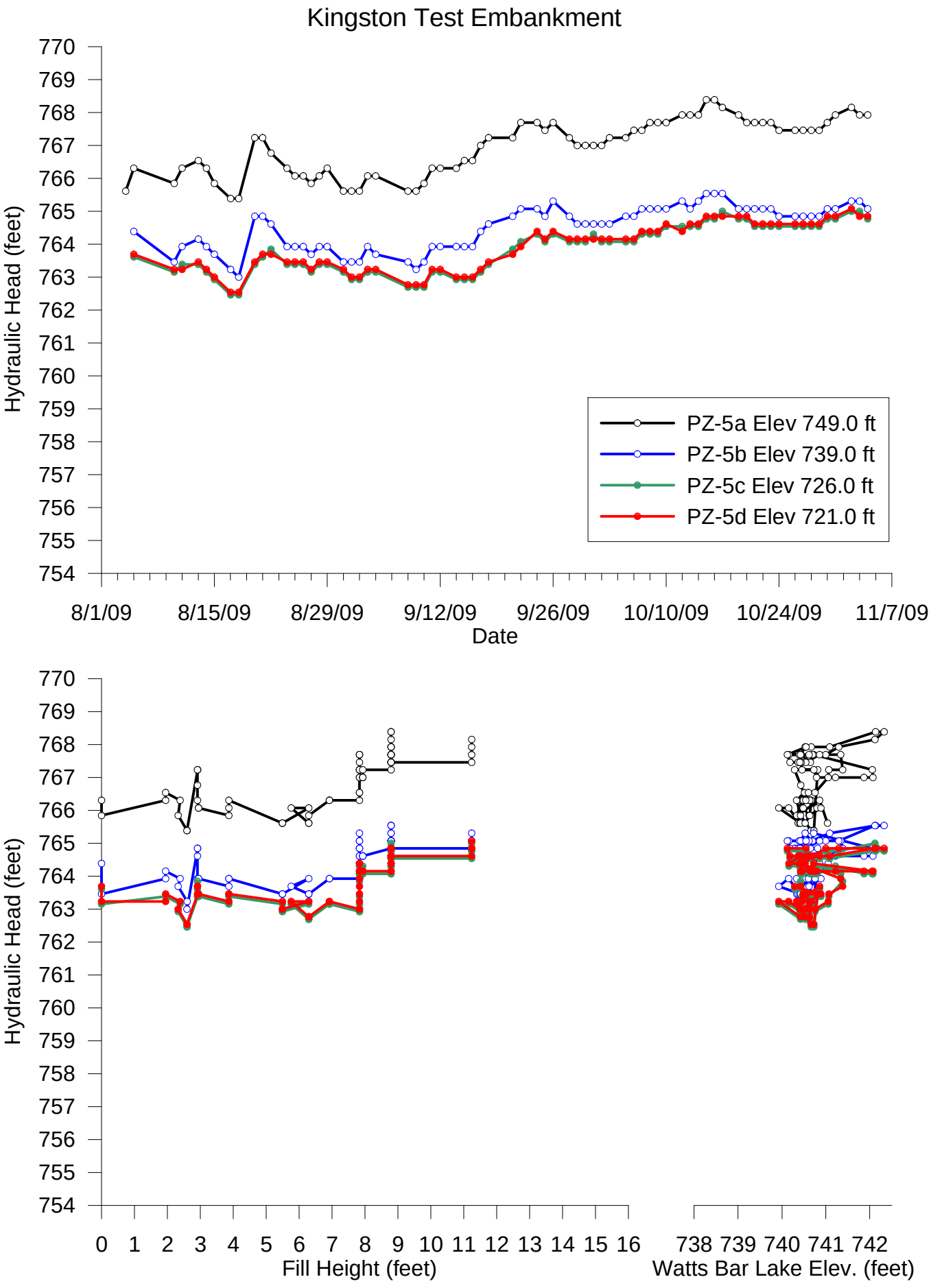

Kingston Test Embankment
PZ-2a Elev 742.5 ft
PZ-2b Elev 731.5 ft
PZ-2c Elev 720.5 ft
PZ-2d Elev 713.5 ft
Hydraulic Head (feet)
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
754
8/1/09
8/15/09
8/29/09
9/12/09
9/26/09
10/10/09
10/24/09
11/7/09
Date

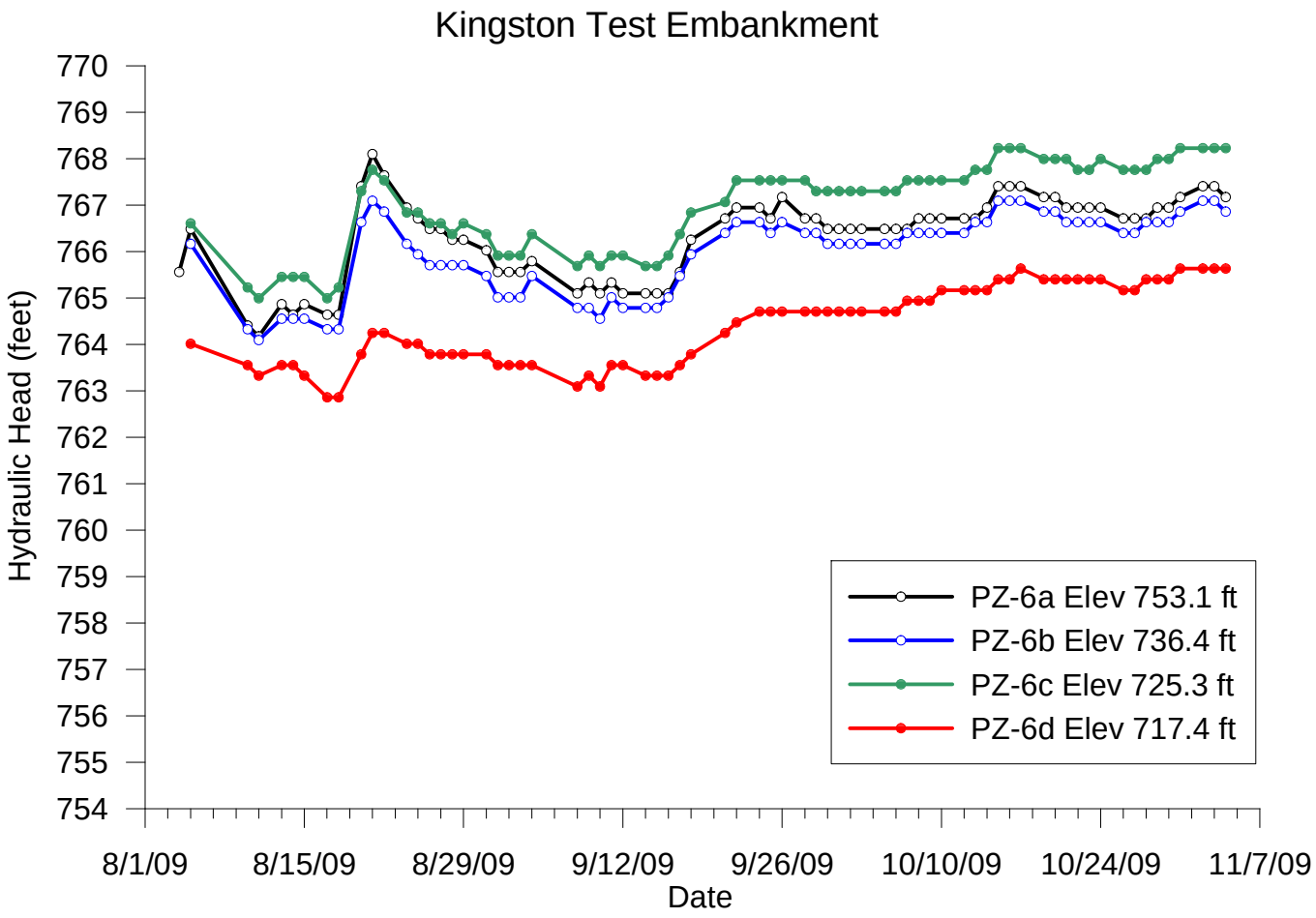

Hydraulic Head (feet)
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
754
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Fill Height (feet)
738 739 740 741 742
Watts Bar Lake Elev. (feet)

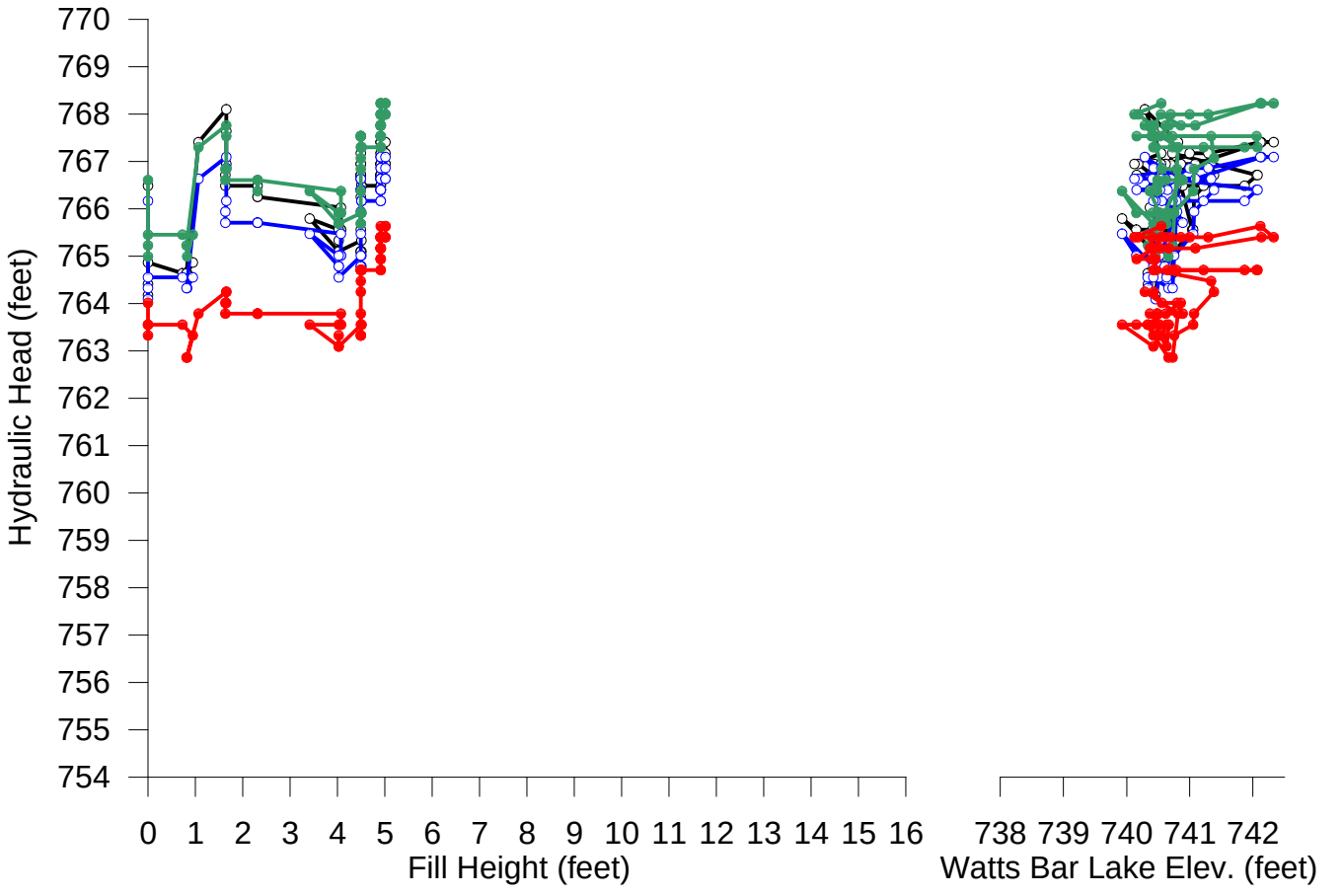

Kingston Test Embankment
PZ-3a Elev 745.3 ft
PZ-3b Elev 734.3 ft
PZ-3c Elev 723.3 ft
PZ-3d Elev 717.3 ft
Hydraulic Head (feet)
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
754
8/1/09
8/15/09
8/29/09
9/12/09
9/26/09
10/10/09
10/24/09
11/7/09
Date

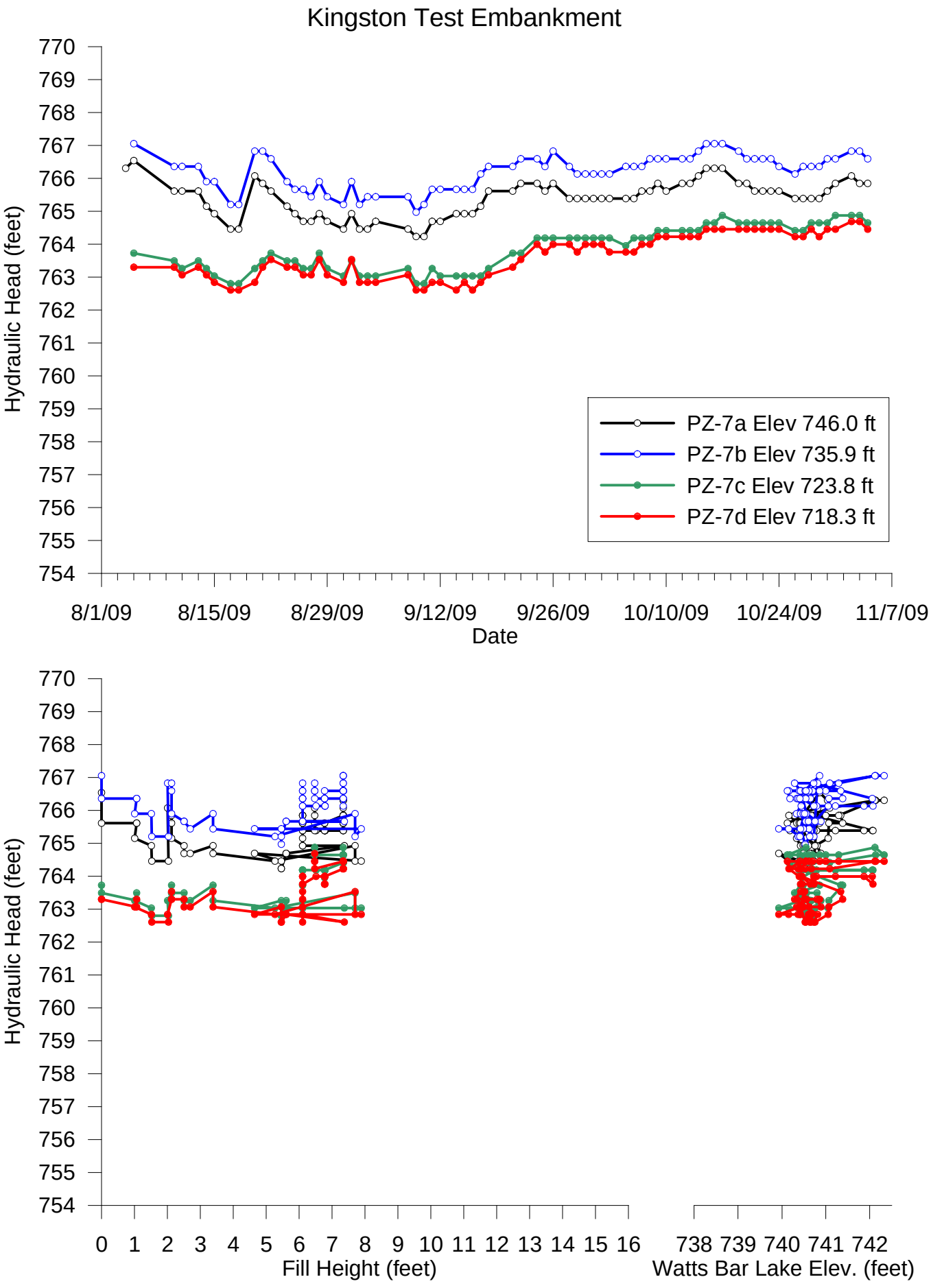

Hydraulic Head (feet)
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
754
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Fill Height (feet)
738 739 740 741 742
Watts Bar Lake Elev. (feet)

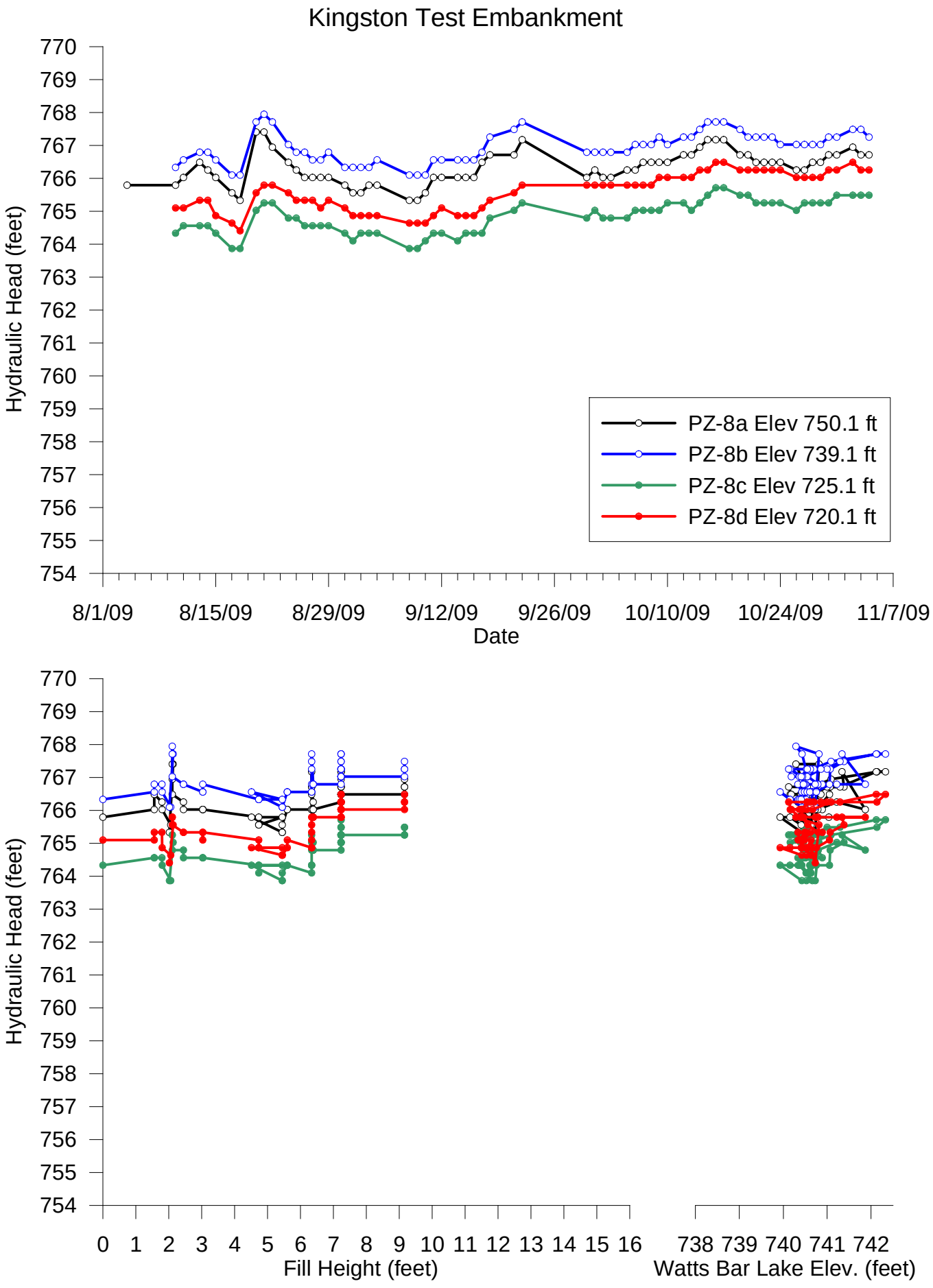

Kingston Test Embankment
Hydraulic Head (feet)
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
754
PZ-4a Elev 742.5 ft
PZ-4b Elev 731.5 ft
PZ-4c Elev 720.5 ft
PZ-4d Elev 713.5 ft
8/1/09
8/15/09
8/29/09
9/12/09
9/26/09
10/10/09
10/24/09
11/7/09
Date
Hydraulic Head (feet)
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Fill Height (feet)
738 739 740 741 742
Watts Bar Lake Elev. (feet)

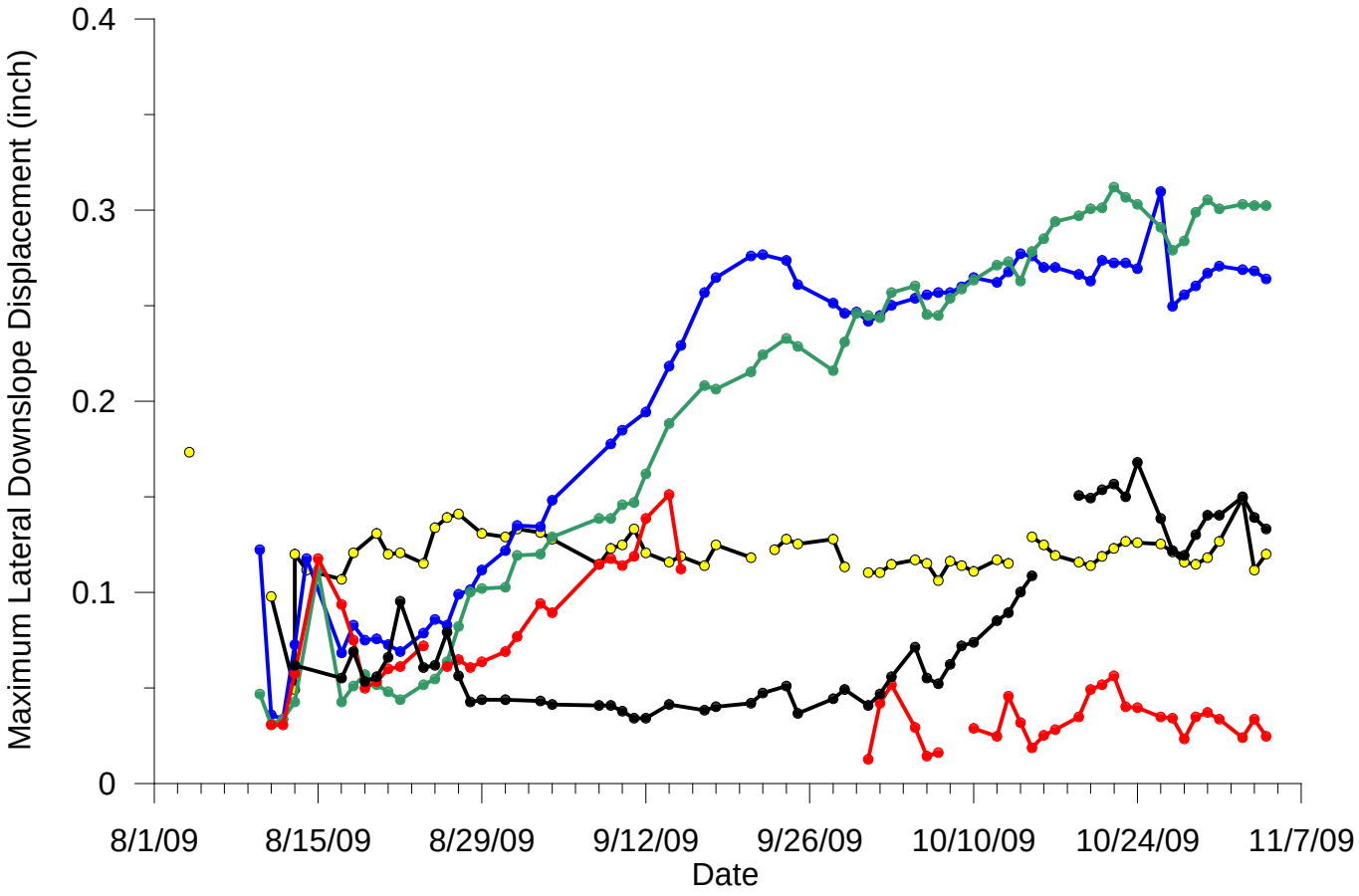

Kingston Test Embankment
Hydraulic Head (feet)
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
754
PZ-5a Elev 749.0 ft
PZ-5b Elev 739.0 ft
PZ-5c Elev 726.0 ft
PZ-5d Elev 721.0 ft
8/1/09
8/15/09
8/29/09
9/12/09
9/26/09
10/10/09
10/24/09
11/7/09
Date
Hydraulic Head (feet)
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Fill Height (feet)
738 739 740 741 742
Watts Bar Lake Elev. (feet)

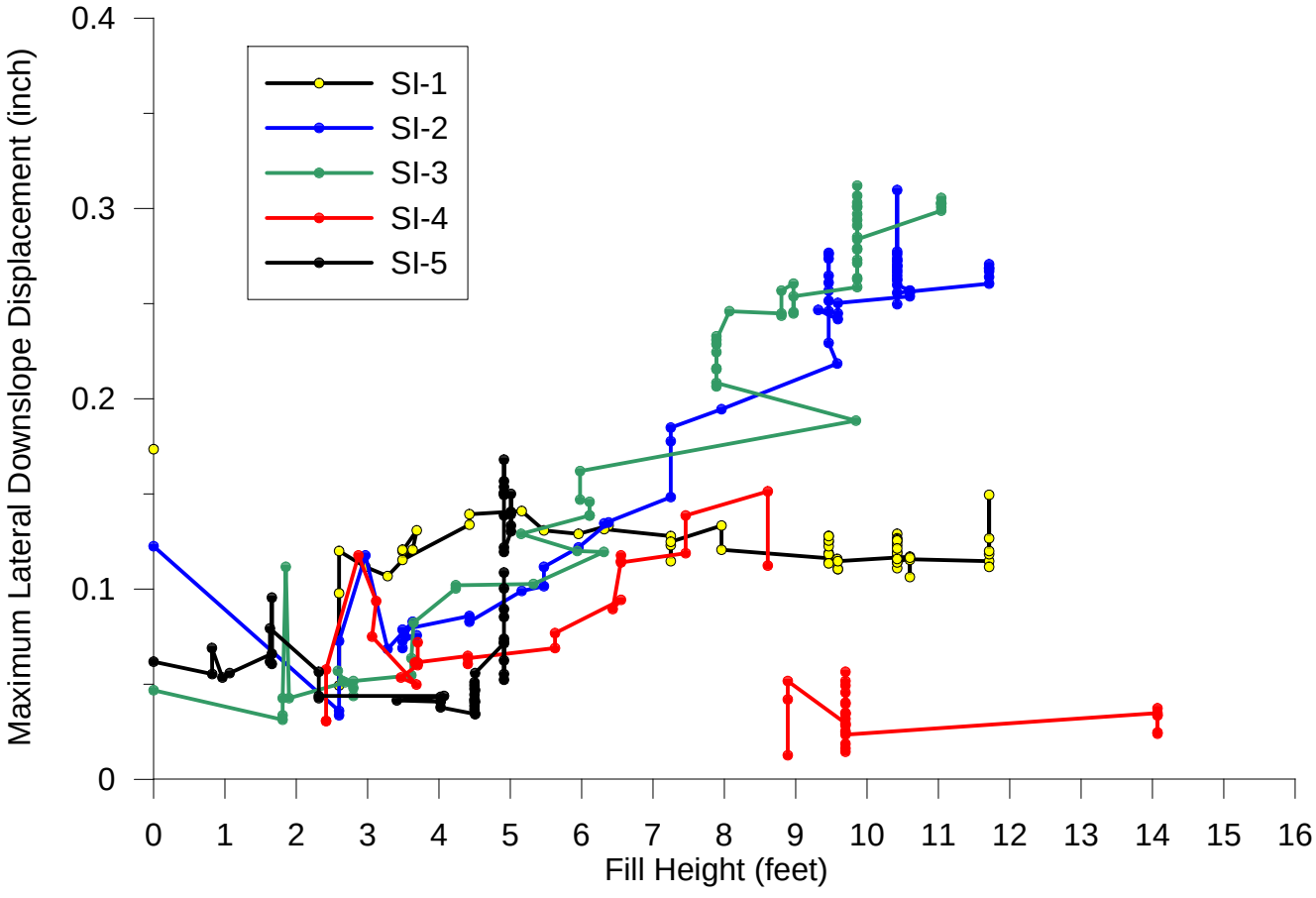

Kingston Test Embankment
Hydraulic Head (feet)
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
754
8/1/09
8/15/09
8/29/09
9/12/09
9/26/09
10/10/09
10/24/09
11/7/09
Date
PZ-6a Elev 753.1 ft
PZ-6b Elev 736.4 ft
PZ-6c Elev 725.3 ft
PZ-6d Elev 717.4 ft

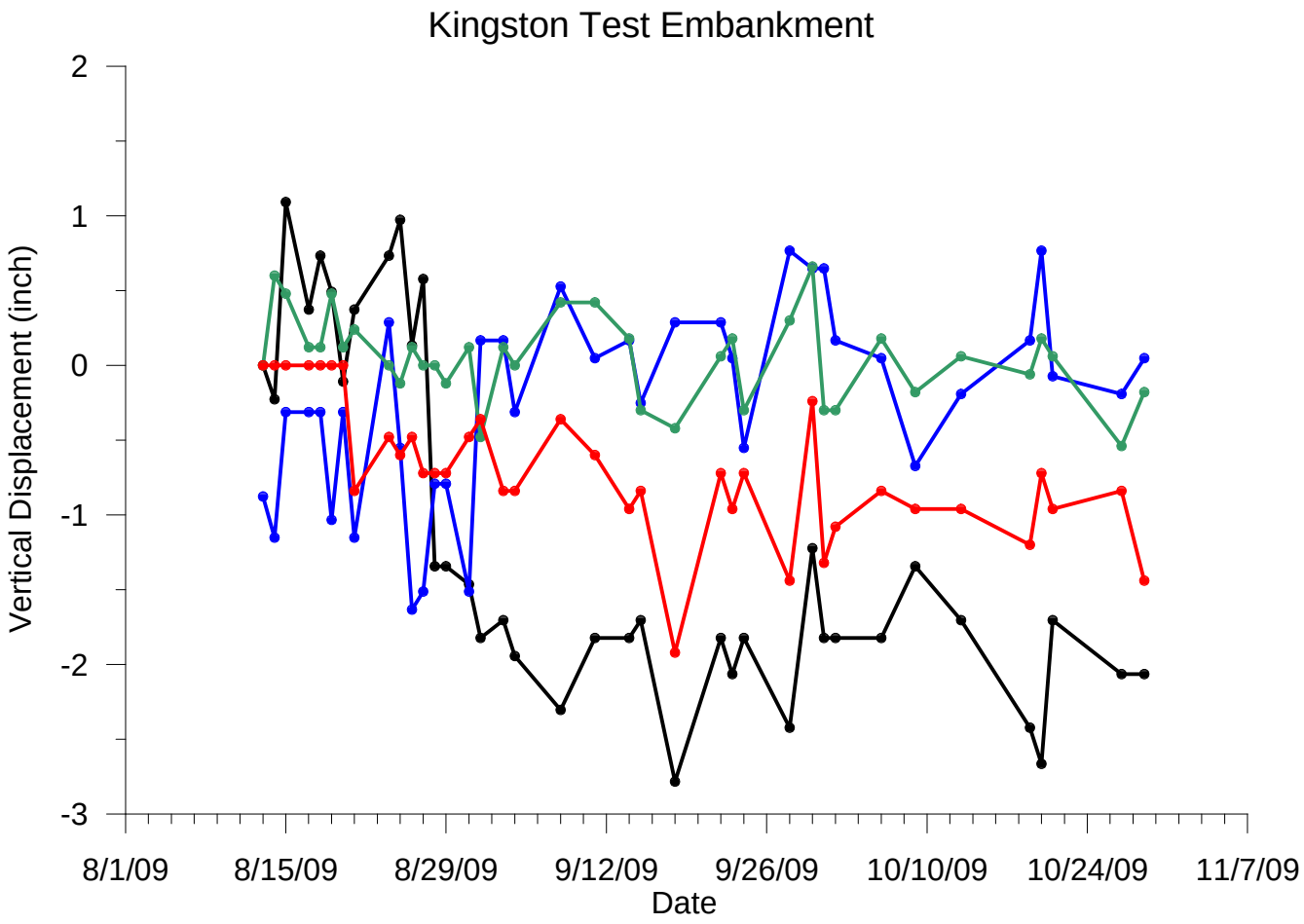

Hydraulic Head (feet)
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
754
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Fill Height (feet)
738 739 740 741 742
Watts Bar Lake Elev. (feet)

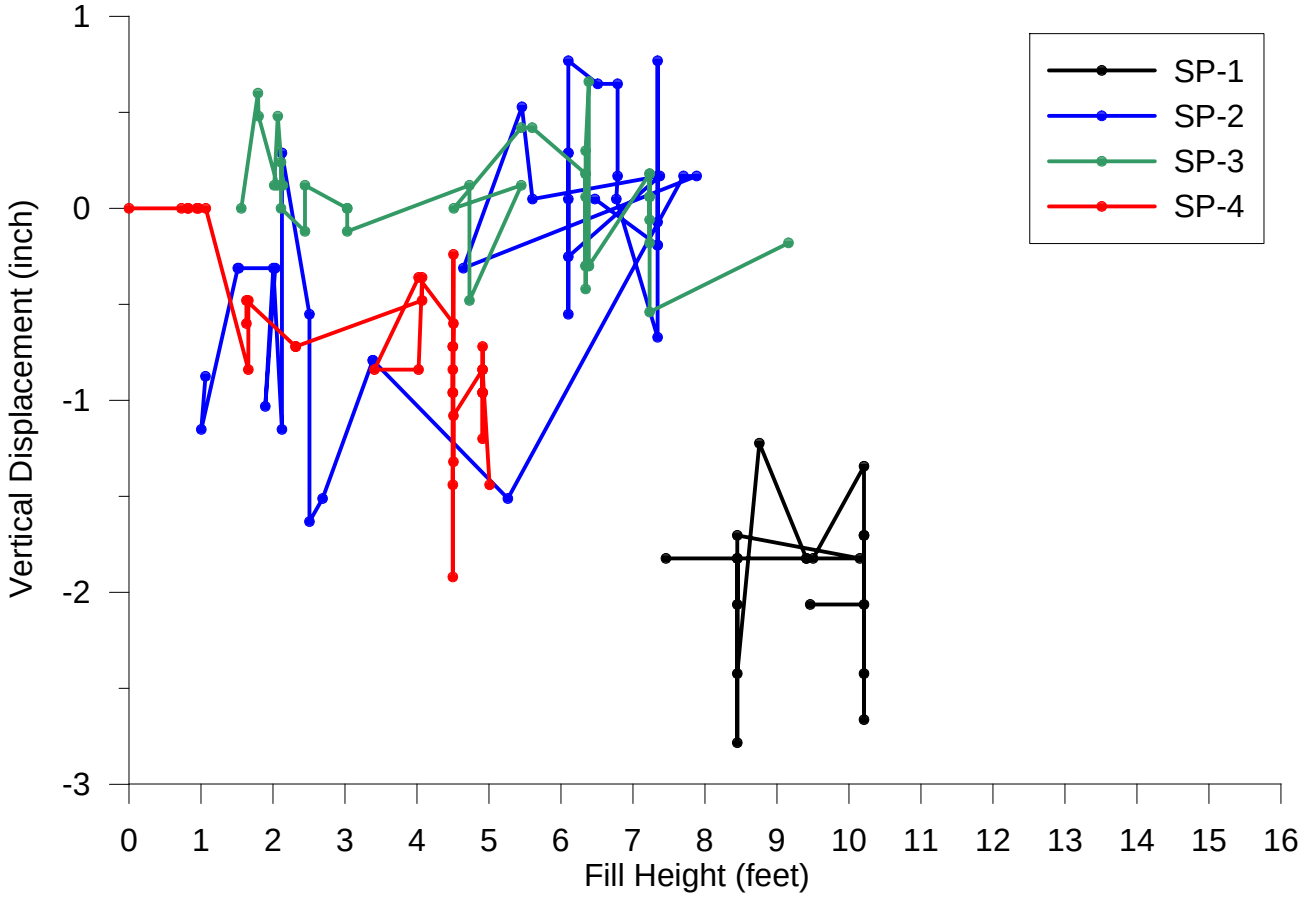

Kingston Test Embankment
Hydraulic Head (feet)
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
754
8/1/09
8/15/09
8/29/09
9/12/09
9/26/09
10/10/09
10/24/09
11/7/09
Date
PZ-7a Elev 746.0 ft
PZ-7b Elev 735.9 ft
PZ-7c Elev 723.8 ft
PZ-7d Elev 718.3 ft
Hydraulic Head (feet)
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Fill Height (feet)
738 739 740 741 742
Watts Bar Lake Elev. (feet)


Kingston Test Embankment
Hydraulic Head (feet)
770
769
768
767
766
765
764
763
762
761
760
759
758
757
756
755
754
PZ-8a Elev 750.1 ft
PZ-8b Elev 739.1 ft
PZ-8c Elev 725.1 ft
PZ-8d Elev 720.1 ft
8/1/09
8/15/09
8/29/09
9/12/09
9/26/09
10/10/09
10/24/09
11/7/09
Date
Hydraulic Head (feet)
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Fill Height (feet)
738 739 740 741 742
Watts Bar Lake Elev. (feet)


Kingston Test Embankment
Maximum Lateral Downslope Displacement (inch)
0.4
0.3
0.2
0.1
0
8/1/09
8/15/09
8/29/09
9/12/09
9/26/09
10/10/09
10/24/09
11/7/09
Date

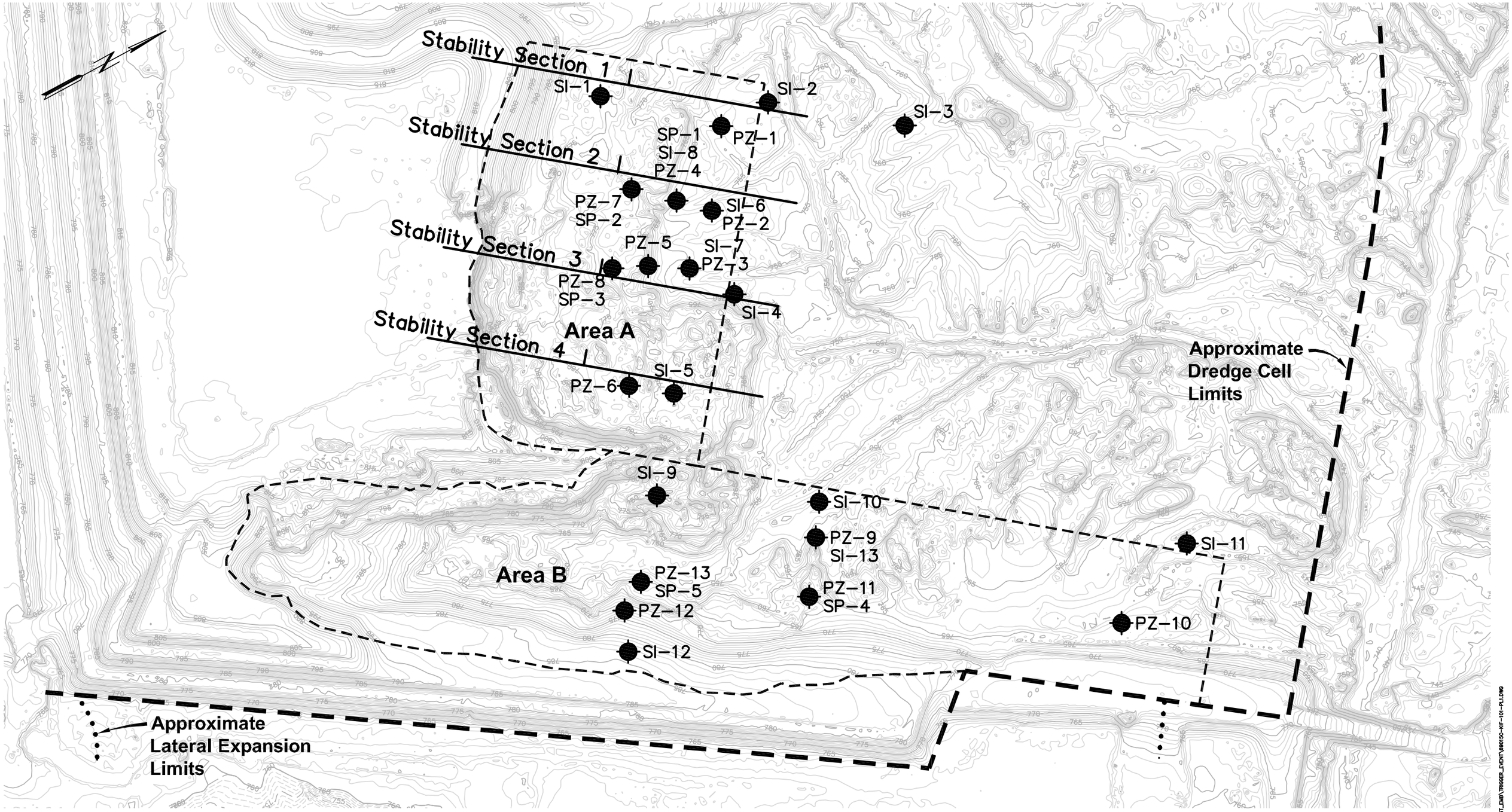

Maximum Lateral Downslope Displacement (inch)
SI-1
SI-2
SI-3
SI-4
SI-5
0.4
0.3
0.2
0.1
0
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
Fill Height (feet)


Kingston Test Embankment
Vertical Displacement (inch)
2
1
0
-1
-2
-3
8/1/09
8/15/09
8/29/09
9/12/09
9/26/09
10/10/09
10/24/09
11/7/09
Date


Vertical Displacement (inch)
1
0
-1
-2
-3
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
Fill Height (feet)
SP-1
SP-2
SP-3
SP-4

Appendix B

Cross Sections



NOTES

1. Topographic mapping was generated from a LIDAR survey performed on April, 2009 by Tuck Mapping Solutions, Inc.

LEGEND

PZ-1	Piezometer
SI-1	Slope Inclinometer
SP-1	Settlement Platform

TEST EMBANKMENT – STABLITY SECTIONS

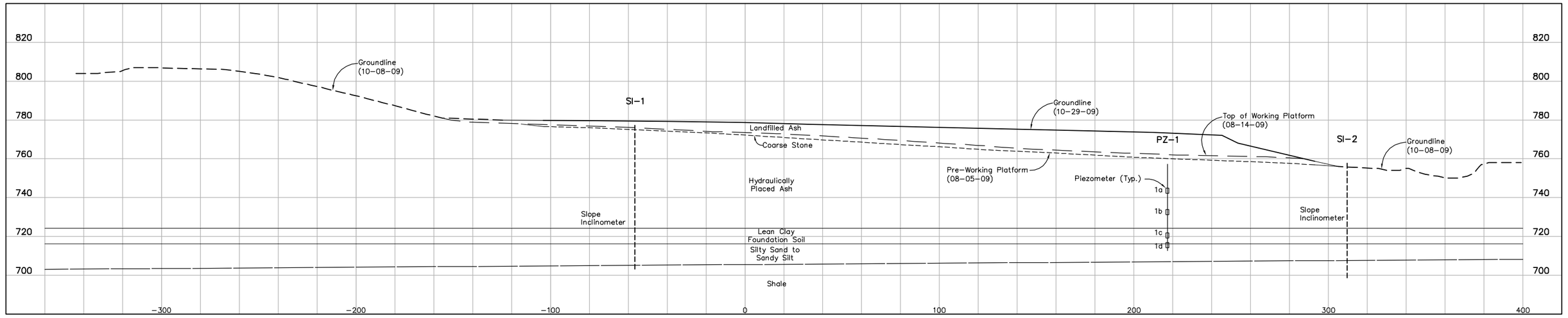
SCALE: 1"=200'

69015c-kif-101-pl1.DWG

100 0 200 400 FEET

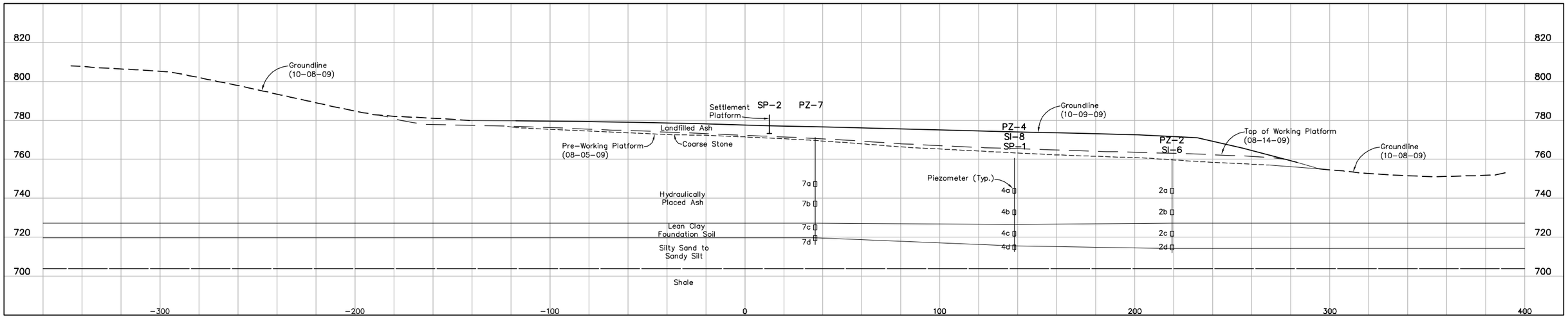
GRAPHIC SCALE: 1" = 200'

PLOT DATE: 11/05/2009 USER: GRAHAM, DAVE
V:\1756\ACTIVE\175689015\ENVIRONMENTAL\DRAWING\TEST_EMB\TRIGGER_EVENT\69015C-KIF-101-PL1.DWG



STABILITY SECTION 1
SCALE: 1"=20'

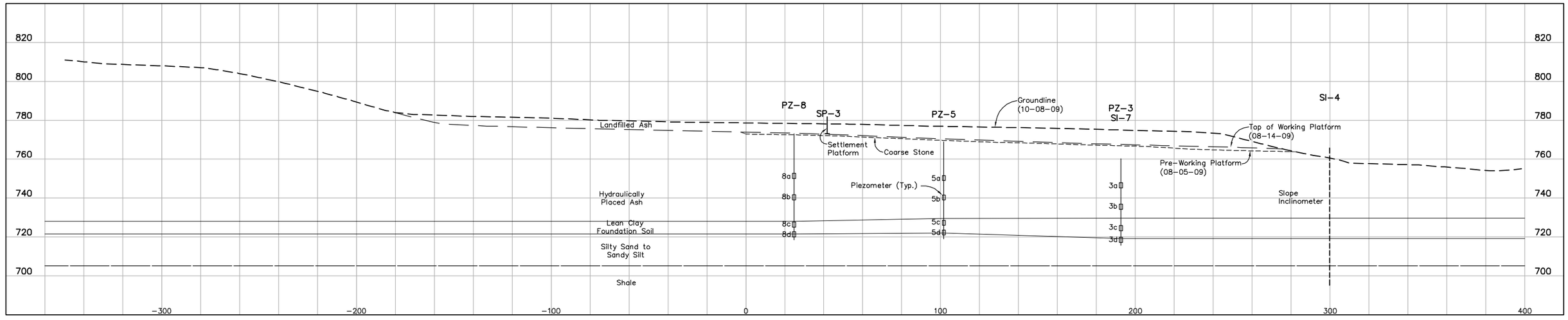
PLOT DATE: 11/02/2009 USER: GRAHAM DAVE
X:\756\ACTIVE\756890151\ENVIRONMENTAL\GRAHAM\TEST_EMB\TRIGGER_EVENT\SECTION.DWG



STABILITY SECTION 2
SCALE: 1"=20'

NOTE:
SI-6 and SI-8 have not been installed

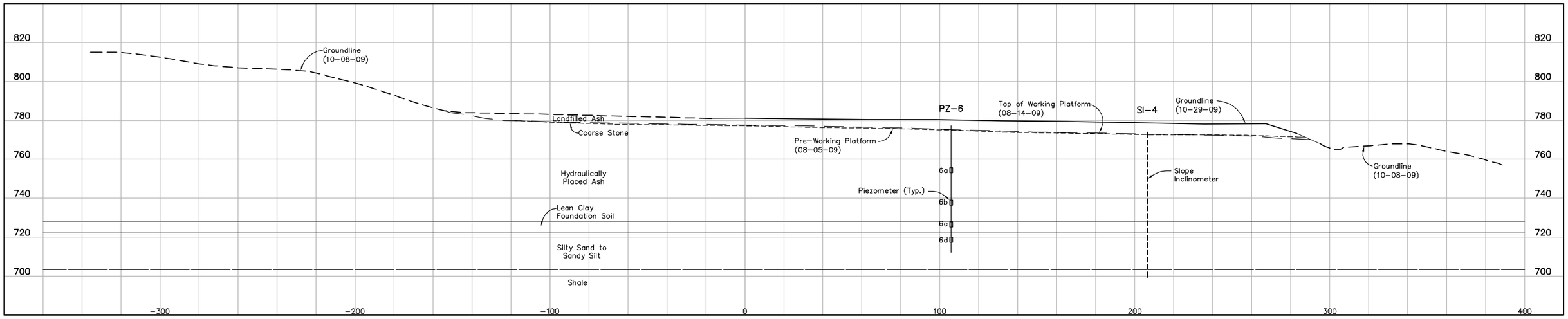
PLOT DATE: 11/02/2009 USER: GRAHAM.DAVE
X:\1756\ACTIVE\176889015\ENVIRONMENTAL\GRAHAM\TEST_EMB\TRIGGER_EVENT\TRIGGER_EVENT.DWG



STABILITY SECTION 3
SCALE: 1"=20'

NOTE:
SI-7 has not been installed

PLOT DATE: 11/05/2009 USER: GRAHAM, DAVE
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\TEST_EMB\TRIGGER_EVENT\SECTION3.DWG



STABILITY SECTION 4
SCALE: 1"=20'

PLOT DATE: 11/02/2009 USER: GRAHAM, DAVE
X:\1756\ACTIVE\175699015\ENVIRONMENTAL\GRAHAM\TEST_EMB\TRIGGER_EVENT\SECTION4.DWG

Appendix C

Slope Stability Results

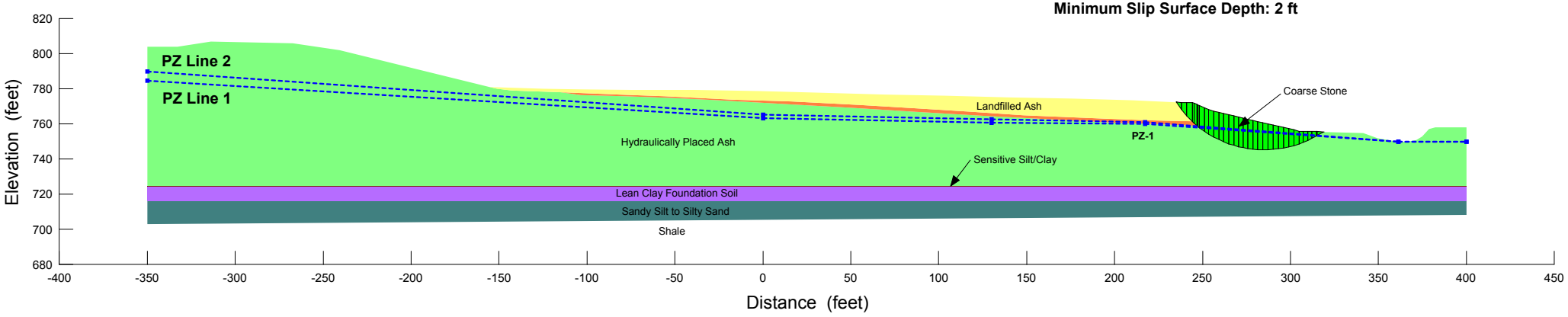
Slope Stability
Test Embankment - Section 1
Trigger Event - Nov 1

Kingston Fossil Plant
Tennessee Valley Authority

November 2009
Method: Modified Spencer
File Name: Test Emb_Sec1_Shallow Failure.gsz

Material Type	Unit Weight		Cohesion	Friction Angle	PZ Line
	Saturated	Moist			
Landfilled Ash	111	109	0	30	2
Coarse Stone	128	115	0	38	2
Hydraulically Placed Ash	107	100	0	25	2
Sensitive Silt/Clay	107	100	0	28	2
Lean Clay Foundation Soil	130		0	32	1
Sandy Silt to Silty Sand	128		0	30	1
Shale	Impenetrable				1

Factor of Safety: 1.8
Center: (285, 805) ft
Radius: 59.7 ft
Minimum Slip Surface Depth: 2 ft



Directory: V:\1756\active\175669015\environmental\analysis\Trigger Event Nov 1\Test Embankment Stability Runs\Test Emb_Sec1_Shallow Failure.gsz

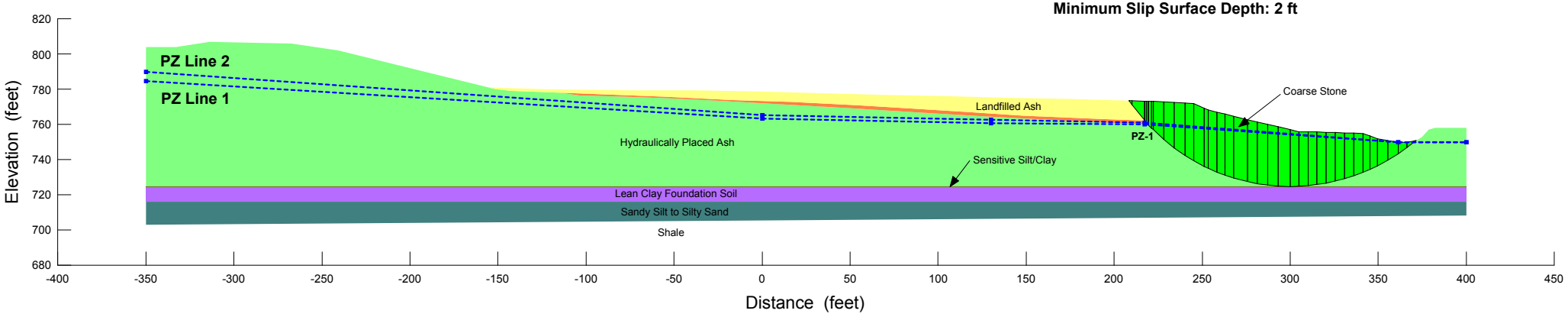
Slope Stability
Test Embankment - Section 1
Trigger Event - Nov 1

Kingston Fossil Plant
Tennessee Valley Authority

November 2009
Method: Modified Spencer
File Name: Test Emb_Sec1_Deep Failure.gsz

Material Type	Unit Weight		Cohesion	Friction Angle	PZ Line
	Saturated	Moist			
Landfilled Ash	111	109	0	30	2
Coarse Stone	128	115	0	38	2
Hydraulically Placed Ash	107	100	0	25	2
Sensitive Silt/Clay	107	100	0	28	2
Lean Clay Foundation Soil	130		0	32	1
Sandy Silt to Silty Sand	128		0	30	1
Shale	Impenetrable				1

Factor of Safety: 2.0
Center: (300, 835) ft
Radius: 110.2 ft
Minimum Slip Surface Depth: 2 ft



Directory: V:\1756\active\175669015\environmental\analysis\Trigger Event Nov 1\Test Embankment Stability Runs\Test Emb_Sec1_Deep Failure.gsz

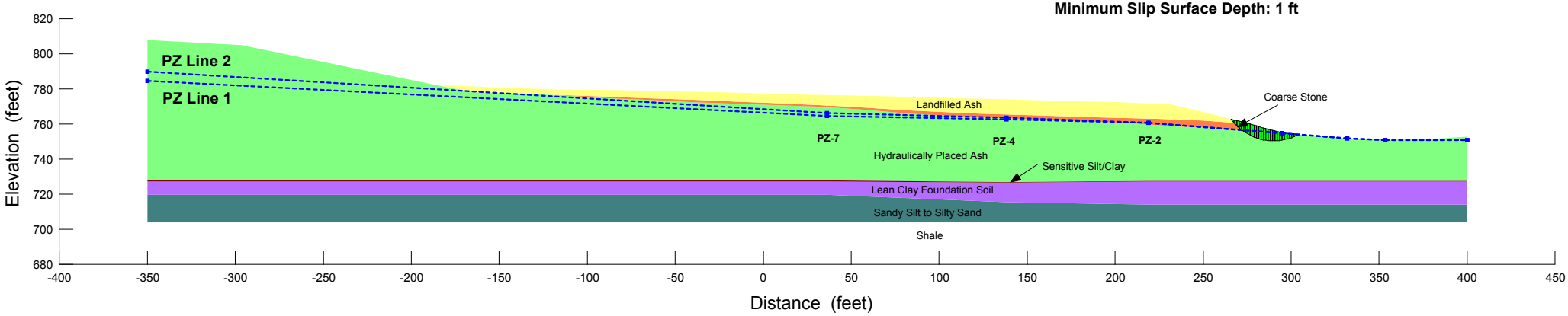
Slope Stability
Test Embankment - Section 2
Trigger Event - Nov 1

Kingston Fossil Plant
Tennessee Valley Authority

November 2009
Method: Modified Spencer
File Name: Test Emb_Sec2_Shallow Failure.gsz

Material Type	Unit Weight		Cohesion	Friction Angle	PZ Line
	Saturated	Moist			
Landfilled Ash	111	109	0	30	2
Coarse Stone	128	115	0	38	2
Hydraulically Placed Ash	107	100	0	25	2
Sensitive Silt/Clay	107	100	0	28	2
Lean Clay Foundation Soil	130		0	32	1
Sandy Silt to Silty Sand	128		0	30	1
Shale	Impenetrable				1

Factor of Safety: 1.5
Center: (290, 780) ft
Radius: 29.5 ft
Minimum Slip Surface Depth: 1 ft



Directory: V:\1756\active\175669015\environmental\analysis\Trigger Event Nov 1\Test Embankment Stability Runs\Test Emb_Sec2_Shallow Failure.gsz

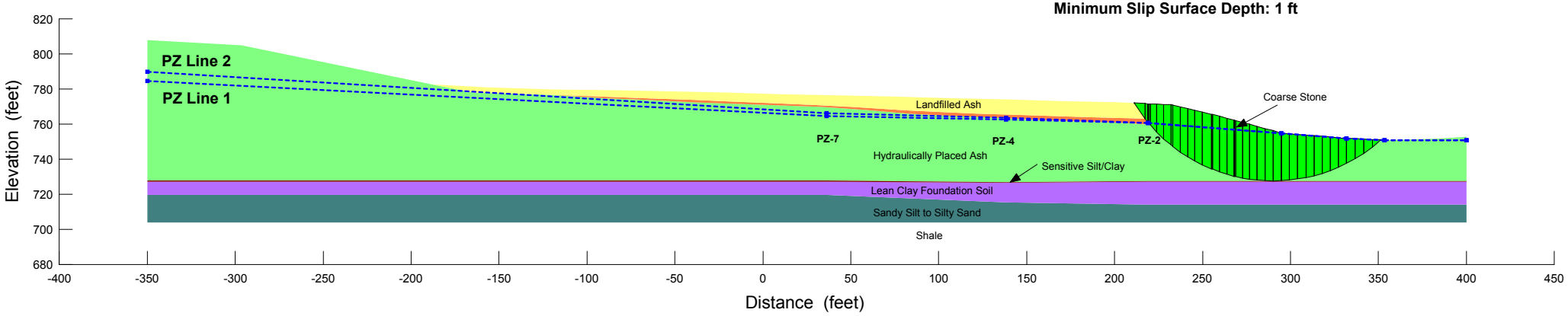
Slope Stability
Test Embankment - Section 2
Trigger Event - Nov 1

Kingston Fossil Plant
Tennessee Valley Authority

November 2009
Method: Modified Spencer
File Name: Test Emb_Sec2_Deep Failure.gsz

Material Type	Unit Weight		Cohesion	Friction Angle	PZ Line
	Saturated	Moist			
Landfilled Ash	111	109	0	30	2
Coarse Stone	128	115	0	38	2
Hydraulically Placed Ash	107	100	0	25	2
Sensitive Silt/Clay	107	100	0	28	2
Lean Clay Foundation Soil	130		0	32	1
Sandy Silt to Silty Sand	128		0	30	1
Shale	Impenetrable				1

Factor of Safety: 1.8
Center: (290, 820) ft
Radius: 92.3 ft
Minimum Slip Surface Depth: 1 ft



Directory: V:\1756\active\175669015\environmental\analysis\Trigger Event Nov 1\Test Embankment Stability Runs\Test Emb_Sec2_Deep Failure.gsz

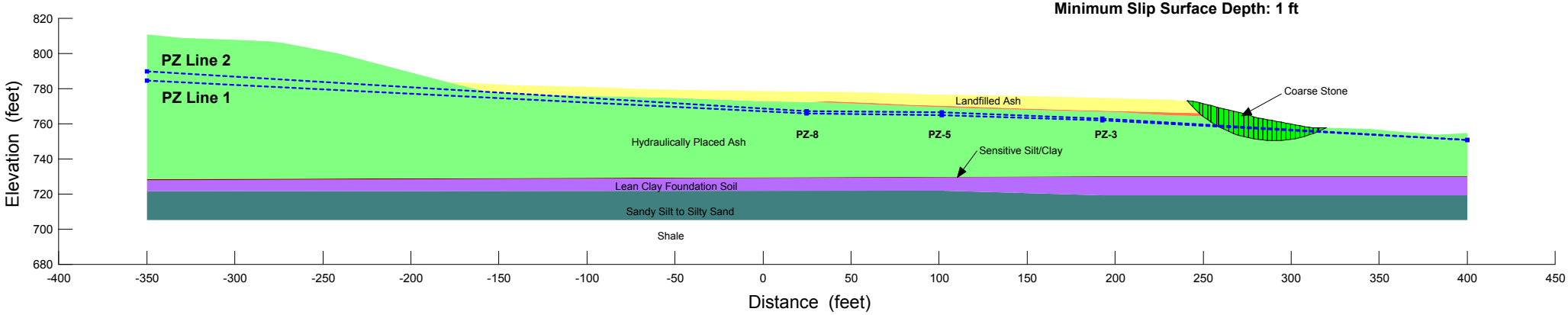
Slope Stability
Test Embankment - Section 3
Trigger Event - Nov 1

Kingston Fossil Plant
Tennessee Valley Authority

November 2009
Method: Modified Spencer
File Name: Test Emb_Sec3_Shallow Failure.gsz

Material Type	Unit Weight		Cohesion	Friction Angle	PZ Line
	Saturated	Moist			
Landfilled Ash	111	109	0	30	2
Coarse Stone	128	115	0	38	2
Hydraulically Placed Ash	107	100	0	25	2
Sensitive Silt/Clay	107	100	0	28	2
Lean Clay Foundation Soil	130		0	32	1
Sandy Silt to Silty Sand	128		0	30	1
Shale	Impenetrable				1

Factor of Safety: 1.9
Center: (290, 815) ft
Radius: 64.5 ft
Minimum Slip Surface Depth: 1 ft



Directory: V:\1756\active\175669015\environmental\analysis\Trigger Event Nov 1\Test Embankment Stability Runs\Test Emb_Sec3_Shallow Failure.gsz

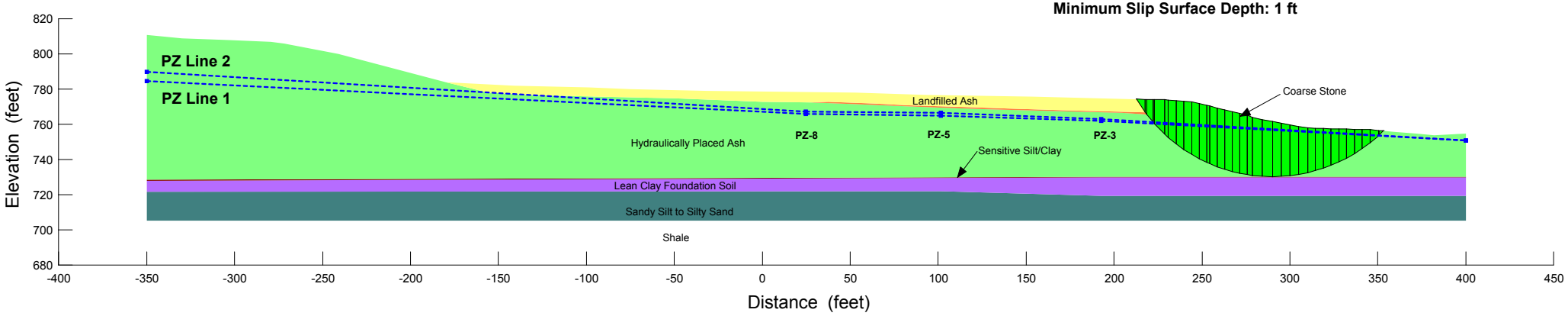
Slope Stability
Test Embankment - Section 3
Trigger Event - Nov 1

Kingston Fossil Plant
Tennessee Valley Authority

November 2009
Method: Modified Spencer
File Name: Test Emb_Sec3_Deep Failure.gsz

Material Type	Unit Weight		Cohesion	Friction Angle	PZ Line
	Saturated	Moist			
Landfilled Ash	111	109	0	30	2
Coarse Stone	128	115	0	38	2
Hydraulically Placed Ash	107	100	0	25	2
Sensitive Silt/Clay	107	100	0	28	2
Lean Clay Foundation Soil	130		0	32	1
Sandy Silt to Silty Sand	128		0	30	1
Shale	Impenetrable				1

Factor of Safety: 2.3
Center: (290, 820) ft
Radius: 89.7 ft
Minimum Slip Surface Depth: 1 ft



Directory: V:\1756\active\175669015\environmental\analysis\Trigger Event Nov 1\Test Embankment Stability Runs\Test Emb_Sec3_Deep Failure.gsz

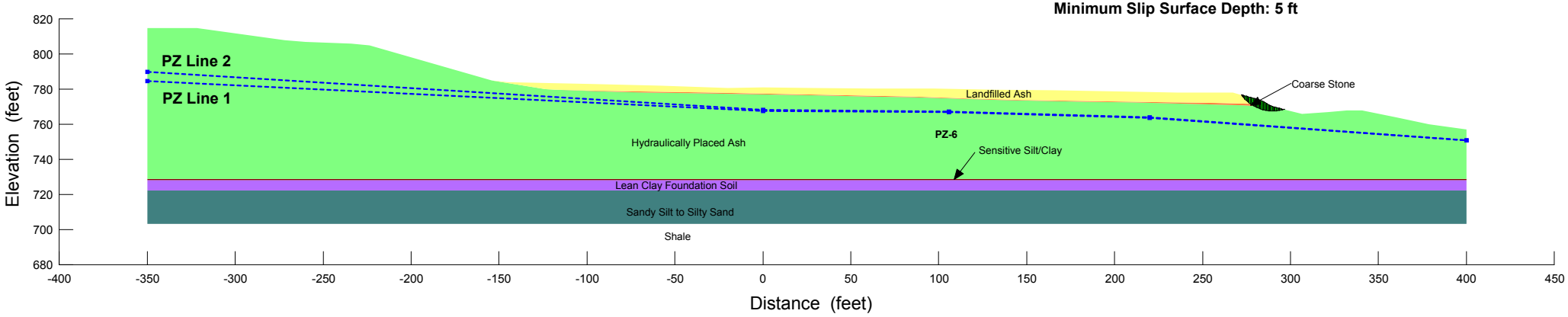
Slope Stability
Test Embankment - Section 4
Trigger Event - Nov 1

Kingston Fossil Plant
Tennessee Valley Authority

November 2009
Method: Modified Spencer
File Name: Test Emb_Sec4_Shallow Failure.gsz

Material Type	Unit Weight		Cohesion	Friction Angle	PZ Line
	Saturated	Moist			
Landfilled Ash	111	109	0	30	2
Coarse Stone	128	115	0	38	2
Hydraulically Placed Ash	107	100	0	25	2
Sensitive Silt/Clay	107	100	0	28	2
Lean Clay Foundation Soil	130		0	32	1
Sandy Silt to Silty Sand	128		0	30	1
Shale	Impenetrable				1

Factor of Safety: 1.6
Center: (290, 789.75) ft
Radius: 22.105 ft
Minimum Slip Surface Depth: 5 ft



Directory: V:\1756\active\175669015\environmental\analysis\Trigger Event Nov 1\Test Embankment Stability Runs\Test Emb_Sec4_Shallow Failure.gsz

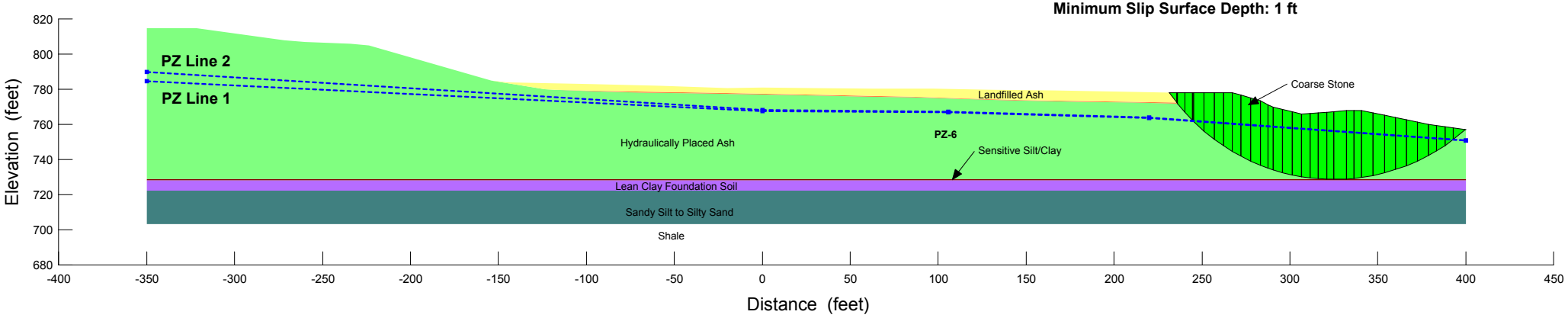
Slope Stability
Test Embankment - Section 4
Trigger Event - Nov 1

Kingston Fossil Plant
Tennessee Valley Authority

November 2009
Method: Modified Spencer
File Name: Test Emb_Sec4_Deep Failure.gsz

Material Type	Unit Weight		Cohesion	Friction Angle	PZ Line
	Saturated	Moist			
Landfilled Ash	111	109	0	30	2
Coarse Stone	128	115	0	38	2
Hydraulically Placed Ash	107	100	0	25	2
Sensitive Silt/Clay	107	100	0	28	2
Lean Clay Foundation Soil	130		0	32	1
Sandy Silt to Silty Sand	128		0	30	1
Shale	Impenetrable				1

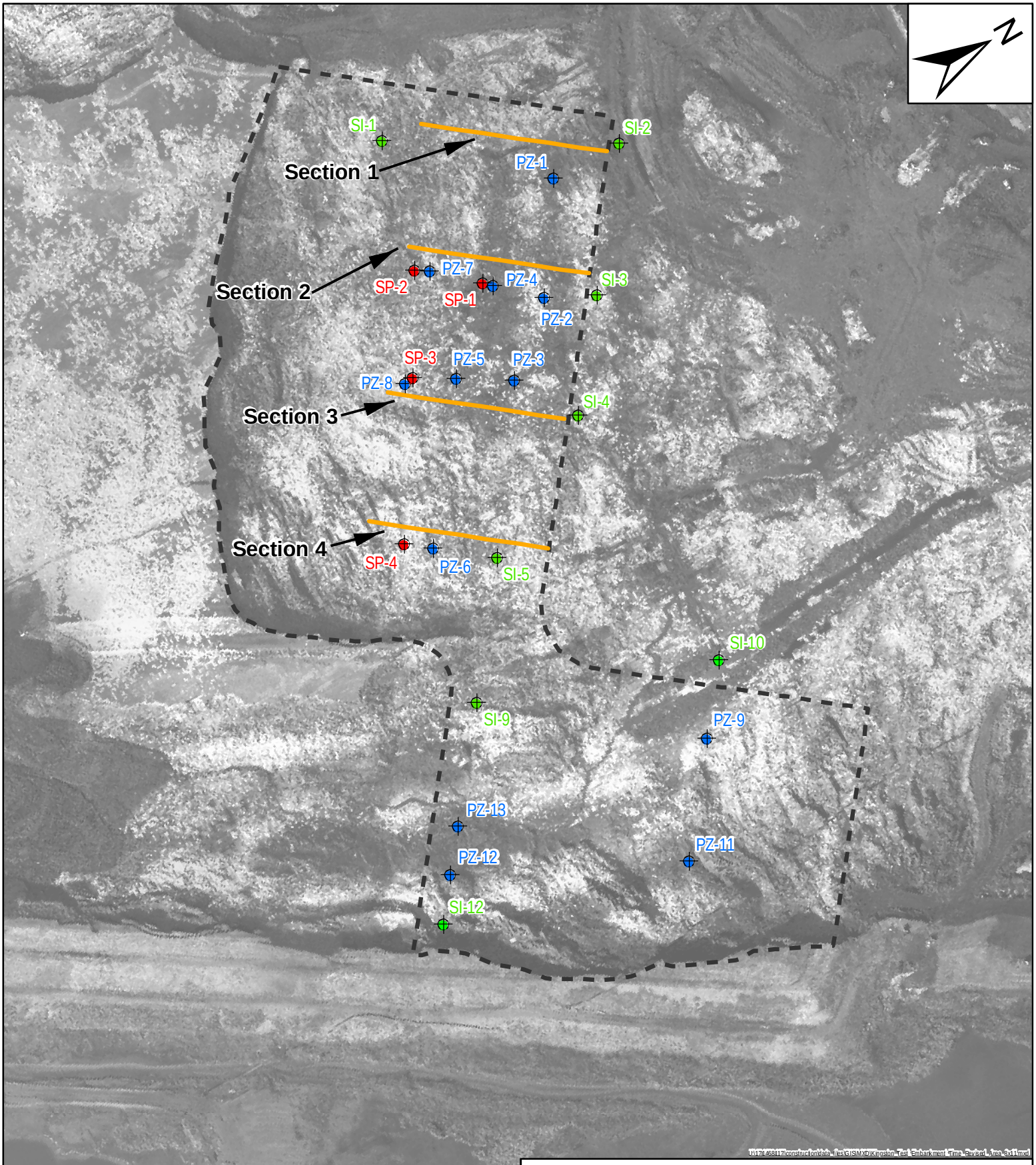
Factor of Safety: 3.0
Center: (325, 842) ft
Radius: 113.2 ft
Minimum Slip Surface Depth: 1 ft



Directory: V:\1756\active\175669015\environmental\analysis\Trigger Event Nov 1\Test Embankment Stability Runs\Test Emb_Sec4_Deep Failure.gsz

Appendix D

Current Test Embankment Data Report



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)
- Settlement Plate (SP)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

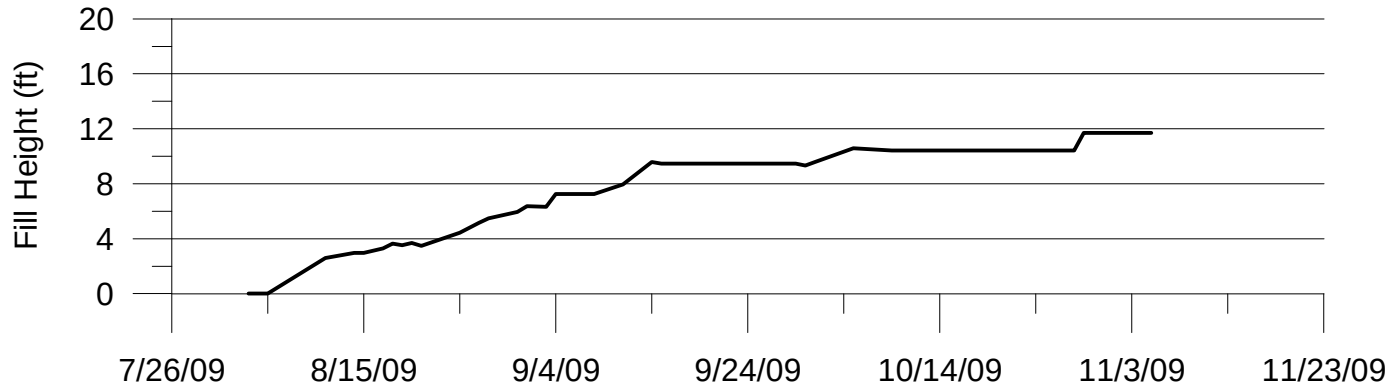
DRAWN BY:	MEP	PROJECT NO.	175669015	DATE:	November 8, 2009
CHECKED BY:	JWA	SCALE:	1" = 200'		

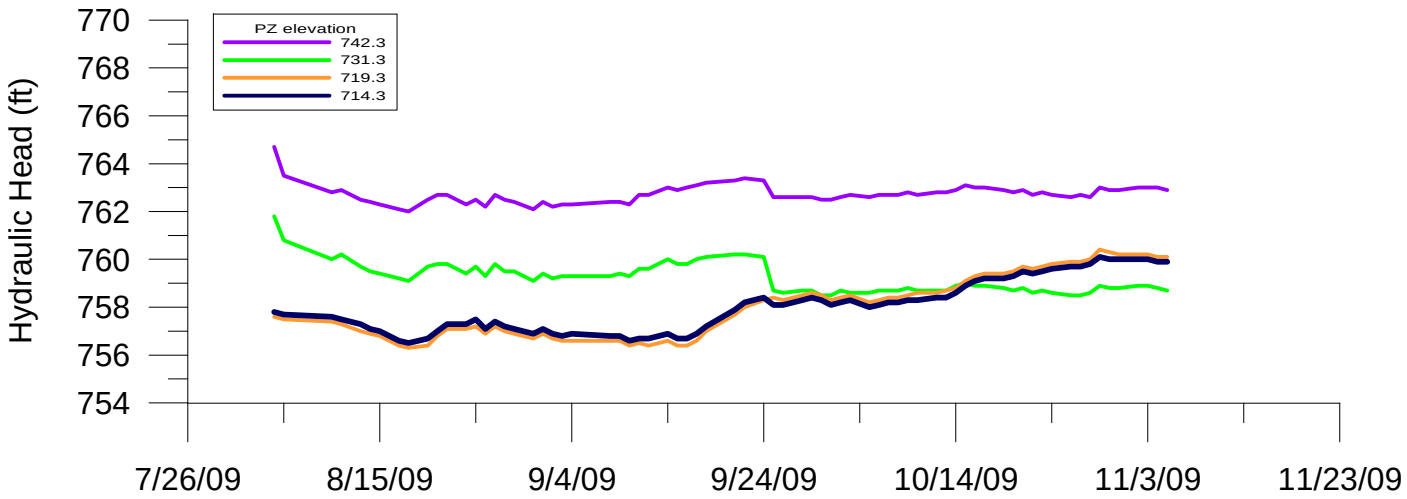
Stantec

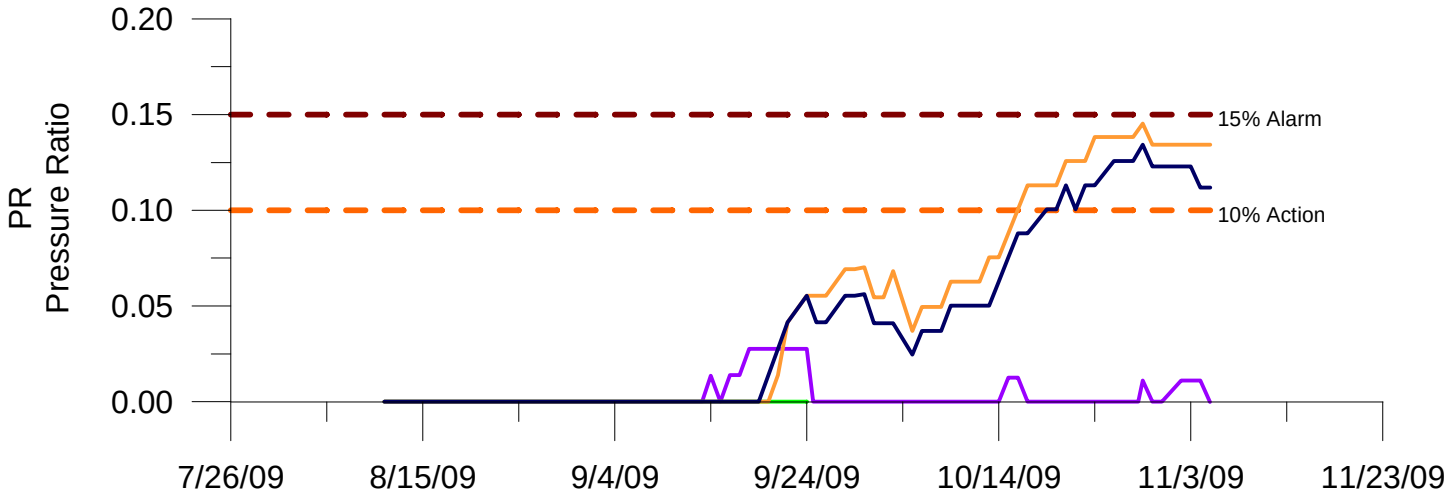
Kingston Test Embankment
175669015

Survey Section 1

PZ-1







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

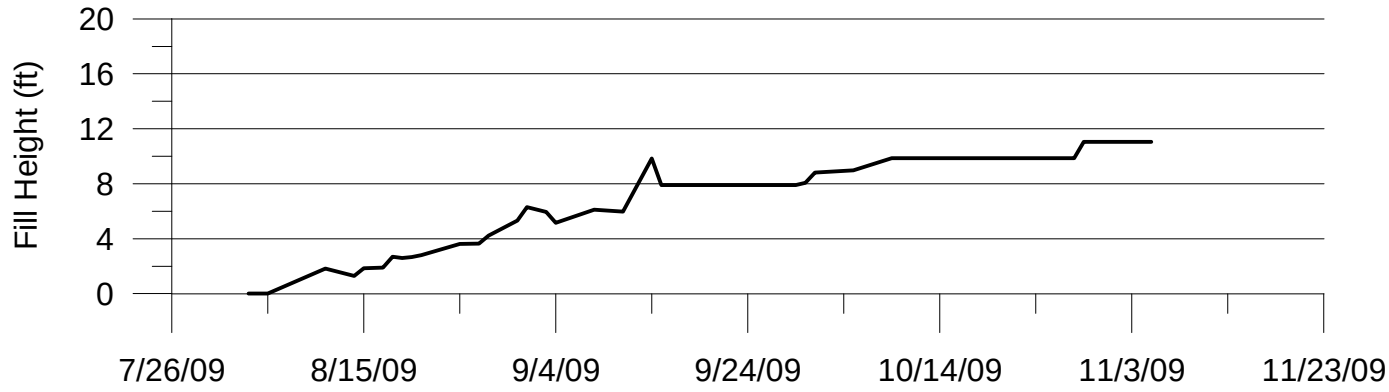
* △Z= Fill Height x 110 (pcf)

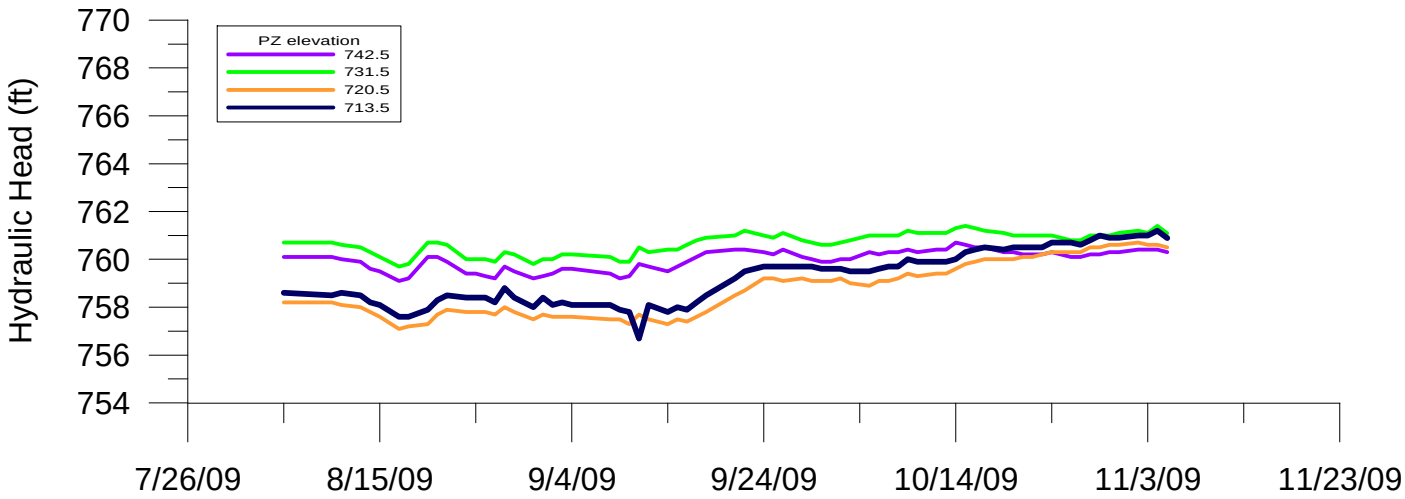
Stantec

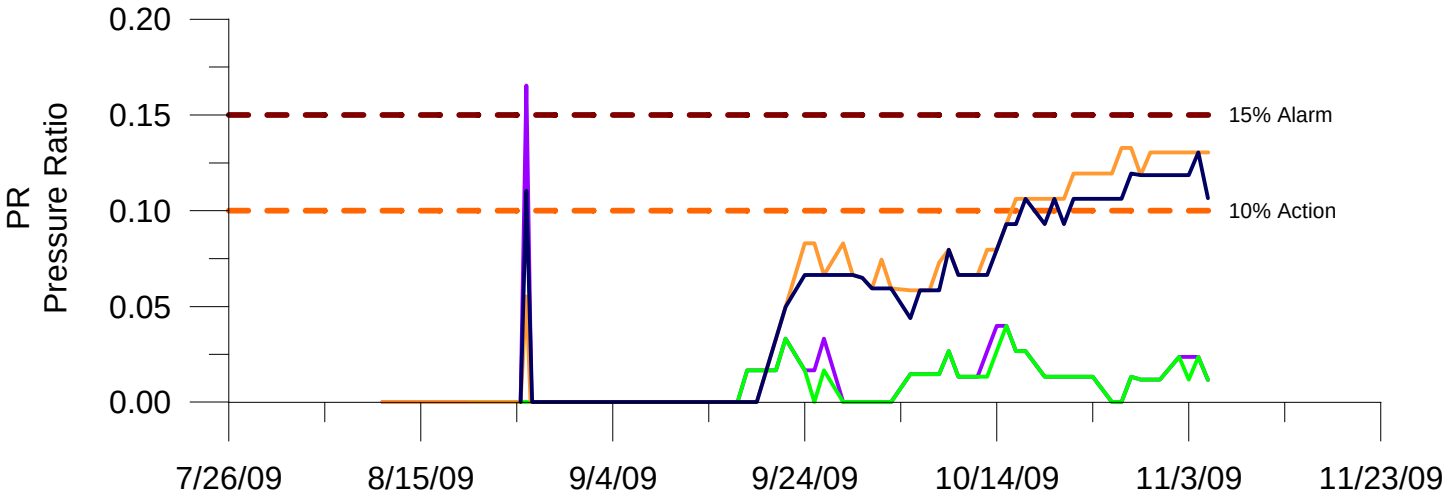
Kingston Test Embankment
175669015

Survey Section 2

PZ-2







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

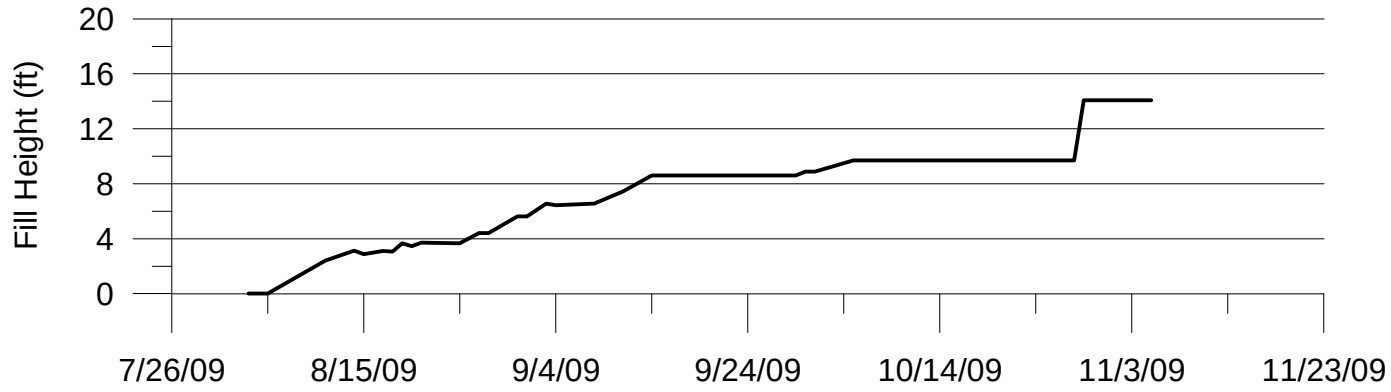
* △Z= Fill Height x 110 (pcf)

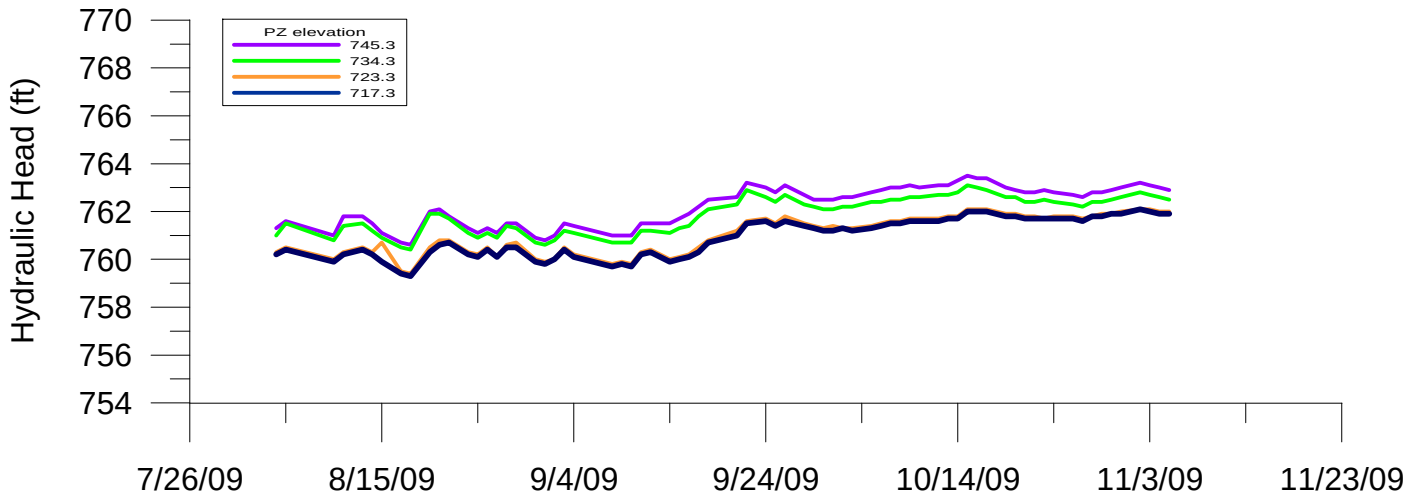
Stantec

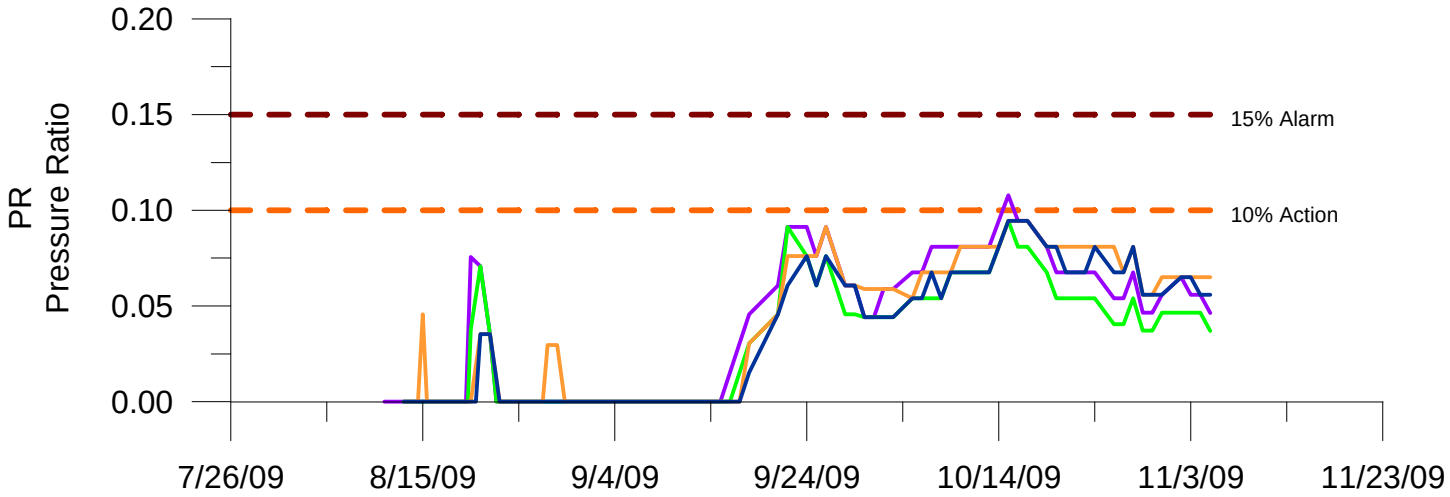
Survey Section 3

Kingston Test Embankment
175669015

PZ-3







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

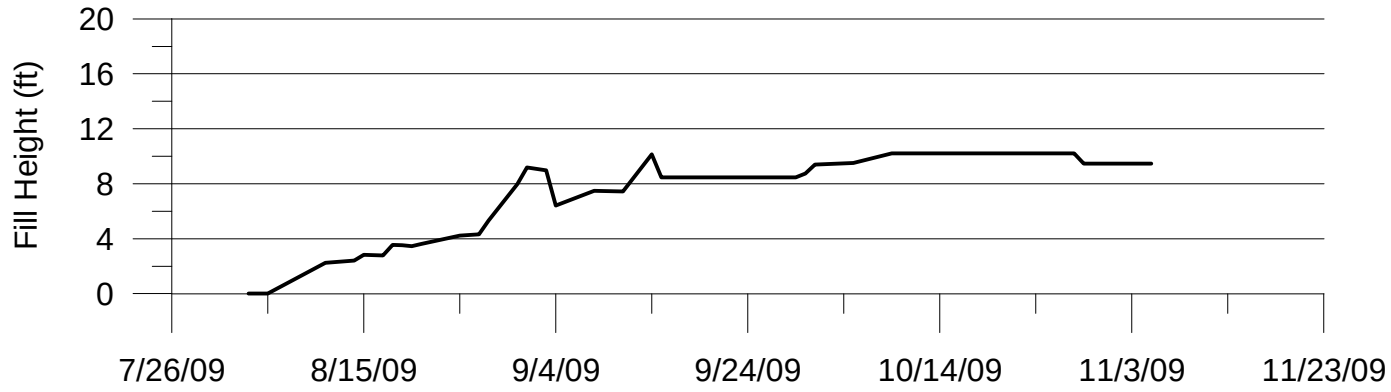
* △Z= Fill Height x 110 (pcf)

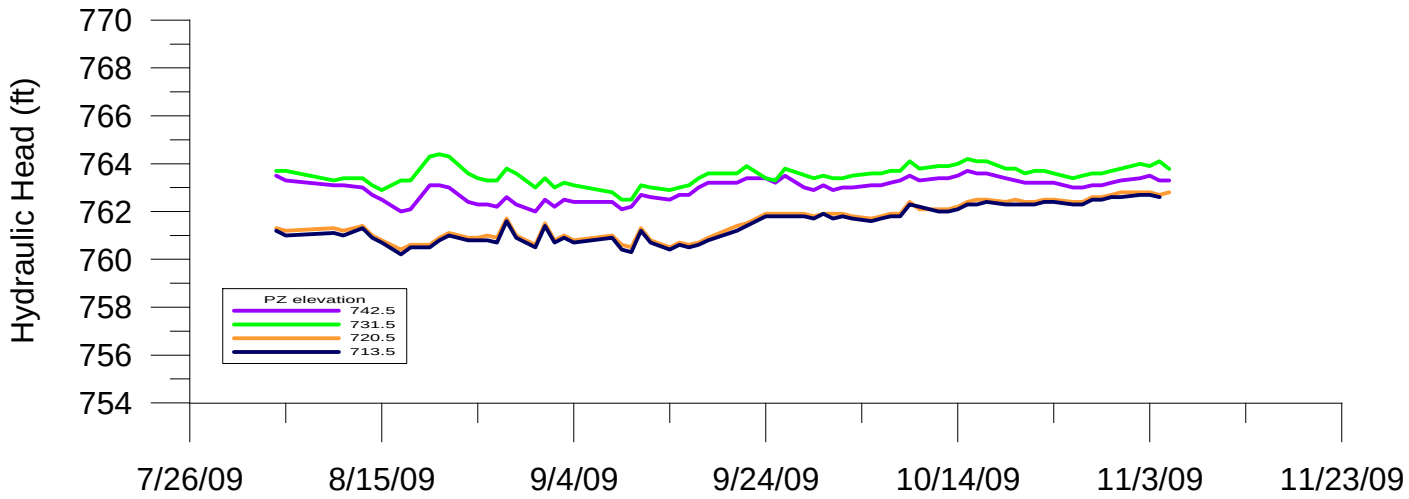
Stantec

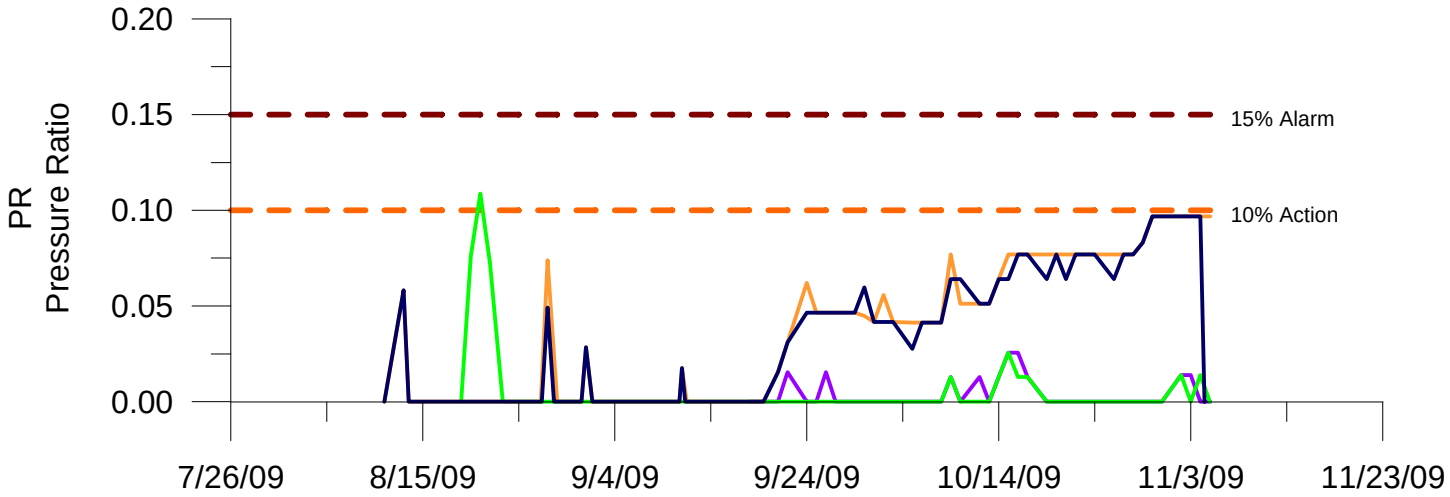
Survey Section 2

Kingston Test Embankment
175669015

PZ-4







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

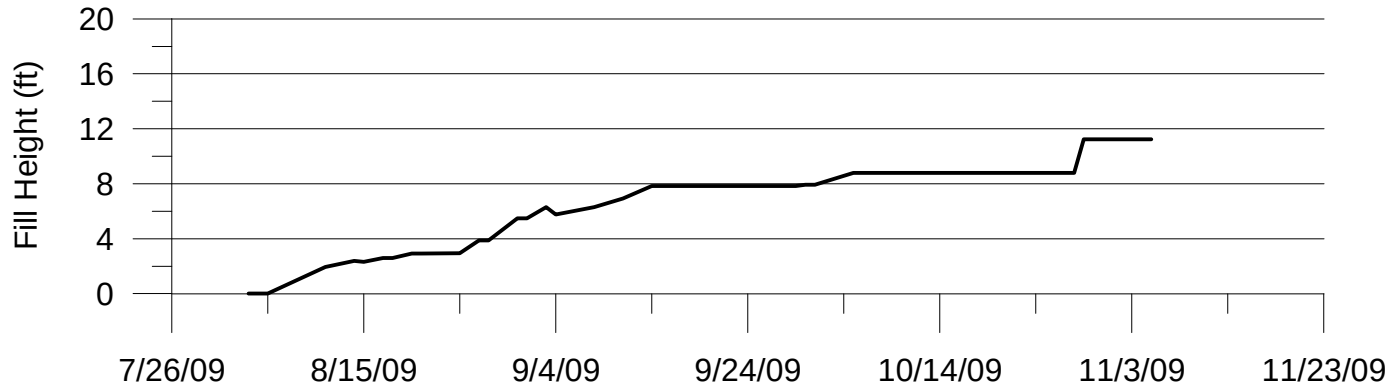
* △Z= Fill Height x 110 (pcf)

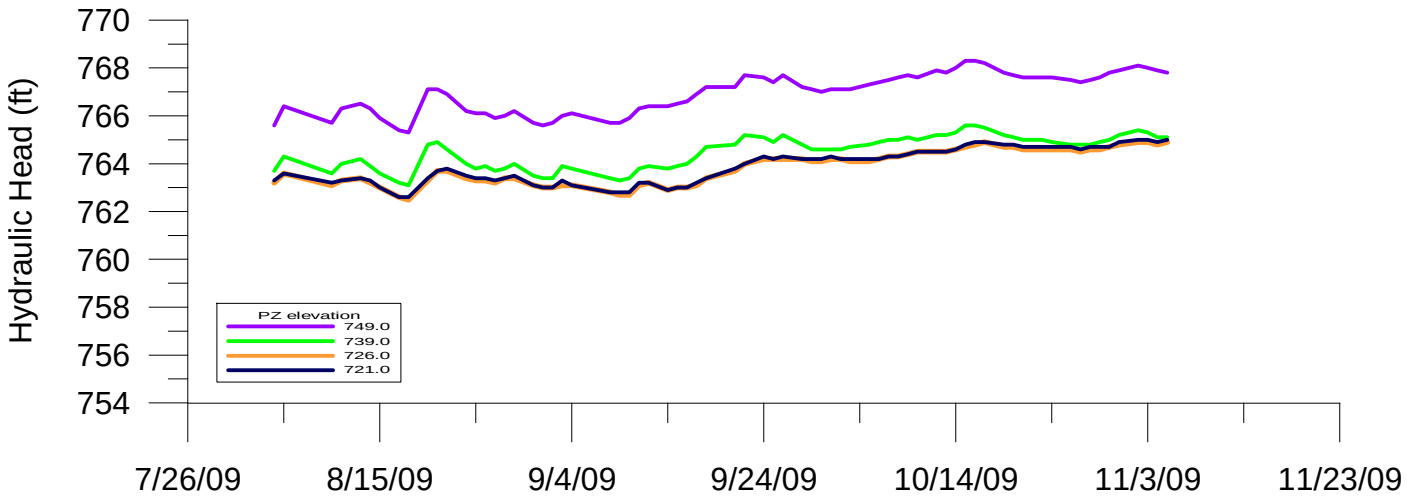
Stantec

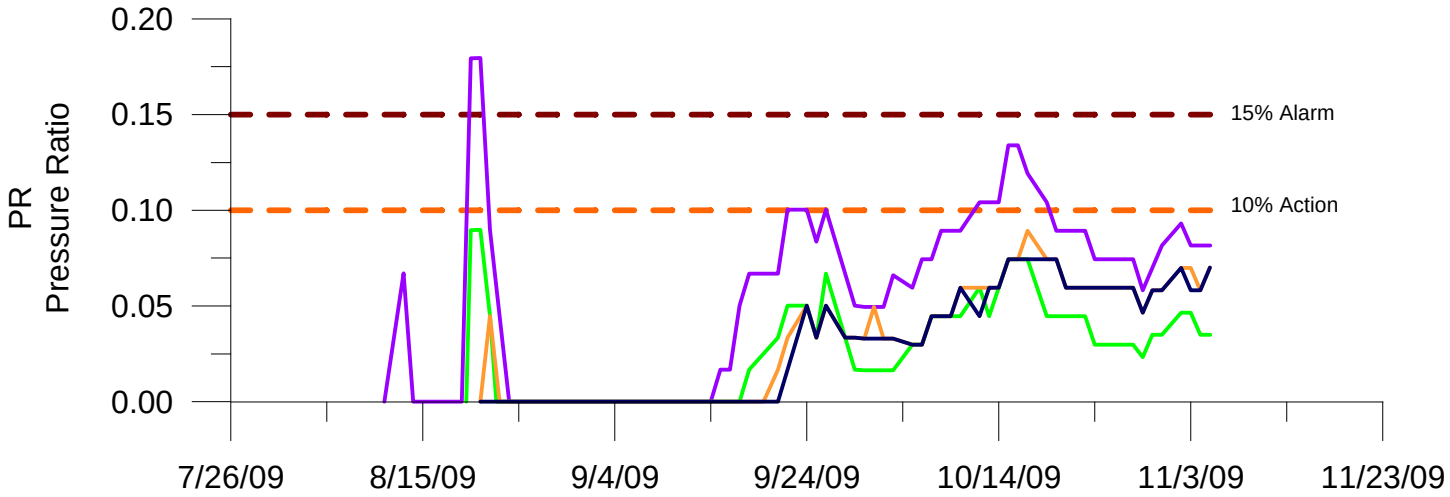
Kingston Test Embankment
175669015

Survey Section 3

PZ-5







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

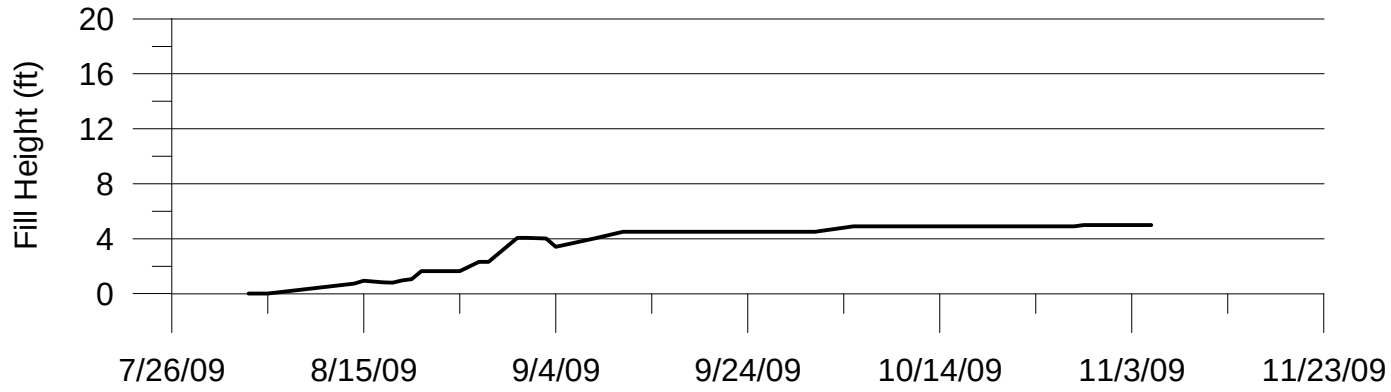
* △Z= Fill Height x 110 (pcf)

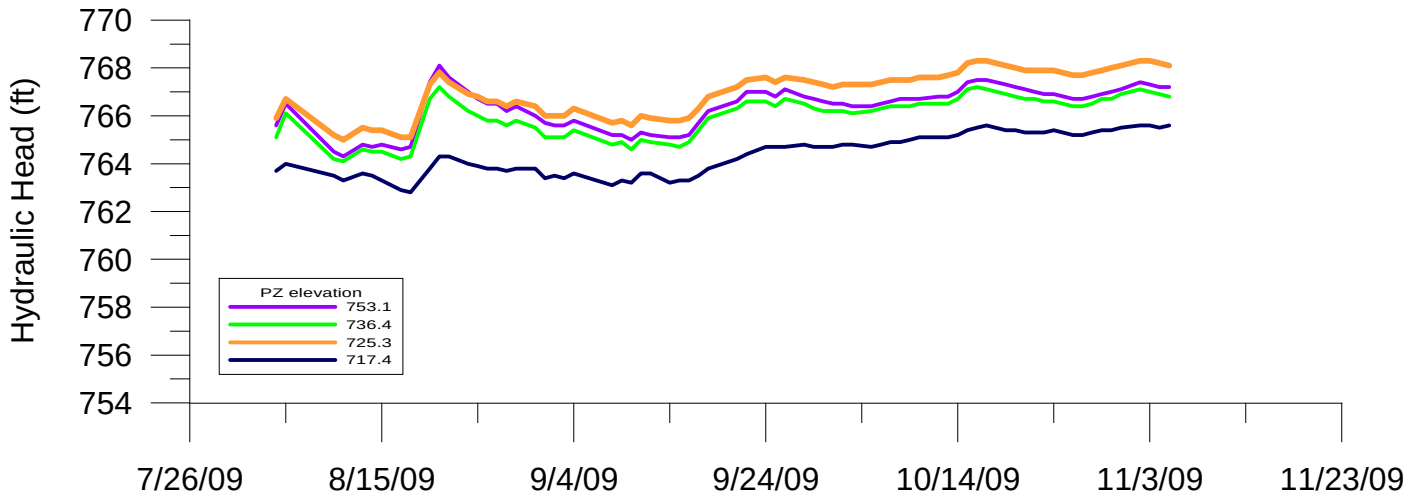
Stantec

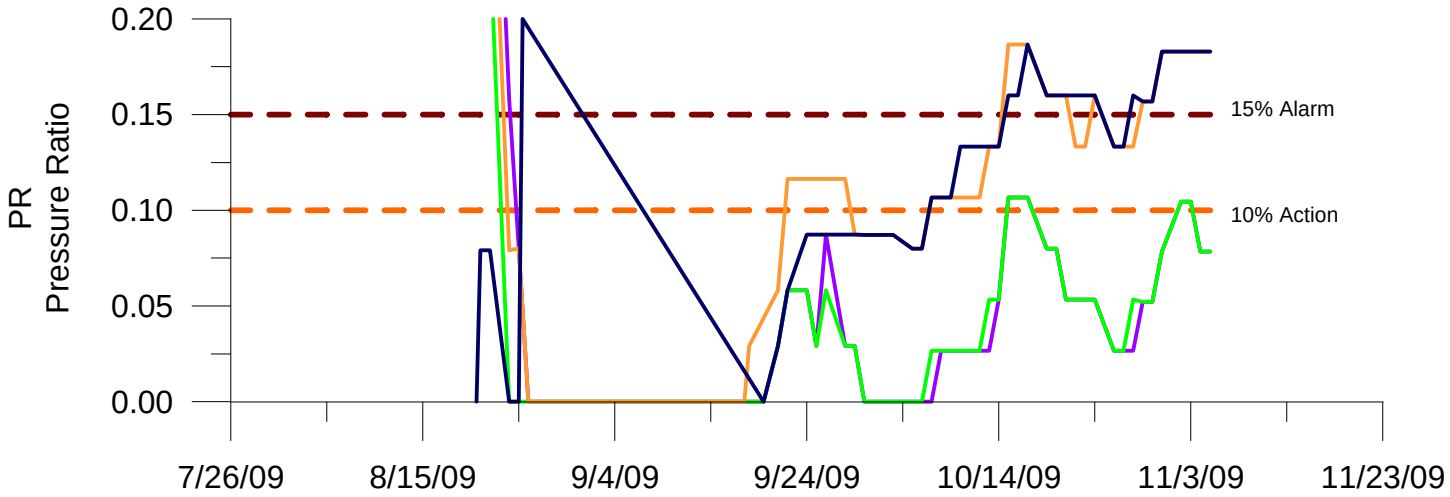
Kingston Test Embankment
175669015

Survey Section 4

PZ-6







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

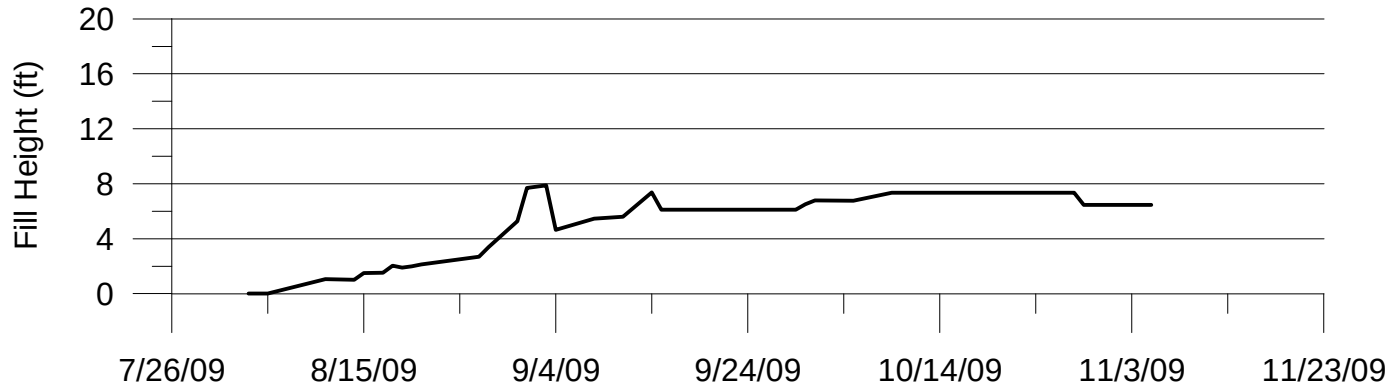
* △Z= Fill Height x 110 (pcf)

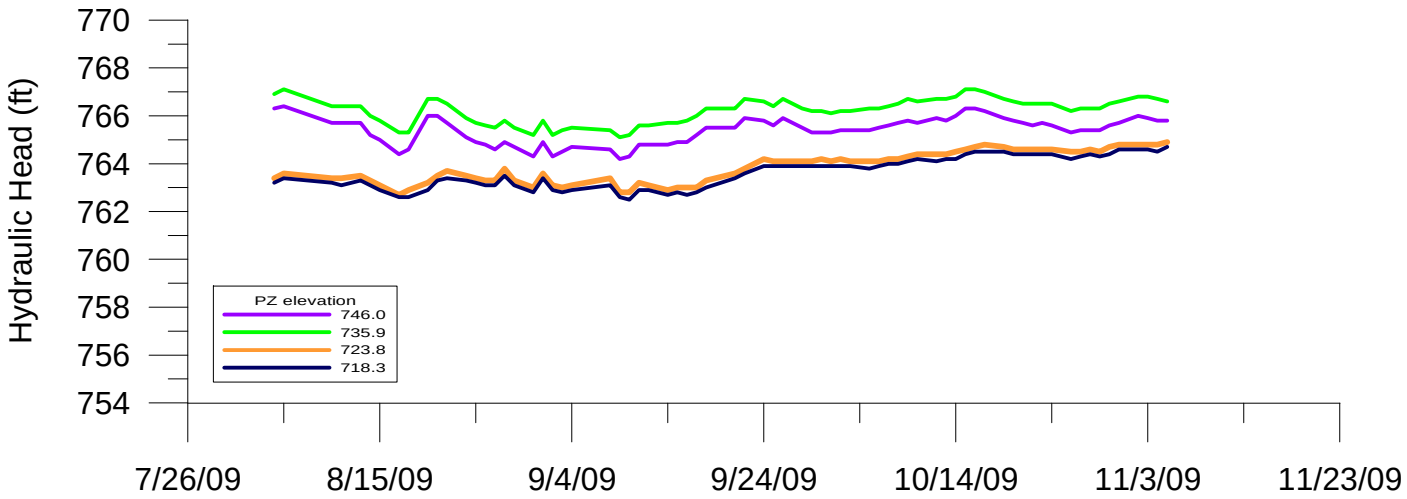
Stantec

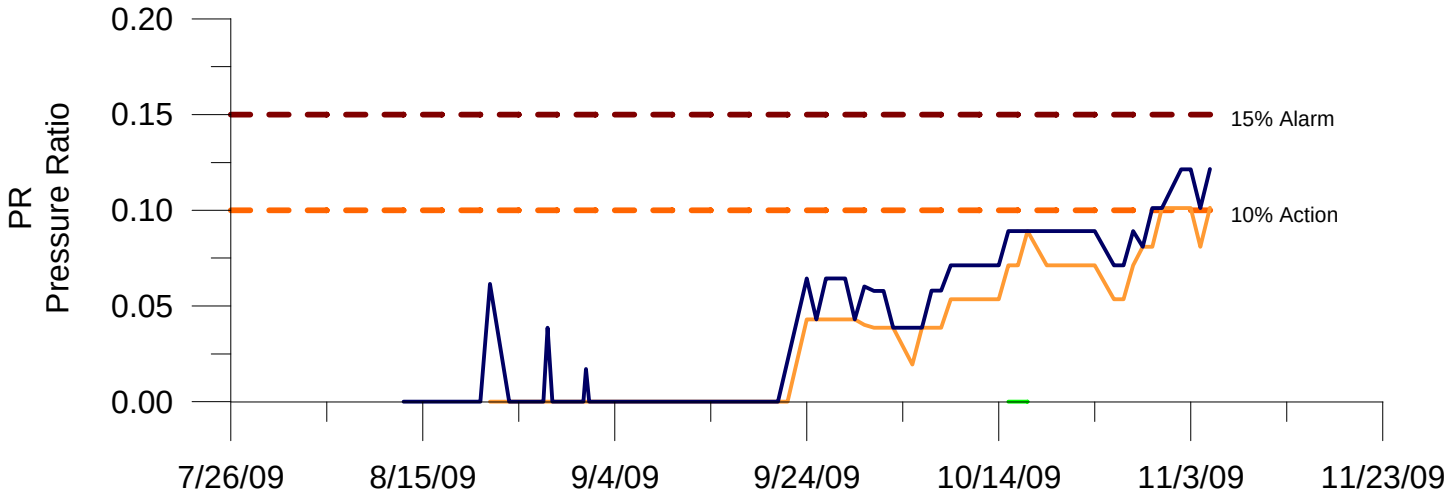
Kingston Test Embankment
175669015

Survey Section 2

PZ-7







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

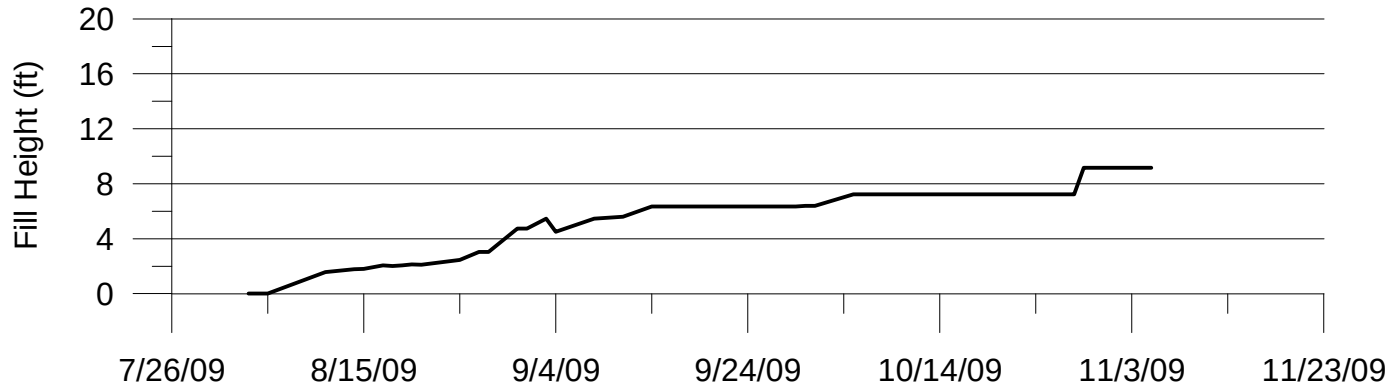
* △Z= Fill Height x 110 (pcf)

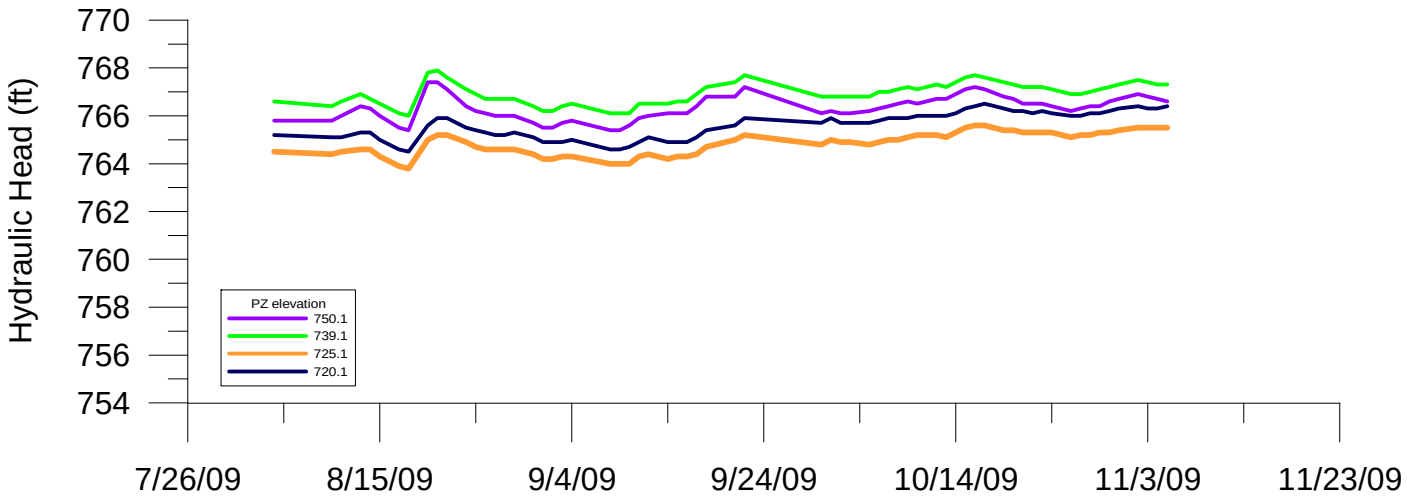
Stantec

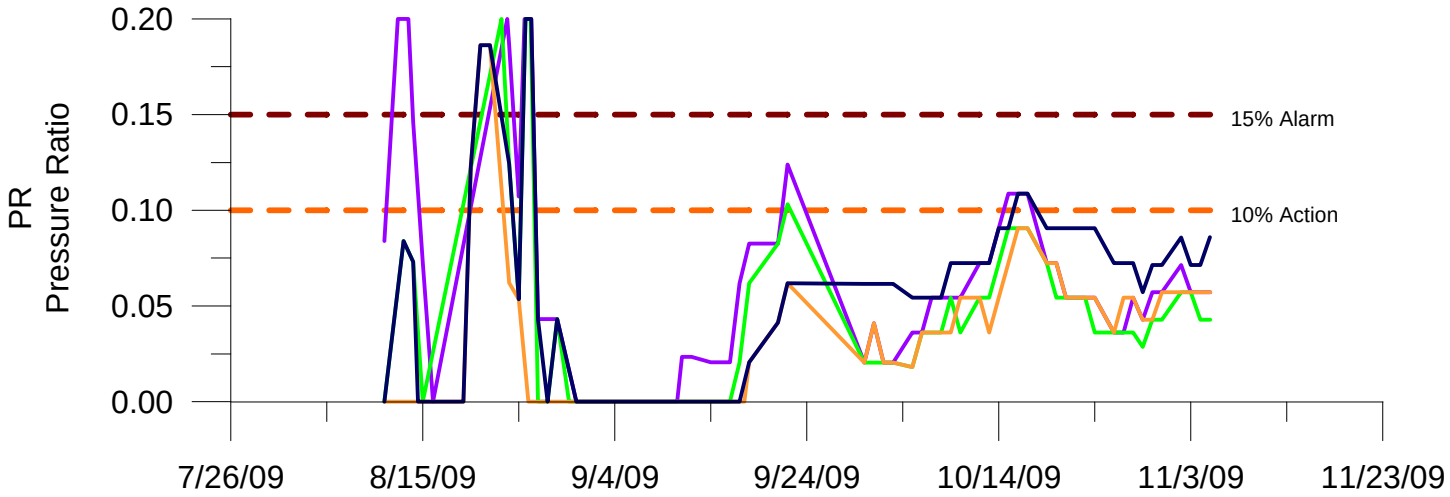
Kingston Test Embankment
175669015

Survey Section 3

PZ-8







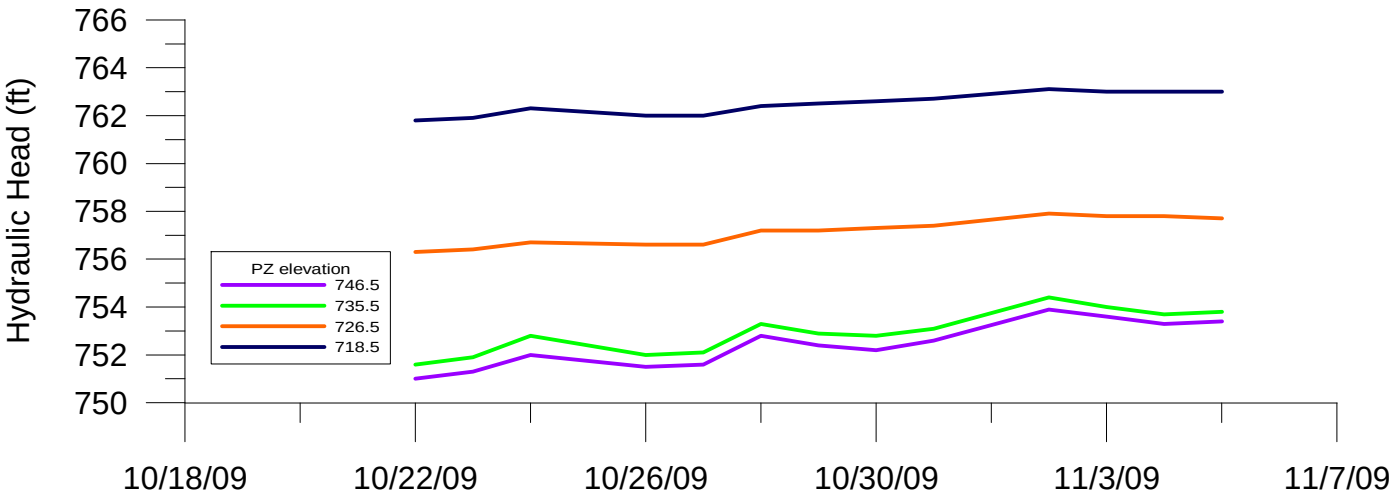
* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

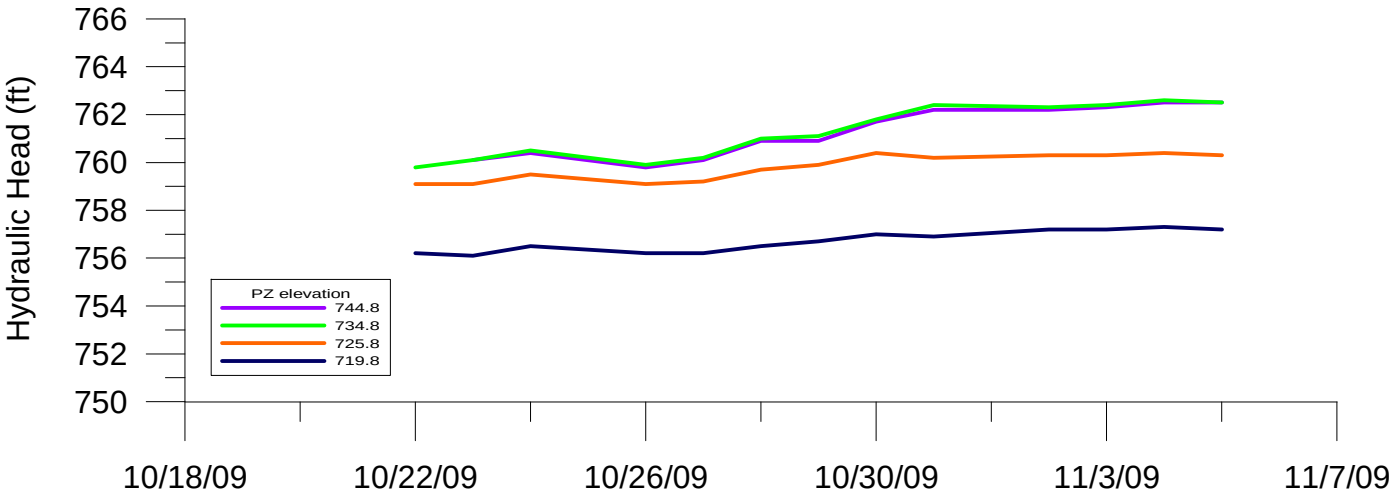
* △Z= Fill Height x 110 (pcf)

Kingston Test Embankment
175669015

PZ-9

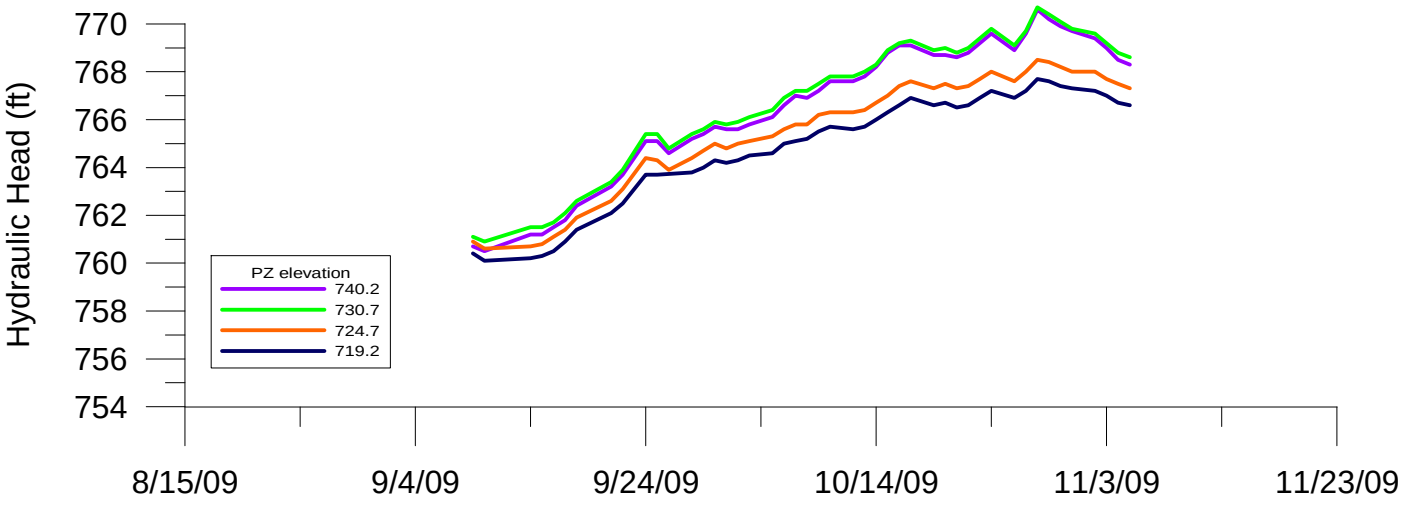


PZ-11

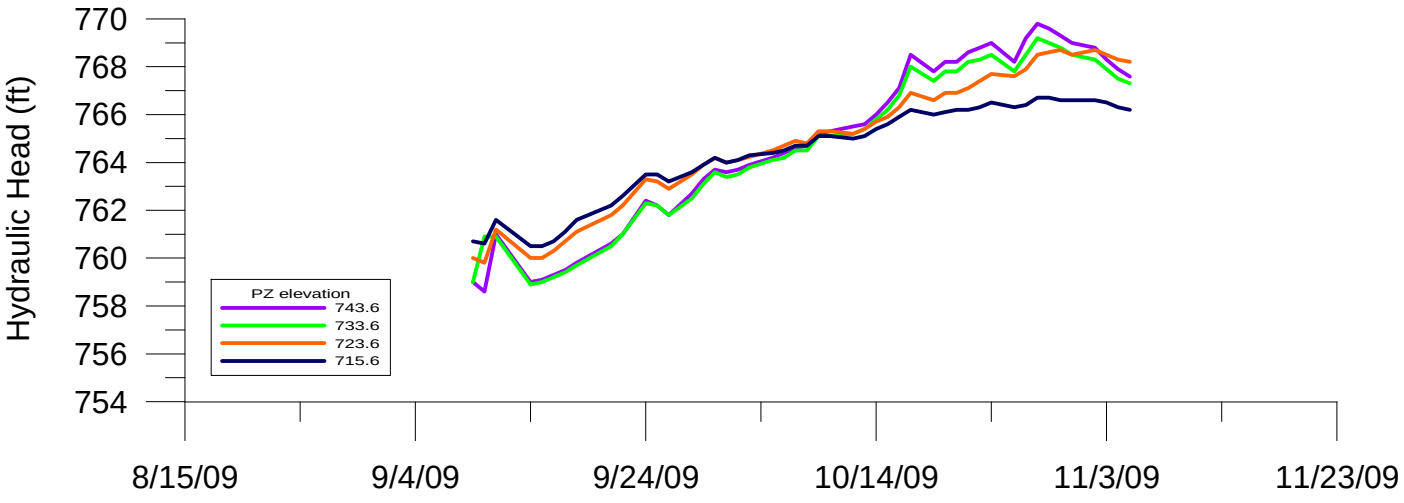


Kingston Test Embankment
175669015

PZ-12



PZ-13

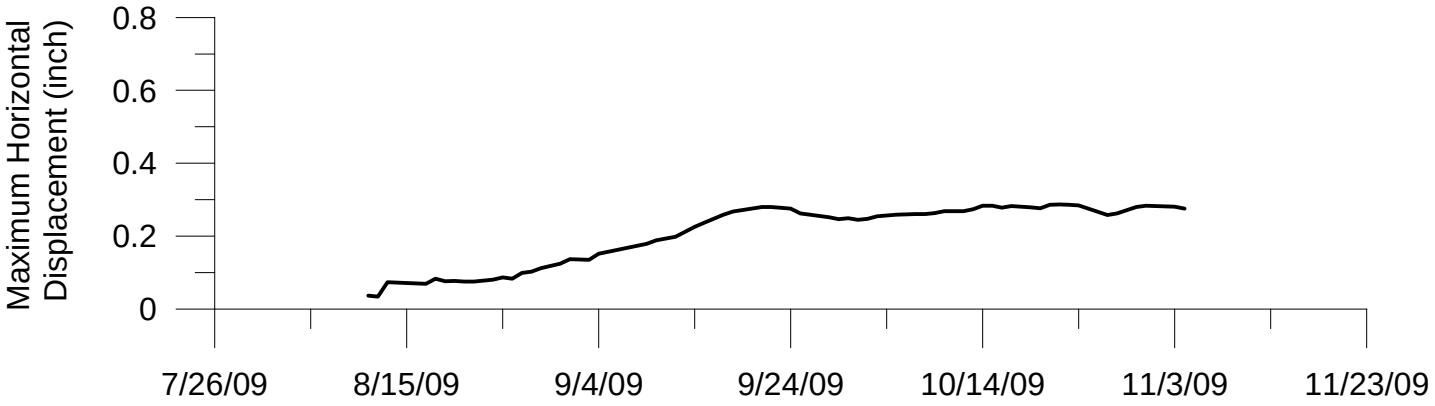


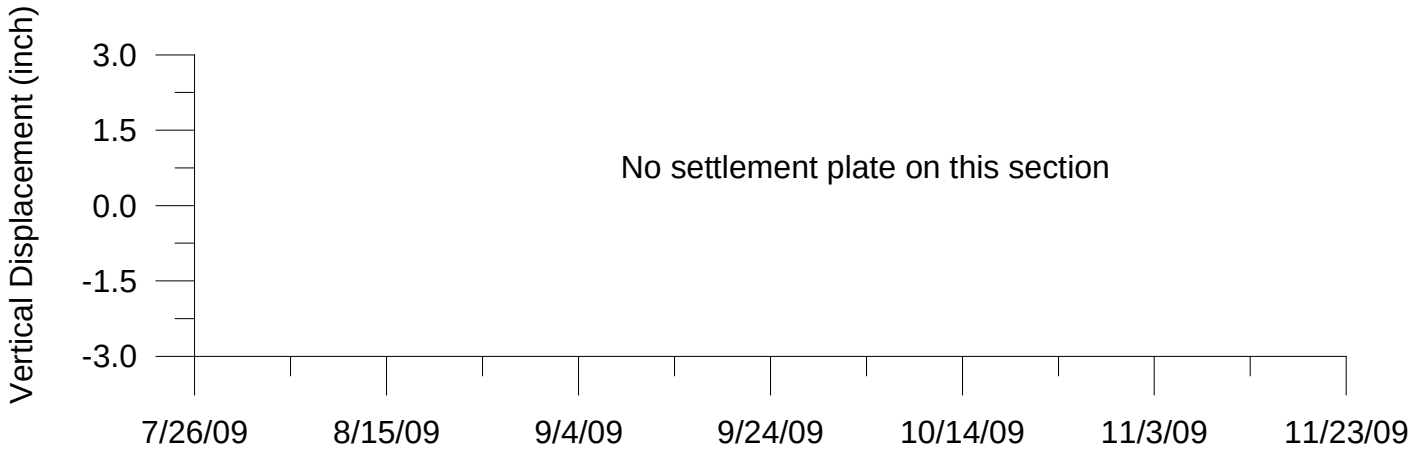
Stantec

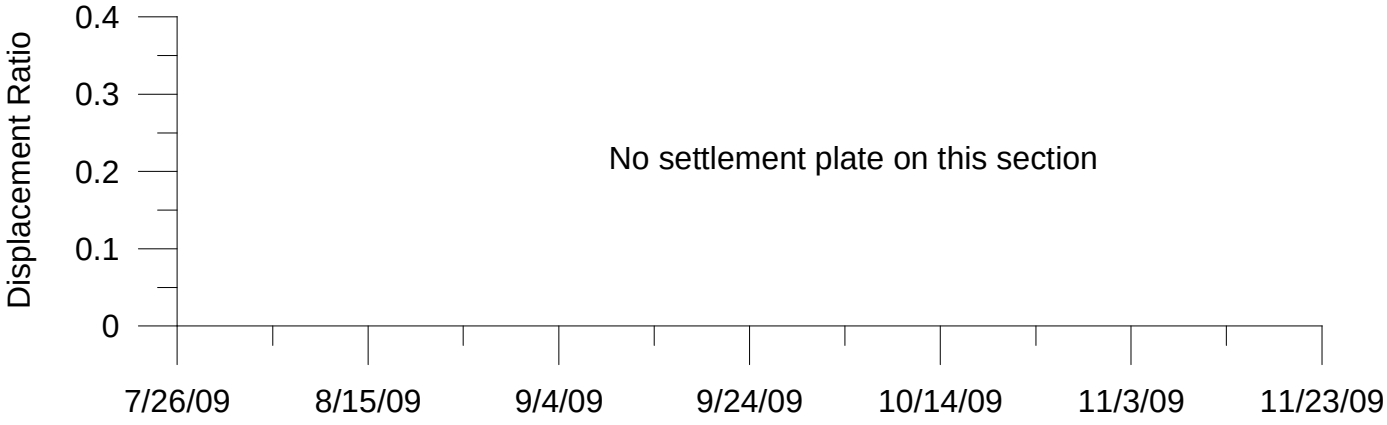
Kingston Test Embankment
175669015

Survey Section 1

SI-2







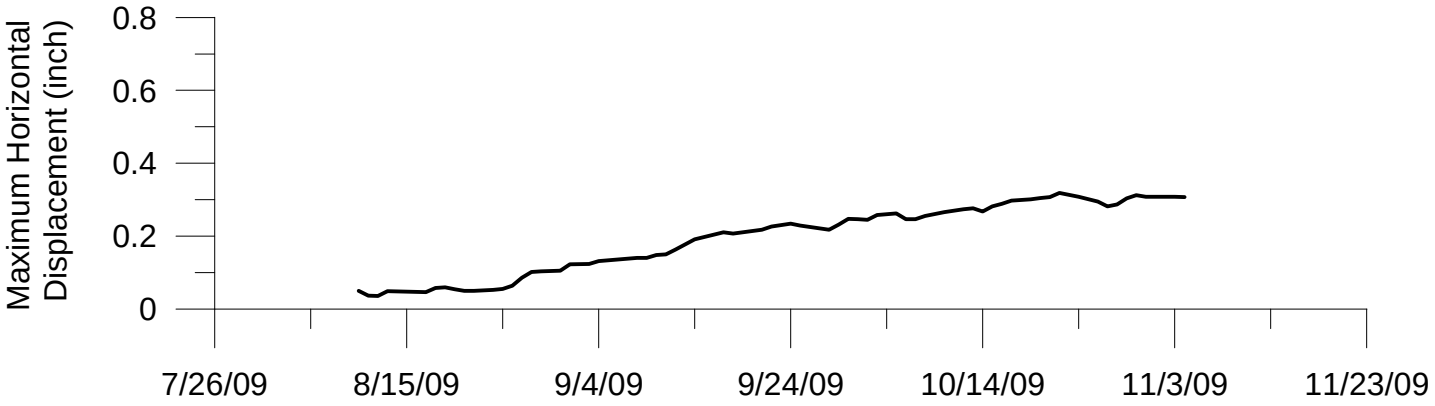
* DR (Displacement Ratio) = Max Horizontal Displacement / Vertical Displacement

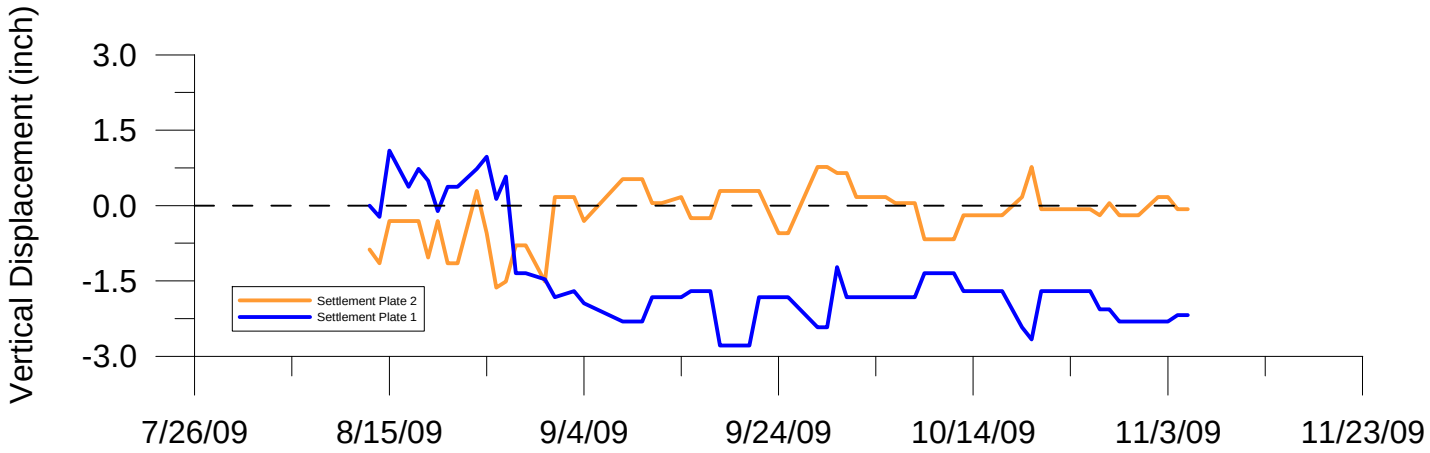
Stantec

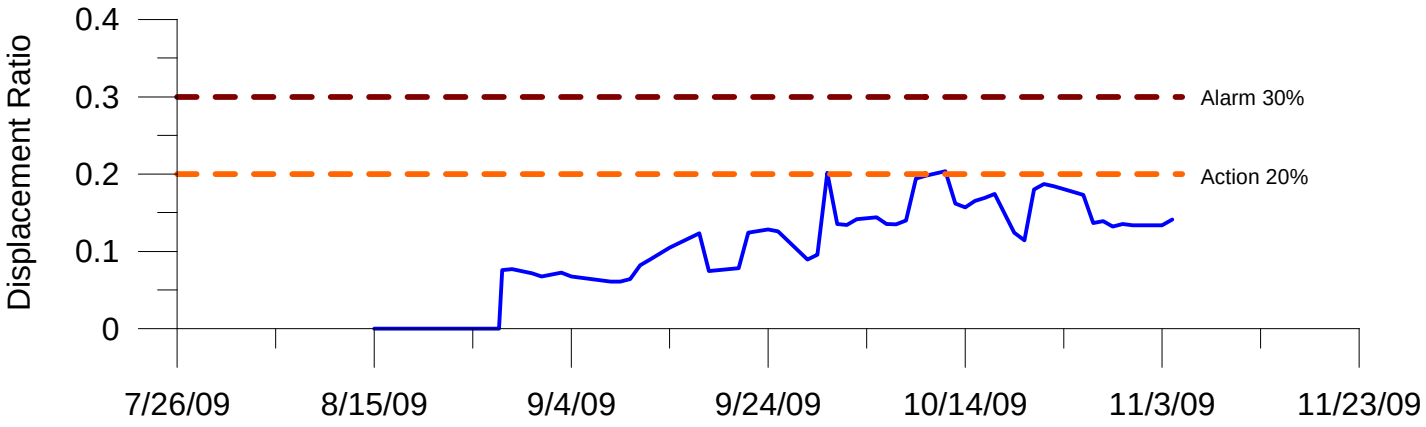
Kingston Test Embankment
175669015

Survey Section 2

SI-3







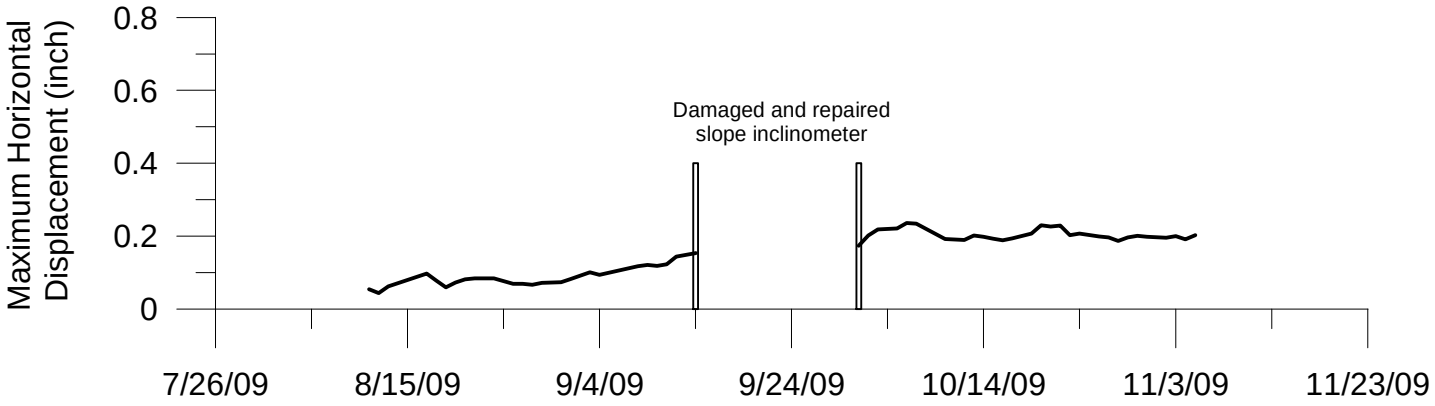
* DR (Displacement Ratio) = Max Horizontal Displacement / Vertical Displacement

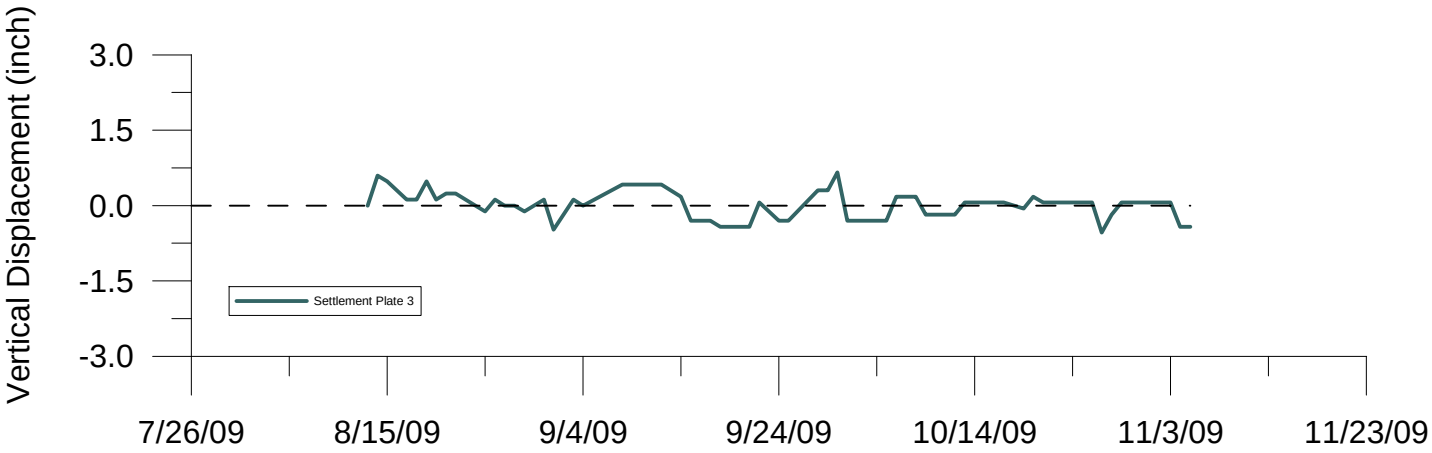
Stantec

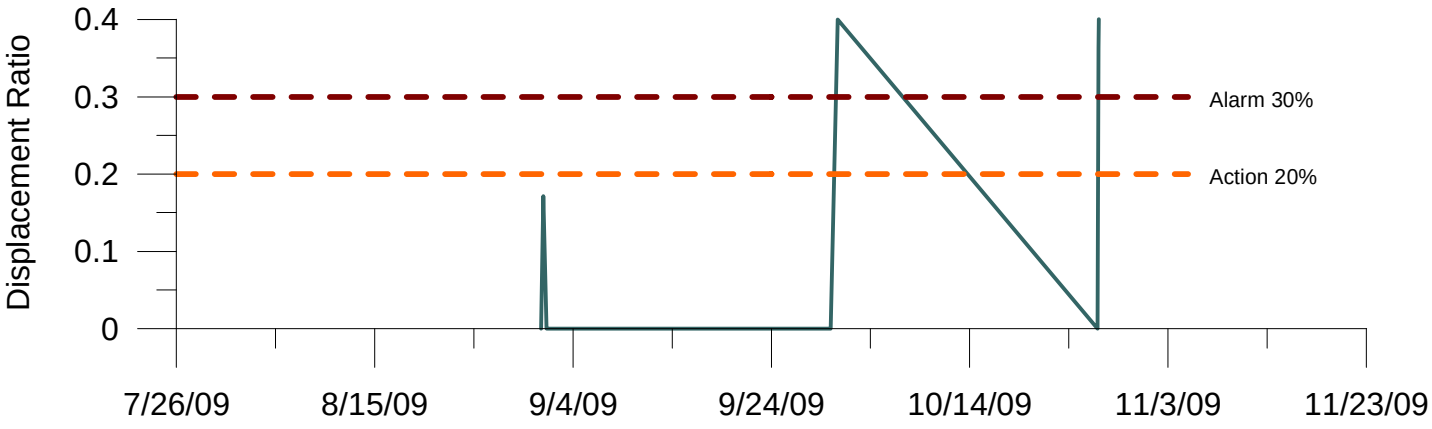
Kingston Test Embankment
175669015

Survey Section 3

SI-4







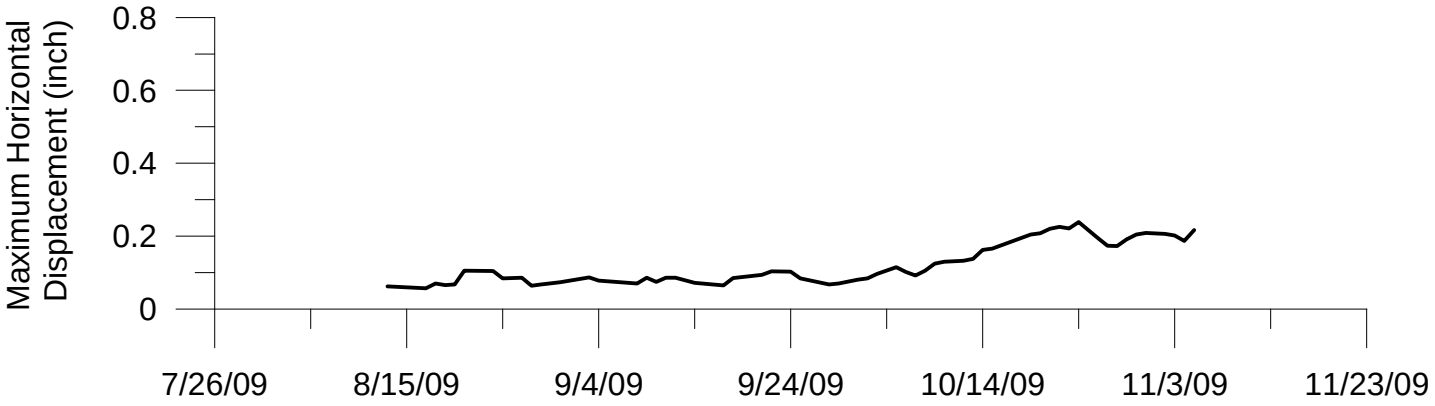
* DR (Displacement Ratio) = Max Horizontal Displacement / Vertical Displacement

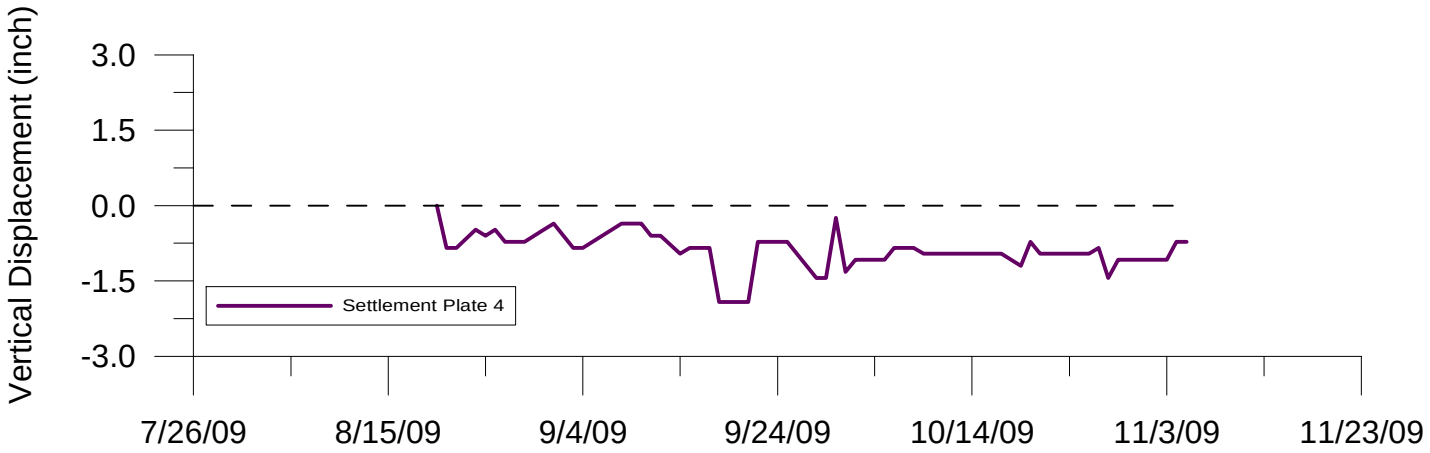
Stantec

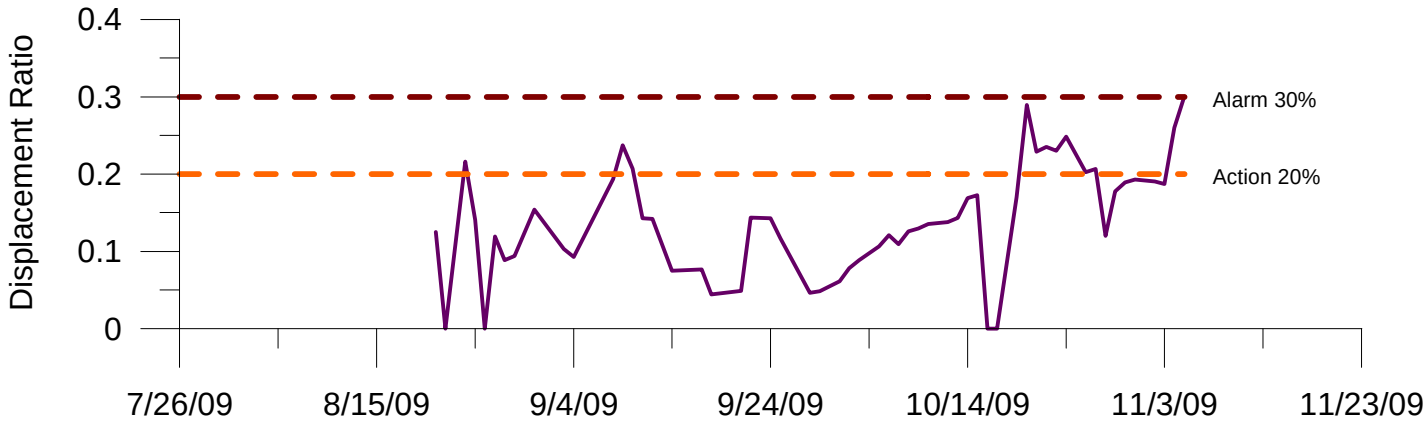
Kingston Test Embankment
175669015

Survey Section 4

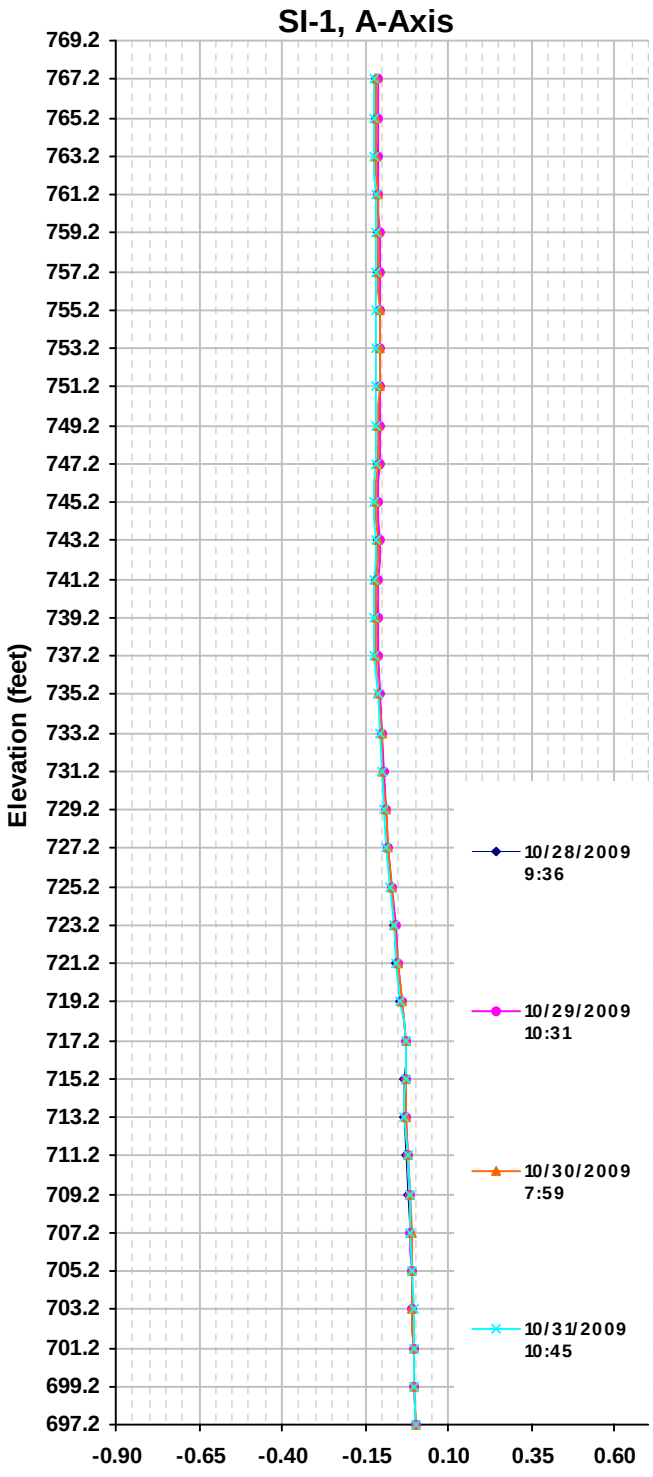
SI-5



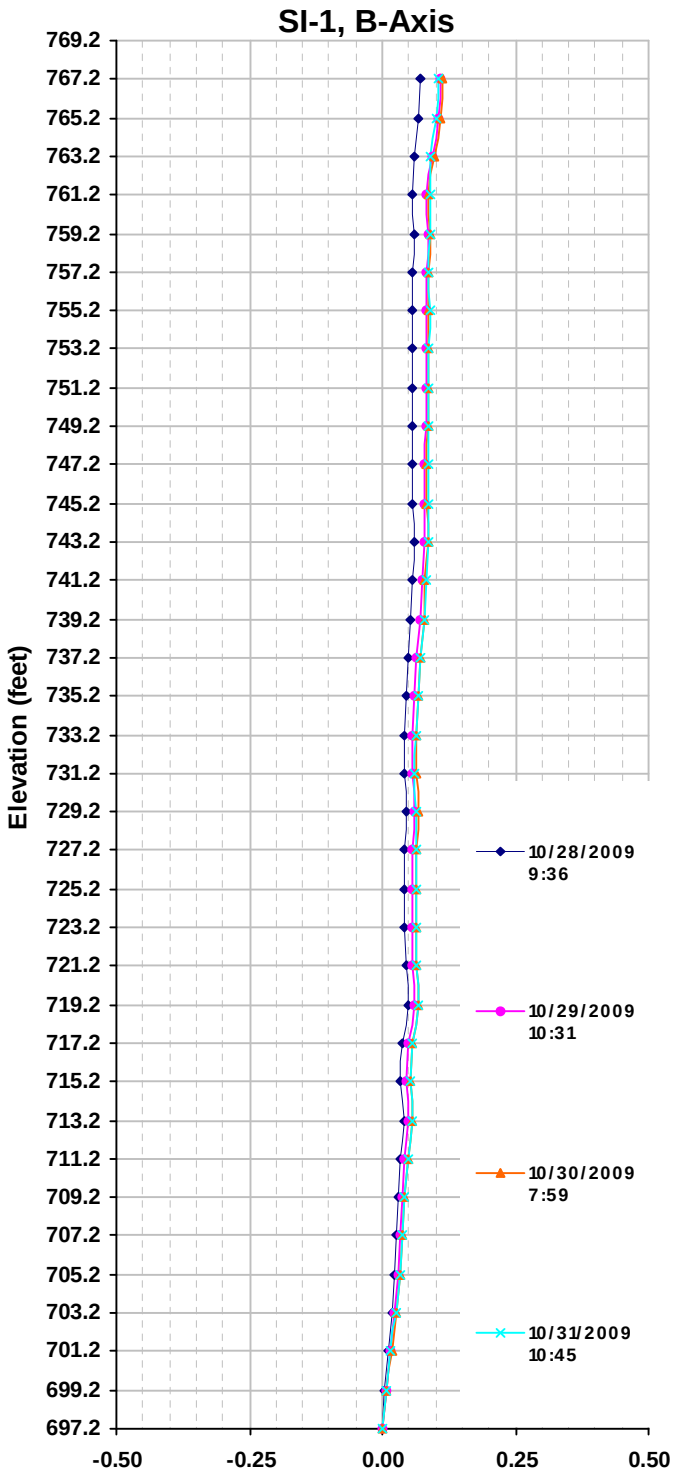




* DR (Displacement Ratio) = Max Horizontal Displacement / Vertical Displacement

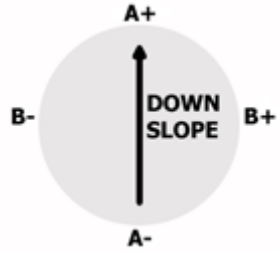


Maximum Displacement: .1266 (in)
Initial date: 8/8/2009

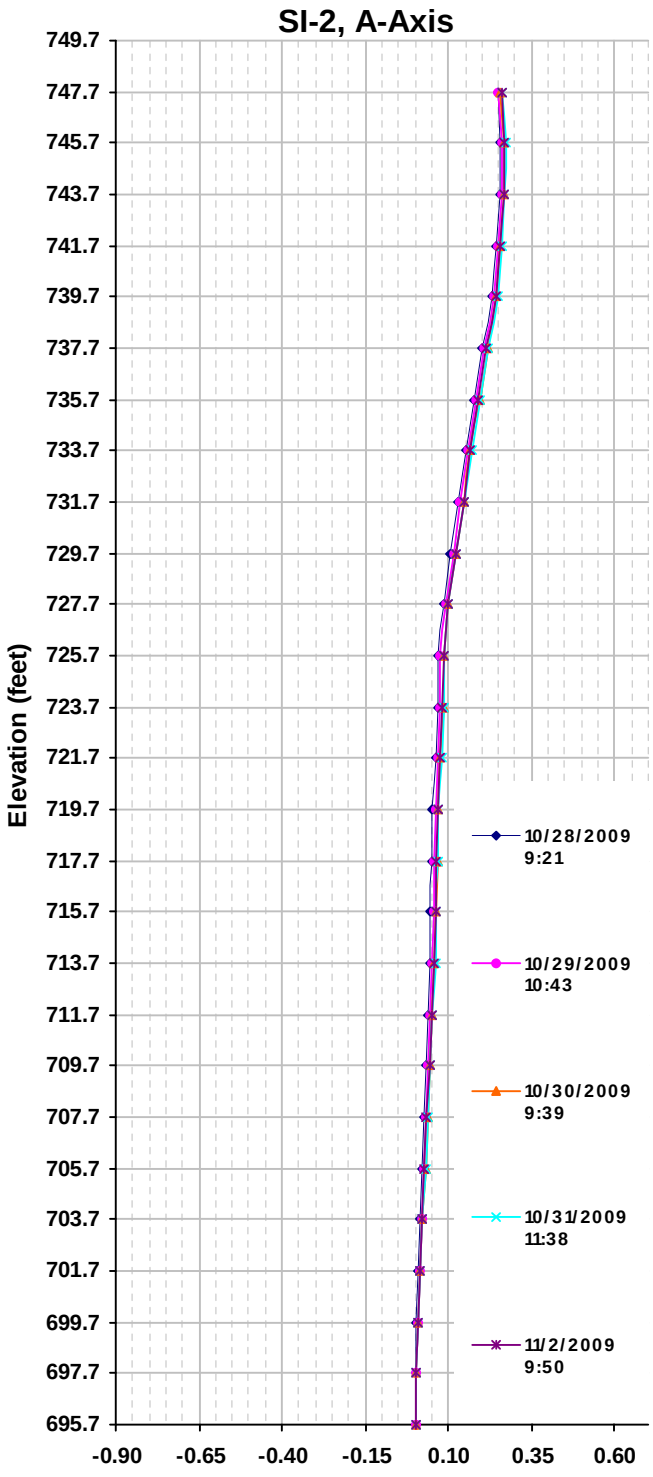


Maximum Displacement: .1122 (in)
Initial date: 8/8/2009

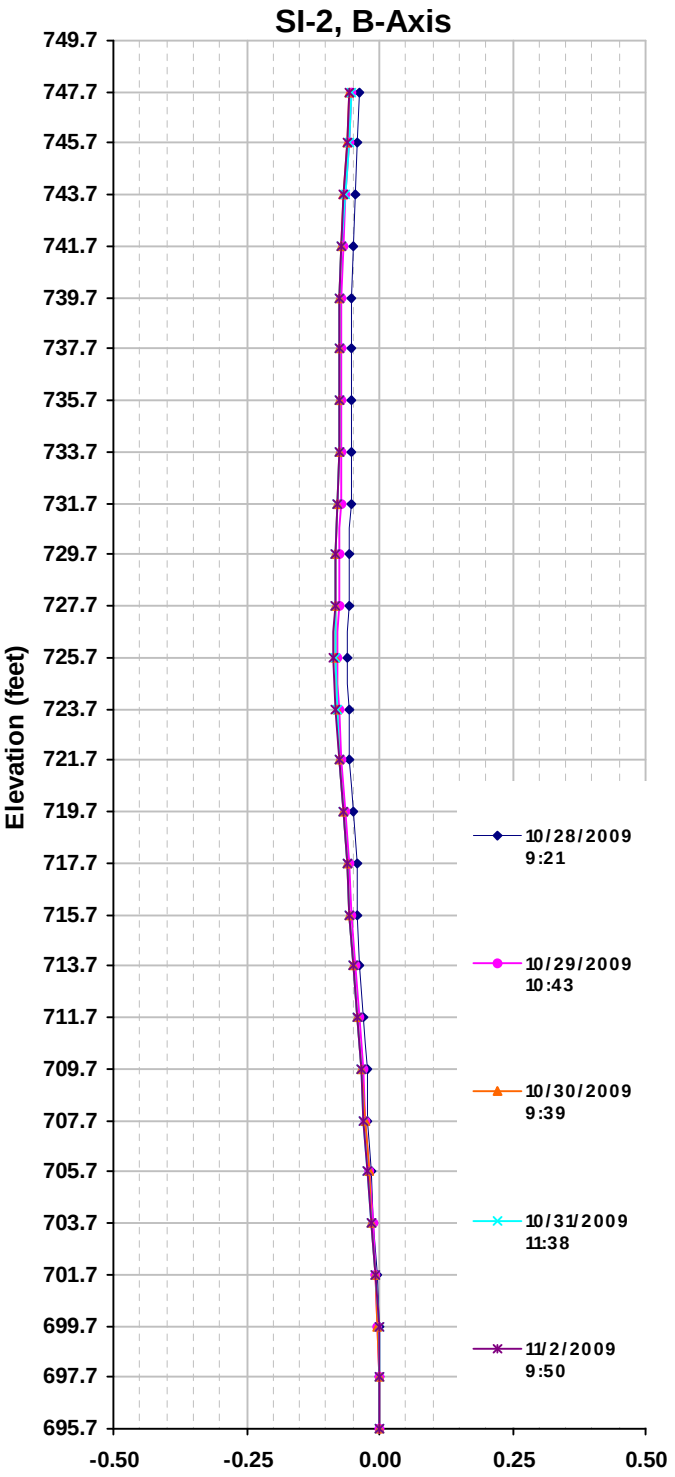
Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
11/2/2009

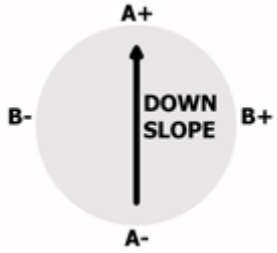


Maximum Displacement: .2706 (in)
Initial date: 8/8/2009

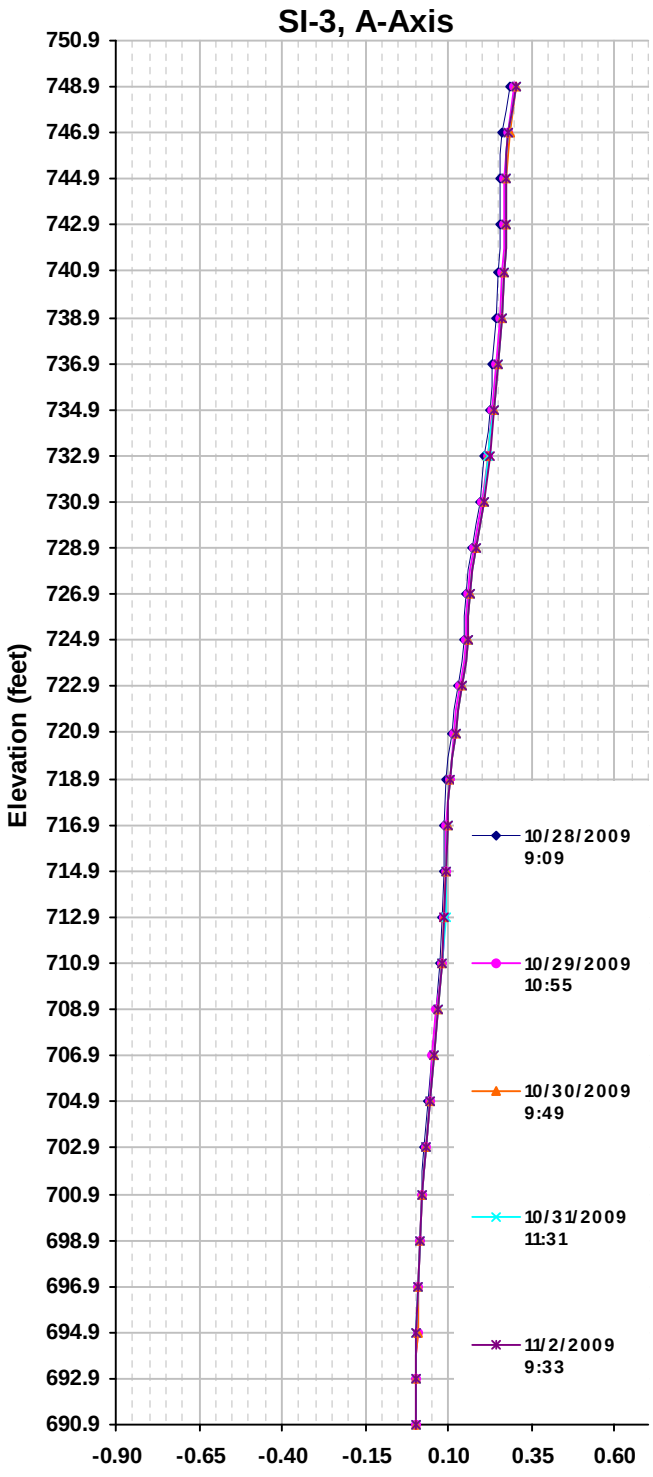


Maximum Displacement: .0846 (in)
Initial date: 8/8/2009

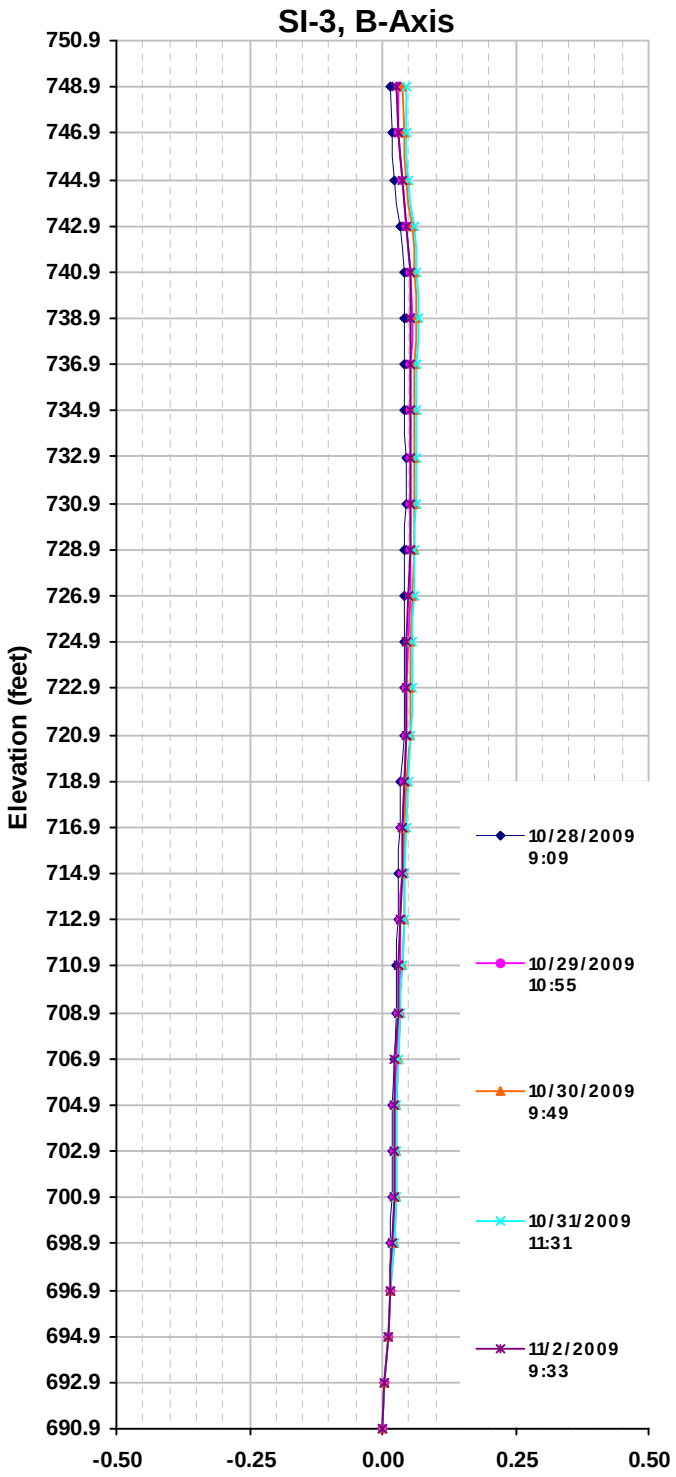
Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
11/2/2009

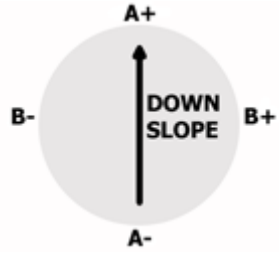


Maximum Displacement: .3054 (in)
Initial date: 8/8/2009

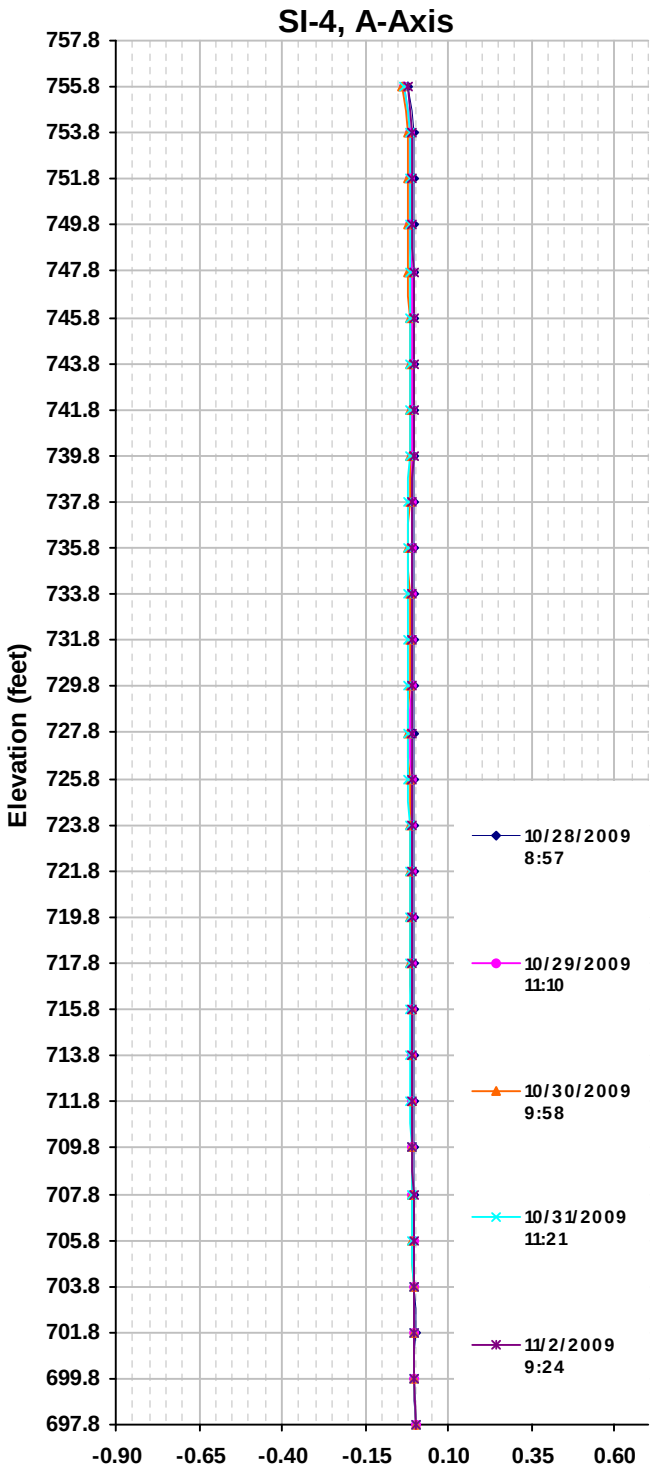


Maximum Displacement: .0666 (in)
Initial date: 8/8/2009

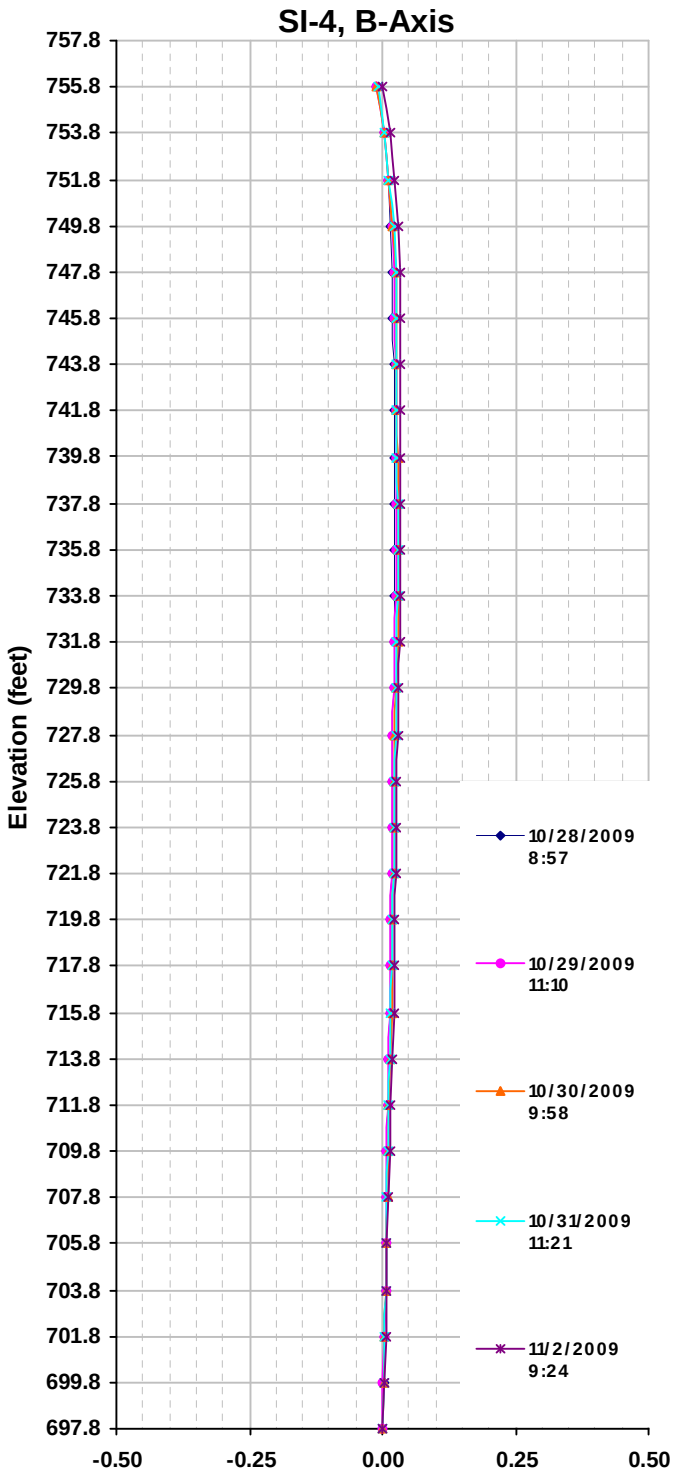
Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
11/2/2009

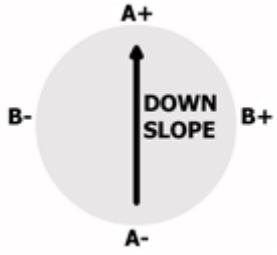


Maximum Displacement: .0372 (in)
Initial date: 10/9/2009

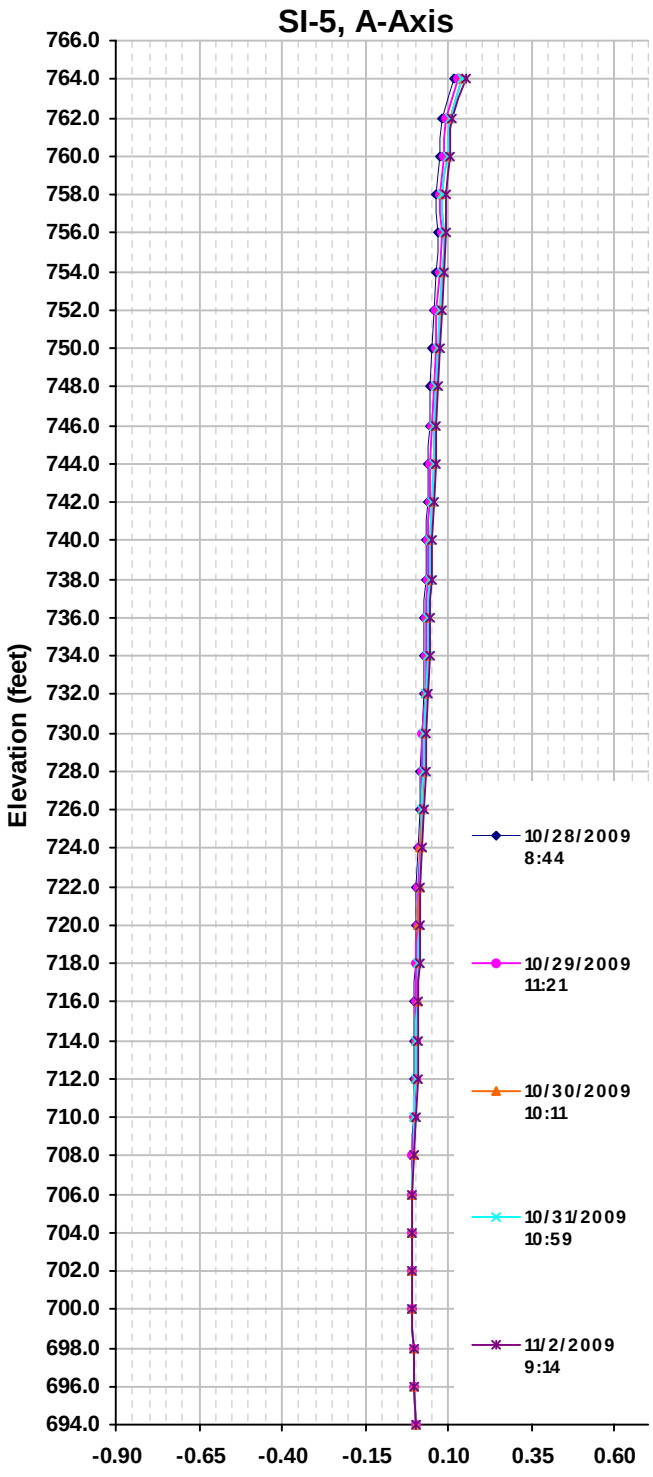


Maximum Displacement: .0348 (in)
Initial date: 10/9/2009

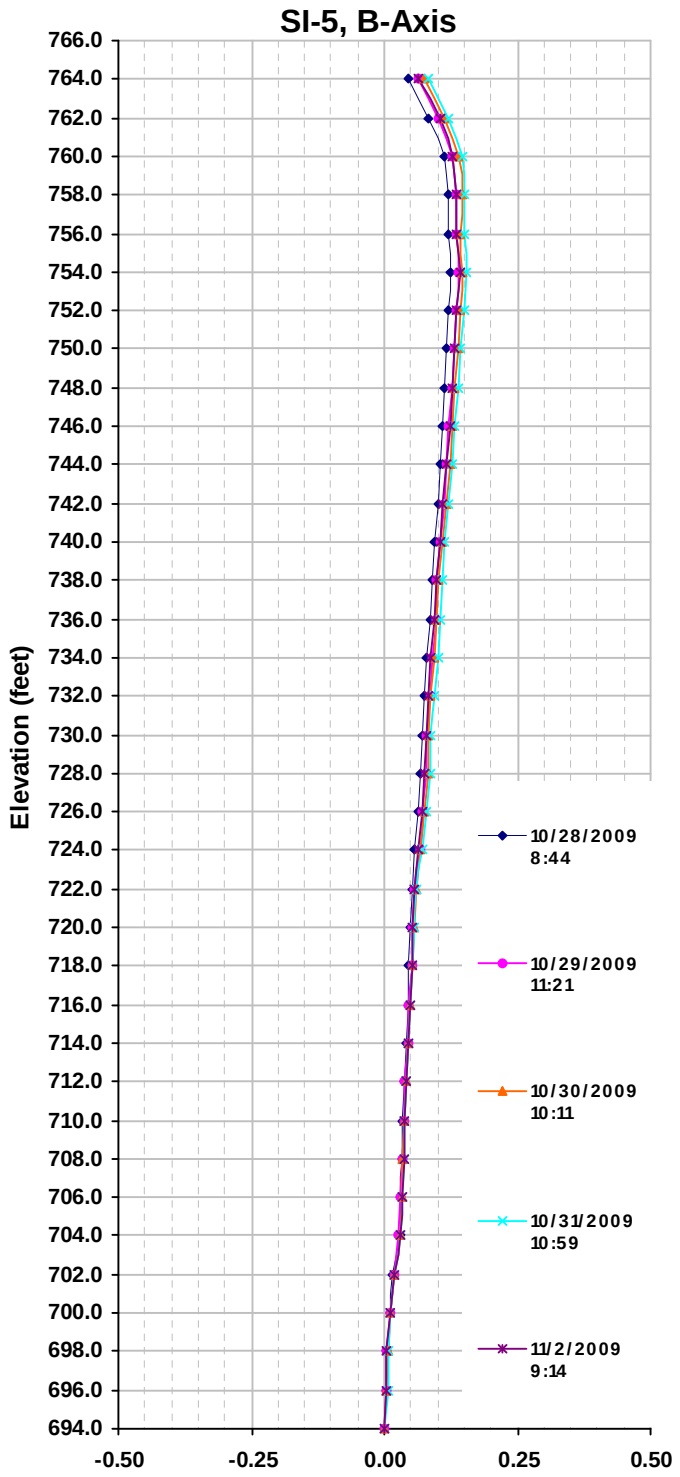
Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
11/2/2009

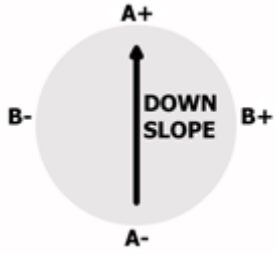


Maximum Displacement: .1500 (in)
Initial date: 8/8/2009

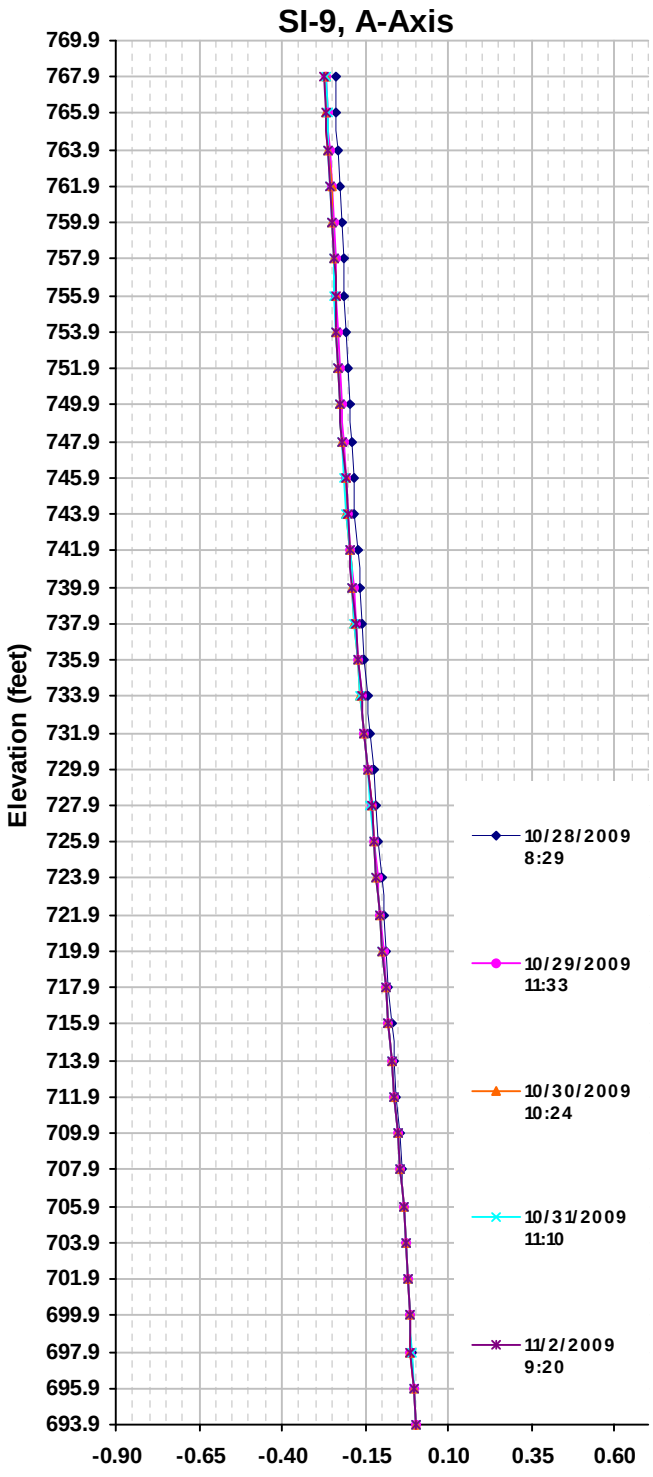


Maximum Displacement: .1542 (in)
Initial date: 8/8/2009

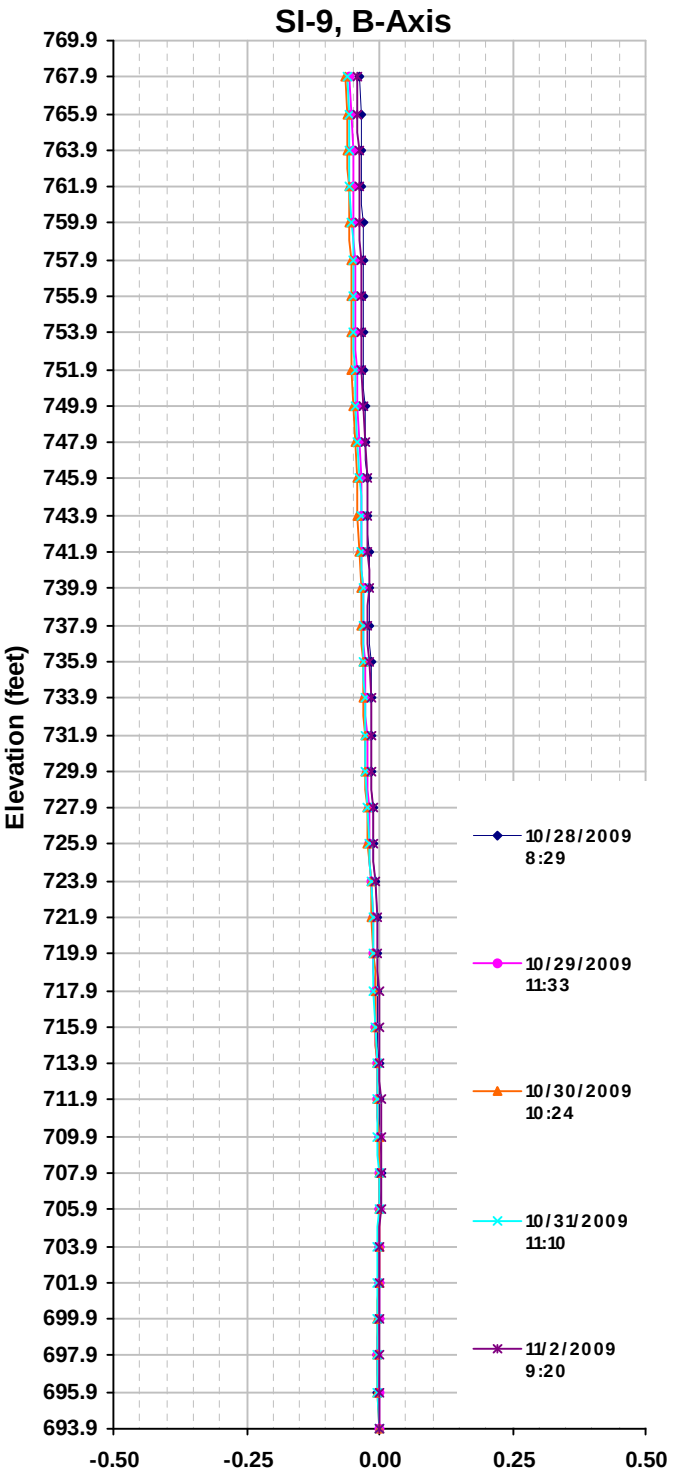
Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
11/2/2009

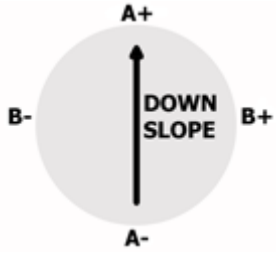


Maximum Displacement: .2724 (in)
Initial date: 8/22/2009



Maximum Displacement: .0642 (in)
Initial date: 8/22/2009

Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
11/2/2009

February 2, 2010 Report

Stantec Consulting Services Inc.
1409 North Forbes Road
Lexington KY 40511-2050
Tel: (859) 422-3000
Fax: (859) 422-3100

February 2, 2010 let_010_kif_175669015

Mr. Michael T. Scott, PE
General Manager
TVA Kingston Fossil Ash Recovery Operations
1134 Swan Pond Road, KFP 1T-KST
Harriman, Tennessee 37748

Re: Updated Assessment and Recommendations to Improve Stability
Dredge Cell Test Embankment
Kingston Fossil Plant
Harriman, Roane County, Tennessee

Dear Mr. Scott:

This letter transmits results from updated slope stability analyses, recently completed to evaluate current factors of safety within the Kingston Dredge Cell Test Embankment. The analyses represent the height of fill and subsurface pore water pressures, as measured with the field instrumentation, on or about January 13, 2010.

The results indicate drained factors of safety greater than 1.5, as required by Tennessee Valley Authority (TVA) design criteria for long term conditions, on the three analyzed cross sections. However, on the western side of the embankment, factors of safety for undrained slope stability are inadequate (less than 1.3). This assessment is based on advanced, three-stage stability analyses for the potential of an undrained failure.

Data from the test embankment instrumentation continue to show pore pressure and displacement ratios that are below pre-established threshold or trigger limits. Data obtained from slope inclinometer surveys at the toe of the slope show the accumulation of measurable shearing strains across the depth of the underlying ash on the western half of the test embankment. The greater deformations in this area are consistent with the lower safety factors indicated by the stability analyses.

To address and improve slope stability, we recommend constructing a sand berm around the western end of the test embankment. The berm will average about 5 feet in thickness (maximum thickness of 7 feet), will be 50 feet wide at the top, and may be constructed from river sand (from ongoing dredging at the site). Until this berm is completed, filling operations should be directed to areas east of Section 2. Placement of fill may resume across the full

width of the test embankment once the recommended berm is completed. Construction of the test embankment may otherwise proceed, as long as monitoring is continued in accordance with the approved work plan.

With the recommended sand berm in place, analyses of the three cross sections indicate that the test embankment will meet current stability criteria through the end of planned construction. This conclusion is based on refined analyses and target factors of safety, which have been recently established (in collaboration with TVA and AECOM) to protect against the development of sudden undrained failures in saturated ash.

Details of these analyses, results, and recommendations are provided below. Supporting documentation is provided in the attached exhibits:

- Exhibit A Geometry of the Kingston Dredge Cell Test Embankment mid-January 2010
- Exhibit B Instrumentation Data Report from January 22, 2010
- Exhibit C Stability of Section 2 at Completion of Tier 2
- Exhibit D Recommended Sand Berm at the Western End of the Test Embankment
- Exhibit E Drained Embankment Stability with Recommended Sand Berm upon Completion of Tier 2
- Exhibit F Undrained Embankment Stability with Recommended Sand Berm upon Completion of Tier 2
- Exhibit G Undrained Embankment Stability with Recommended Sand Berm upon Completion of Tier 3

Background

The test embankment within the Kingston dredge cell is being constructed to obtain field data that will support design of the selected closure plan. The design, instrumentation, and monitoring plan for the test embankment are described in an approved document by Stantec Consulting Services Inc. (Stantec) dated June 3, 2009. Roughly 250,000 cubic yards of compacted ash are planned for placement to a height of about 45 feet, which corresponds to a peak elevation of about 800 feet. Depending on location, between 15 and 23 feet of fill material was placed within the test embankment between August 5, 2009, and January 14, 2010. Conditions within and beneath the embankment are currently being monitored using data from 32 vibrating wire piezometers (installed at eight locations), four settlement plates, and six slope inclinometer installations (additional inclinometers are being installed as the embankment is built).

On October 30, 2009, placement of fill in the test embankment was temporarily halted due to pore pressure ratios above pre-selected thresholds. At that time, Stantec completed an engineering evaluation of the instrument readings and analyzed the stability of the test embankment. These analyses, documented in a Stantec report dated November 9, 2009, indicated that adequate factors of safety existed for stability of the embankment slopes. The

high water pressures measured at that time appear to have been driven by other activities and drainage from adjacent areas of the site. The temporary stop in field operations and the re-evaluation of stability followed the written plans for the test embankment. Filling operations were allowed to resume on November 3, 2009; monitoring and evaluation of data from the on-site instrumentation have since continued in accordance with the test plan.

When completed, the planned test embankment will have three 15-foot thick tiers, with two 50-foot wide setbacks (benches) in the outslopes. As of January 13, 2010, the fill was just above the top of Tier 2. Based on survey data, the surface of the active fill varied between elevations of about 787 and 792 feet, with an average elevation of 790 feet. The topography of the test embankment at the completion of Tier 2 is depicted in Exhibit A.

Current Instrument Readings

Field data collected from the test embankment instrumentation are processed and reported (via FTP) weekly; the test embankment data report from January 22, 2010, is included here as Exhibit B. The instrumentation system, measurement locations, and data presentation have been previously described in the approved "Test Embankment Program" (Stantec, June 3, 2009) and the "Assessment of Current Stability" (Stantec, November 9, 2009). In the weekly report (Exhibit B), data were reported from 48 piezometers, six inclinometers, and four settlement plates. Inclinometers SI-7 and SI-8 were recently installed, but the data were not reported because elevations had not been established. Measurements from additional slope inclinometers and piezometers, installed to the north and east of the test embankment and shown on Exhibit A, are not reported as part of the test embankment program.

Based on the January 22 data from the piezometers, the computed pore pressure ratios are all below 10%, which is the lower "Action" threshold. The current displacement ratios, computed from slope inclinometers and settlement plate data, are also below the "Action" threshold of 20%. The thresholds (trigger limits) for the instrument readings were recently clarified in a January 6 letter distributed by Stantec. The variations in these ratios over time during construction of the test embankment are plotted in Exhibit B.

Looking at the lateral displacement profiles in Exhibit B, maximum deformations have been measured in SI-2 and SI-3, which are located at the toe of Tier 1 on the western half of the test embankment. At these two locations, downslope displacements (toward the north) approaching 0.30 to 0.35 inches have been recorded at roughly elevation 745 feet. The lateral deformations extend to the full depth of the soil and ash (top of the weathered shale is at about elevation 708 feet at SI-2 and 704 feet at SI-3), and appear to result from lateral squeezing and shearing within the foundation soils beneath the embankment. The inclinometer surveys do not show the development of defined failure planes, which would appear as relatively sharp transitions in the plots of displacement versus elevation.

The slope of the inclinometer data represents the magnitude of the shear strains in the soil:

$$\text{Shear Strain} = \arctan\left(\frac{\text{Lateral Displacement}}{\text{Depth Increment}}\right)$$

The maximum strains (maximum slope of displacement profile) have occurred in the saturated, hydraulically placed ash. At SI-2 and SI-3, the bottom of the ash deposits are at about elevations 724 and 727 feet, respectively. Above those levels, the shear strains in the ash are roughly 0.1% at both locations. These measured field strains have developed over time under drained conditions, and do not signal an imminent failure. However, the higher measured strains indicate higher shearing stresses within the ash along Sections 1 and 2, on the western side of the test embankment.

The data from SI-2 and SI-3 show that measurable deformations have accumulated beneath the embankment. The threshold or triggering limits for the instrument data were established to provide guidance for the field monitoring team. While the data are currently below all thresholds, it is prudent to evaluate the embankment stability based on engineering analysis.

Updated Stability Analyses

To assess the current stability of the test embankment, the analyses completed in November 2009 were updated. Two-dimensional, limit equilibrium stability calculations were completed using Spencer's method, as implemented in SLOPE/W (from Geo-Slope International) and UTEXAS4 (from Shinoak Software).

Detailed, vertical cross sections through the subsurface at Sections 1 through 4 (Exhibit A) were previously provided in the November 9 report. The subsurface stratigraphy is based on data from several geotechnical explorations completed at the site. Elevations for strata interfaces within the test embankment were obtained from boring logs collected during installation of the instruments.

Section 1 crosses the western end of the test embankment, on the bench at the top of Tier 1. With the addition of fill in Tier 2, Section 1 is no longer aligned with the weak axis (perpendicular to the maximum slope) on the western end of the embankment. Slope stability calculations for Section 1 would not accurately represent stability in this area; hence, previously reported stability evaluations for Section 1 were not updated here.

For the updated stability analyses, the current ground surface elevations along Sections 2 through 4 were defined using data from surveys completed on January 12, 2010. Because active filling operations are continuing, the top of the embankment was conservatively assumed to be level at elevation 790 feet in the calculations. This resulted in arbitrarily raising the ground surface about 1 to 3 feet at the crest of the slope in the three cross sections.

Pore water pressures throughout each cross section were estimated based on current data from piezometers in the test embankment and surrounding areas. Two piezometric lines were established for each cross section: an upper line for pore pressures within the existing

ash, and a second, lower line for the native foundation soils. The piezometric lines (depicted on the stability sections in Exhibits C, E, F, and G) were drawn to match the piezometer data recorded on January 13, 2010.

Updated Static Stability Criteria

Current TVA design criteria ("TVA Coal Combustion Products Management Program", URS, 23 October 2009) require a factor of safety of 1.3 or greater for slope stability during construction and 1.5 for long-term conditions. This criteria, also used by the U.S. Army Corps of Engineers (USACE EM 1110-2-1902)[1], has been adopted by TVA for the Kingston dredge cell project.

Recently, refinements to this stability criteria have been discussed for conditions where embankments are constructed over saturated ash. Given the significant strength loss past the peak undrained shearing resistance, which occurs at relatively low strains, analytical methods and minimum safety factors must be carefully considered. The refined design criteria was discussed and agreed to by TVA, AECOM, and Stantec at a meeting in Knoxville (December 16 and 17, 2009) and via teleconference (January 20, 2010). A memorandum is being prepared to document this refinement, and to better explain the rationale and proper application.

The updated, static stability criteria can be briefly described as follows. No distinction is made between interim and permanent slopes.

- **FSd ≥ 1.5**

  FSd is computed using effective stress methods, assuming fully drained conditions (steady state seepage) with measured or predicted pore water pressures. The value represents stability of the slope at any time when the pore pressures can be determined.

- **FSu ≥ 1.3**

  FSu represents stability with respect to undrained shearing capacity. For embankment construction, FSu is computed for the current embankment height prior to the placement of the next lift of fill. A total stress model of the soil shearing resistance is used, to predict the reduced capacity available if an undrained failure is triggered.

- **FSul ≥ { 2FSu / (1 + FSu) }**

  FSul is obtained from a total stress, undrained analysis of an embankment and represents conditions just after the next lift of fill is placed. This value is intended to limit the average, incremental increase in shear stress along a slip surface to be less

[1] U.S. Army Corps of Engineers (2003). "Slope Stability". No. EM 1110-2-1902, October 31.

than one half of the incremental shear stress required to reach the peak undrained strength. The value of FSul can be used to determine the maximum safe thickness for the next embankment lift.

The value of FSd is computed using conventional, effective stress methods of analysis and strength characterization. FSu and FSul can be computed using the three-stage stability analysis method adopted by the U.S. Army Corps of Engineers for rapid drawdown analyses (USACE 2003, EM 1110-2-1902, Exhibit G)[1]. In the three-stage method, a total stress model of shearing resistance is determined from the anisotropic consolidation stresses. Measured or predicted pore water pressures are used in the first (consolidation) stage of the analysis. The undrained soil strengths are estimated based on linear interpolation with the principle stress ratio during consolidation (described below). The shear resistance along a given potential failure surface is computed in three stages of the calculation:

- Stage 1. Use an effective stress analysis to compute the normal and shear consolidation stresses at each point on the failure plane.
- Stage 2. Determine the undrained, total stress shearing resistance along the failure plane. Based on the consolidation stresses from Stage 1, use the normal consolidation stress and linear interpolation between limiting strength envelopes to estimate the shearing resistance along the slip surface.
- Stage 3. Compute the undrained factor of safety using the lesser of the drained and undrained shear strengths (from Stages 1 and 2) at each point along the slip surface.

This method of analysis is described in EM 1110-2-1902 (USACE 2003)[1] and Duncan and Wright (2005)[2], and is available within UTEXAS4.

Material Properties

The unit weights and strength properties of each material were previously determined. These properties, and the supporting laboratory and field data, are documented in a draft report prepared by Stantec. That report was submitted to TVA, subjected to review by TVA and AECOM, and discussed at a design team meeting on October 8, 2009. Based on those discussions and subsequent review comments, there is a general consensus that the engineering parameters listed in Table 1 and Table 2 are appropriate for representing the ash materials and foundation soils within the Kingston dredge cell. These properties were thus adopted for this analysis of the test embankment stability.

As discussed below, a berm of material is recommended for improving the stability of the test embankment. The berm may be constructed of loosely compacted river sand, obtained from ongoing dredging work at the site. This material was assumed to have a unit weight of 110 pcf and a friction angle of 30 degrees, as listed in Table 1.

In the three-stage undrained stability analysis, an interpolation scheme is used to determine the undrained shear strength of anisotropically consolidated soils. The interpolation is based

[2] Duncan, J. M., and Wright, S. G. (2005). *Soil Strength and Slope Stability.* John Wiley & Sons.

on two limiting strength envelopes, representing a fully drained strength and the undrained strength of an isotropically consolidated soil sample. Both of these input envelopes represent a relationship between the shear strength and the effective normal consolidation stress on the failure plane. The envelopes correspond to effective principal stress ratios (K_c=σ'$_1$/σ'$_3$) at consolidation of K_f and 1, respectively, and are defined by an intercept and a slope. The envelope corresponding to K_c=K_f is identical to the conventional effective stress shear strength envelope. Thus, its intercept ($d_{Kc=Kf}$) is the same as the effective stress cohesion value (c') and its slope ($\psi_{Kc=kf}$) is the same as the effective stress friction angle (ϕ'). The K_c=1 envelope can be derived from the total stress cohesion value (c) and the total stress friction angle (ϕ), as determined from conventional CU triaxial compression tests. When c and ϕ are obtained from a line drawn tangent to the total stress Mohr's circles, the relationships among the intercept ($d_{Kc=1}$) and slope ($\psi_{Kc=1}$) of the K_c=1 envelope, the total stress c and ϕ, and the effective stress ϕ' are (Duncan and Wright 2005):

$$d_{k_c=1} = c\left(\frac{\cos\phi\cos\phi'}{1-\sin\phi}\right)$$

$$\psi_{k_c=1} = \tan^{-1}\left(\frac{\sin\phi\cos\phi'}{1-\sin\phi}\right)$$

Values of $d_{Kc=1}$ and $\psi_{Kc=1}$ for the test embankment soils are listed in Table 2.

Current Stability

Updated stability analyses for the Kingston test embankment were completed for Sections 2, 3, and 4. Values of FSd and FSu computed for Sections 3 and 4 meet the design criteria (those results are reported in later sections of this letter). For a level embankment at elevation 790 feet, the drained stability analyses gave FSd = 1.65 on Section 2, while the undrained, three-stage stability analysis indicated FSu = 1.19. These results are presented in Exhibit C; the critical failure mechanism is a circular slide through the saturated ash at the toe of the slope. The results from the undrained analyses (FSu = 1.19) show that Section 2 does not currently meet criteria (FSu ≥ 1.3) for stability.

The lower stability at Section 2 can be understood by considering the topography shown on Exhibit A. On the western half of the test embankment, the ground surface north of the slope toe dips toward a drainage channel. Compared to Sections 3 and 4, the embankment height is effectively greater on Section 2, which increases the static shear stresses and lowers the safety factor. Deformation data from the slope inclinometers supports this observation. Furthermore, this suggests that the stability of Section 2 can be improved by constructing a relatively small berm along the slope toe.

Recommended Sand Berm

To stabilize Section 2, a toe berm is recommended for the western half of the test embankment. The dimensions of the berm were selected so that the test embankment, from now through planned completion, should meet the refined stability criteria outlined above. The analyses and computed safety factors are presented below.

For the stability analyses, the berm was assumed to consist of loosely compacted sand. The assumed strength (Table 1) is not critical to the results, as the weight of berm (not its strength) provides the needed stabilizing force. The berm material may be constructed using river sand obtained from ongoing dredging work at the site. Stronger materials, such as crushed stone, could be substituted for the river sand without reducing the effectiveness of the berm.

A plan drawing and a typical cross section through the recommended berm are presented in Exhibit D. The top of the berm should extend 50 feet laterally, and slope from an elevation of 758 feet at the face of the test embankment to 757 feet at the crest of the outslope. The berm will average about 5 feet in thickness, with a maximum thickness of about 7 feet. The outslope of the berm should be constructed at a slope no steeper than 5:1 (horizontal:vertical). The berm should wrap around the western end of the test embankment, and tie into existing grade at both ends.

Site drainage around the test embankment and berm has not been addressed here. The sand berm, as shown in Exhibit D, will block a drainage ditch around the northwest corner of the test embankment. Drainage must be maintained, which can be accomplished by shifting the drainage ditch 100 feet (or more) to the north. Erosion control measures that have been recently proposed by Jacobs Engineering Group, Inc. (Jacobs) along the western perimeter of the test embankment will also need modification. Revised layouts for the drainage and erosion control measures should be developed by Jacobs, in association with formalizing plans for constructing the sand berm.

The western side of the test embankment currently does not meet stability criteria (analyses of the existing slope indicate FSu = 1.19). As the berm material is gradually placed, this part of the test embankment should become increasingly more stable. An undrained, three-stage stability analysis was completed to check if the criteria for FSul would be met during construction. The sand berm was treated as a distributed load at the toe of the slope, and the results indicate an acceptable value of FSul = 1.33 (see Exhibit D). With the berm in place, the embankment will exhibit higher safety factors (FSd and FSu), as reported below.

Caution and careful planning should be exercised during construction of the recommended modifications. Placement of fill at the toe will improve stability, so construction equipment should operate only from the top of the berm as it is built. Given the modest final thickness, we recommend building the berm to full height starting at one or both ends, and progress by filling material ahead of completed sections. Recognizing that the stabilizing force is obtained from the weight of the fill, we have not recommended specific restrictions for building the berm in lifts or for compaction of the added fill.

Excavation of drainage ditches should follow completion of the berm. This will avoid conditions where the effective height of the slope is increased prior to having the stabilizing weight of the berm in place. All construction work plans, including sequencing, should be reviewed and approved by TVA safety professionals.

Filling operations on top of the western portion of the test embankment (area of Section 2) should not resume prior to completion of the recommended sand berm as shown in Exhibit D.

Drained Stability Analyses for Completion of Tier 2

Evaluation of the drained safety factors (FSd) was accomplished using SLOPE/W. Because the surficial materials have no cohesion (c' = 0), an infinite slope mechanism (shallow sloughing of material parallel to the slope face) yields the lowest factor of safety in all cases. Stability calculations for shallow failures were completed by specifying a minimum sliding depth of 1 to 2 feet. The resulting FSd ranged from 0.9 to 1.6 for the three cross sections. Observed at various times in the field, these failures pose little risk to the overall embankment or the safety of construction activities.

The primary concern for stability in the test embankment is the potential to trigger a deep failure, along surfaces that would pass through the bottom of the ash deposits. If a deep failure were to develop in the test embankment, there is a potential for triggering a retrogressive failure that could destabilize the relic areas. The deep sliding mechanism would thus have the worst possible consequences.

Results from the drained stability analyses, for the deep sliding mechanism, are presented in Exhibit E and summarized in Table 3. These analyses assume the test embankment is completed to the top of Tier 2 at a level elevation of 790 feet, corresponding roughly to the currently existing conditions. With the recommended sand berm in place, all three cross sections exhibit values of FSd > 2, well in excess of the required minimum value of 1.5.

Undrained Stability Analyses for Completion of Tier 2

Three-stage, undrained stability analyses were completed using UTEXAS4. The calculations modeled the existing geometry of the test embankment with Tier 2, a level top surface at elevation 790 feet, and the recommended sand berm in place. Piezometric levels were modeled based on the January 13 field measurements. Here, there was no additional distributed load or changes in piezometric level in the different stages of the undrained stability calculation. The output results are presented in Exhibit F and summarized in Table 3.

On all three cross sections, the critical undrained slip surface was found in the 3:1 outslope of Tier 1, at the toe of the test embankment fill. The sand berm increases the undrained stability to FSu = 1.35 on Section 2. The lowest computed value of FSu is 1.31 on Section 3, essentially equal to the design minimum value of 1.3. Hence, with the recommended sand berm in place along the toe on the western side, these analyses indicate that the test embankment will meet criteria for undrained stability.

Undrained Stability Analyses for Completion of Tier 3

The stability of the test embankment with continued construction was checked with the three-stage, undrained analyses presented in Exhibit G. The addition of Tier 3 was modeled as a uniformly distributed load of 1,199 psf (11 feet of fill at a unit weight of 109 pcf), set back 50 feet from the crest of Tier 2. The resulting safety factor for each cross section corresponds to FSul, and represents the expected stability if Tier 3 was rapidly placed in one lift. The results, summarized in Table 3, are all well above the minimum criteria values.

For all three analyzed cross sections, the computed values of FSu = FSul (Table 3). Comparison of the output in Exhibits F and G show that the critical slip surface (the one with the lowest safety factor) occurs at the toe of the slope, in all cases, and is not affected by the Tier 3 load. Hence, failure mechanisms that would engage the added fill in Tier 3 all have higher safety factors. This was verified in trial analyses where higher surface pressures were specified until the critical failure mechanism, with a lower FSul, shifted to the upper slope.

Conclusions and Recommendations

The stability of the test embankment being constructed in the Kingston dredge cell has been re-evaluated. Fill heights and piezometric conditions in mid-January 2010, were analyzed. All instrument readings were below established threshold limits, and there is no known evidence of excessive deformation or instability. However, limit equilibrium slope stability analyses demonstrate that the western side of the test embankment does not meet current, refined criteria for the factor of safety against an undrained failure.

Until this condition is mitigated, no additional fill should be placed in the vicinity of Section 2 (western side of the test embankment). To improve stability, we recommend that a berm of sand should be constructed along the toe of the test embankment. The berm is depicted on the drawings in Exhibit D.

- The berm may be constructed using river sand obtained from the ongoing dredging work at the site. Stronger materials, such as crushed stone, could be substituted for the sand without reducing the effectiveness of the berm.

- The berm will average about 5 feet in thickness, with a maximum thickness of about 7 feet. The top of the berm should extend 50 feet laterally, and slope from an elevation of 758 feet at the face of the test embankment to 757 feet at the crest of the outslope. The outslope of the berm should be constructed at a slope no steeper than 5:1 (horizontal:vertical).

- The berm should wrap around the western end of the test embankment, and tie into existing grade at both ends.

- The sand berm, as shown in Exhibit D, will block a drainage ditch around the northwest corner of the test embankment. Drainage needs to be maintained, which can be accomplished by shifting the drainage ditch 100 feet (or more) to the north.

Revised layouts for the drainage and erosion control measures should be developed by Jacobs.

- Placement of fill at the toe will improve stability, so construction equipment should operate only from the top of the berm as it is built. Excavation of drainage ditches should follow completion of the berm, to avoid conditions where the effective height of the slope is increased prior to having the stabilizing weight of the berm in place.

- Caution and careful planning should be exercised during construction of the recommended modifications. All construction work plans should be reviewed and approved by TVA safety professionals.

Filling operations on top of the western portion of the test embankment (area of Section 2) should not resume prior to completion of the recommended sand berm as shown in Exhibit D. Once the berm is completed, construction may proceed across the full width of the test embankment.

Continued diligence is needed to provide for the safe completion of the test embankment. Monitoring of the test embankment instrumentation must continue as additional fill is placed, in accordance with the approved work plan. Additional, periodic updates to the stability analyses may be warranted, especially if the instrumentation records high pressure or displacement ratios.

Please let us know if you have additional questions.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Alan F. Rauch, PhD, PE
Geotechnical Engineer

Michael J. Steele, PE
Associate

/rdr

LEX

Table 1. Unit Weights and Drained Strengths used in the Stability Analyses

Material	Unit Weight		Drained, Effective Stress Strength Parameters	
	γ_m (pcf)	γ_{sat} (pcf)	ϕ' (deg.)	c' (psf)
Landfilled Ash	109	111	30	0
Hydraulically Placed Ash	100	107	25	0
Sensitive Silt/Clay	100	107	28	0
Lean Clay Foundation Soil	--	130	32	0
Sandy Silt to Silty Sand	--	128	30	0
Coarse Stone	115	128	38	0
Sand Berm	110	--	30	0

Table 2. Undrained Strengths used in the Stability Analyses

Material	Undrained, Total Stress Strength Parameters			
	ϕ (deg.)	c (psf)	$\psi_{Kc=1}$ (deg.)	$d_{Kc=1}$ (psf)
Landfilled Ash	**	**	**	**
Hydraulically Placed Ash	10	0	10.78	0
Sensitive Silt/Clay	10*	0*	10.51	0
Lean Clay Foundation Soil	24	0	30.17	0
Sandy Silt to Silty Sand	12	1,000	12.81	1069.45
Coarse Stone	**	**	**	**
Sand Berm	**	**	**	**

* Strength conservatively assumed equal to that of hydraulically placed ash for the analyses reported herein. Design parameters are S = 0.24 and m = 0.71; assuming OCR = 1, c = 0, and measurement in ICU triaxial tests, the equivalent friction angle would be ϕ = 11.2°.

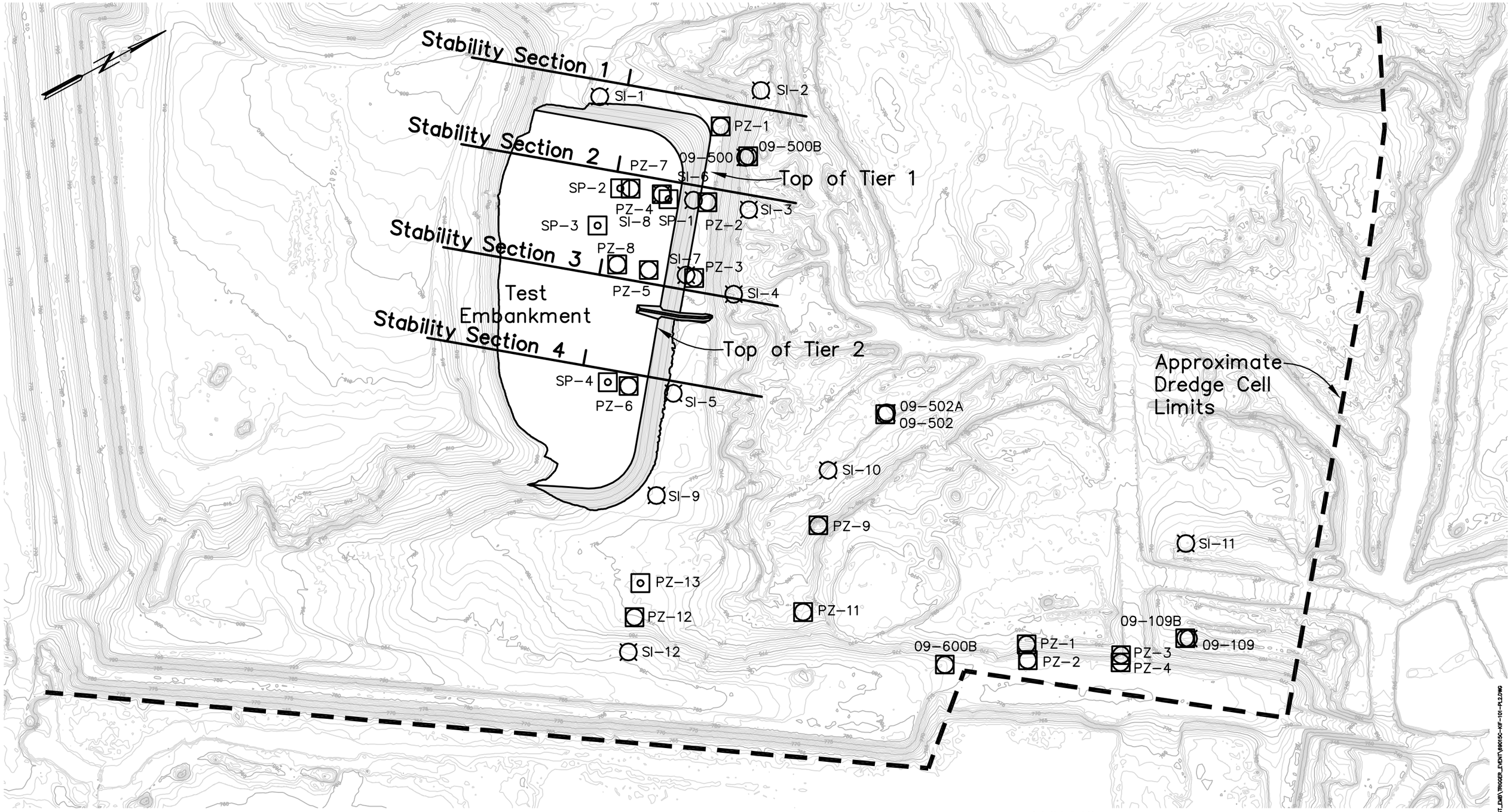
** These materials were assumed to be fully drained or unsaturated in the analyses reported herein; strengths for undrained analyses were thus characterized using ϕ' and c'.

Table 3. Summary of Results from Stability Analyses for Deep Failures, after Completion of the Sand Berm at the Western End of the Test Embankment

Conditions Analyzed	Minimum Safety Factor per Criteria	Computed Safety Factor
Drained Analysis Completion of Tier 2, Top = Elev. 790 ft (see Exhibit E)	**FSd**	
Embankment Section 2	1.5	2.03
Embankment Section 3	1.5	2.20
Embankment Section 4	1.5	3.10
Undrained Analysis Completion of Tier 2, Top = Elev. 790 ft (see Exhibit F)	**FSu**	
Embankment Section 2	1.3	1.35
Embankment Section 3	1.3	1.31
Embankment Section 4	1.3	1.37
Undrained Analysis Completion of Tier 3, Top = Elev. 801 ft (see Exhibit G)	**FSul**	
Embankment Section 2	1.15	1.35
Embankment Section 3	1.13	1.31
Embankment Section 4	1.16	1.37

Exhibit A

Geometry of the Kingston Dredge Cell Test Embankment mid-January 2010



TEST EMBANKMENT – STABLITY SECTIONS

SCALE: 1"=200'

69015c-kif-101-pl1.DWG

LEGEND

STN-1 Slope Inclinometer (SI)

STN-2 Piezometer (PZ)

STN-3 Settlement Platform (SP)

100 0 200 400 FEET

GRAPHIC SCALE: 1" = 200'

NOTES:

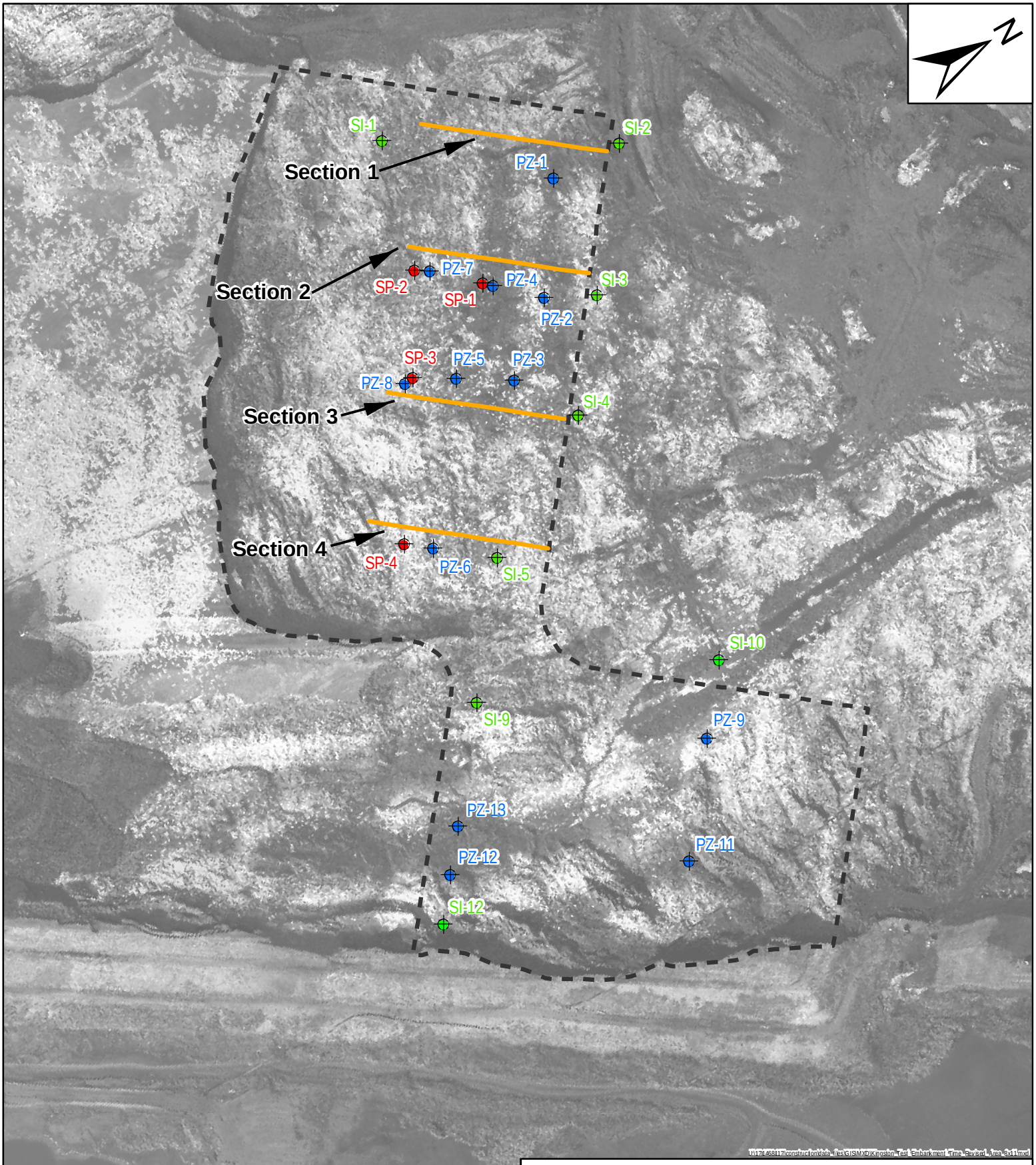
1. Topographic mapping was generated from a LIDAR survey performed on Nov., 25, 2009 by Tuck Mapping Solutions, Inc.
2. Topographic information on the Test Embankment depicts the approximate surface configuration in mid-January, 2010.

A-1

PLOT DATE: 01/25/2010 USER: GRAHAM, DAVE
V:\1756\ACTIVE\175689015\ENVIRONMENTAL\DRAWING\TEST_EMB\TRIGGER_EVENT\69015C-KIF-101-PL2.DWG

Exhibit B

Instrumentation Data Report from January 22, 2010



Legend

- Cross Section
- Piezometer (PZ)
- Slope Inclinometer (SI)
- Settlement Plate (SP)

KINGSTON TEST EMBANKMENT PROGRAM

Stantec

Stantec Consulting Services, Inc.
100 Westwood Place
Suite 420
Brentwood, TN 37027

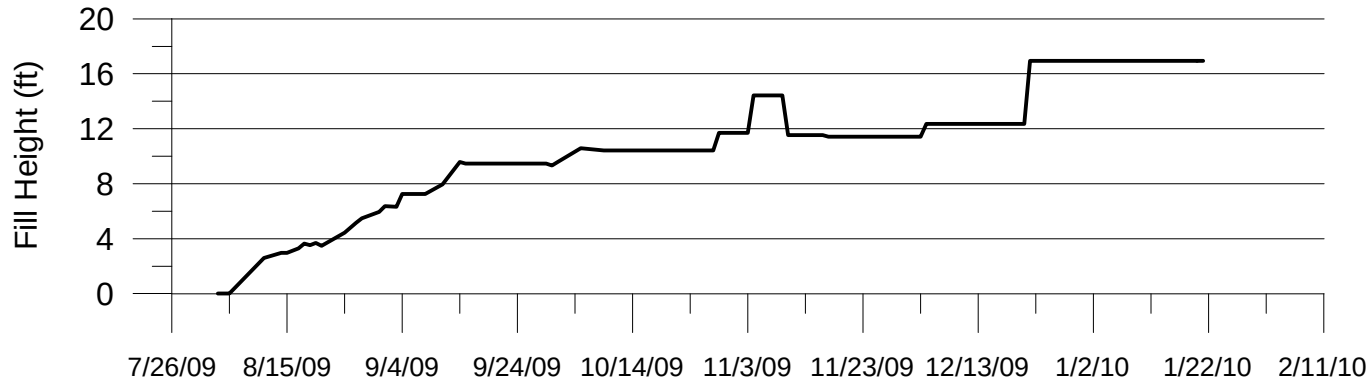
DRAWN BY:	MEP	PROJECT NO.	175669015	DATE: November 8, 2009
CHECKED BY:	JWA	SCALE:	1" = 200'	B-1

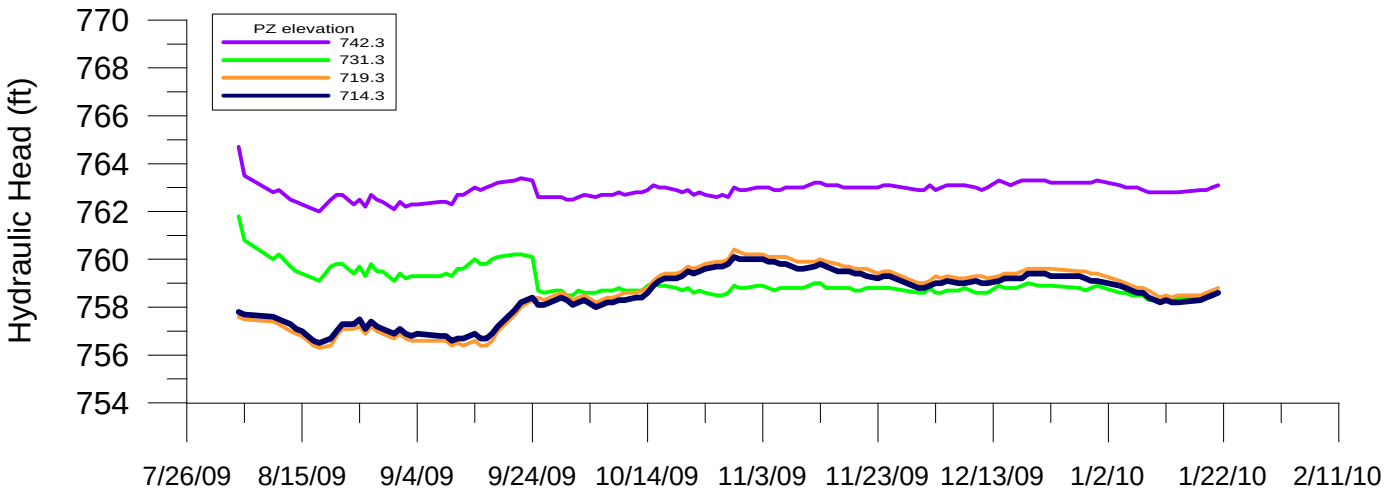
Stantec

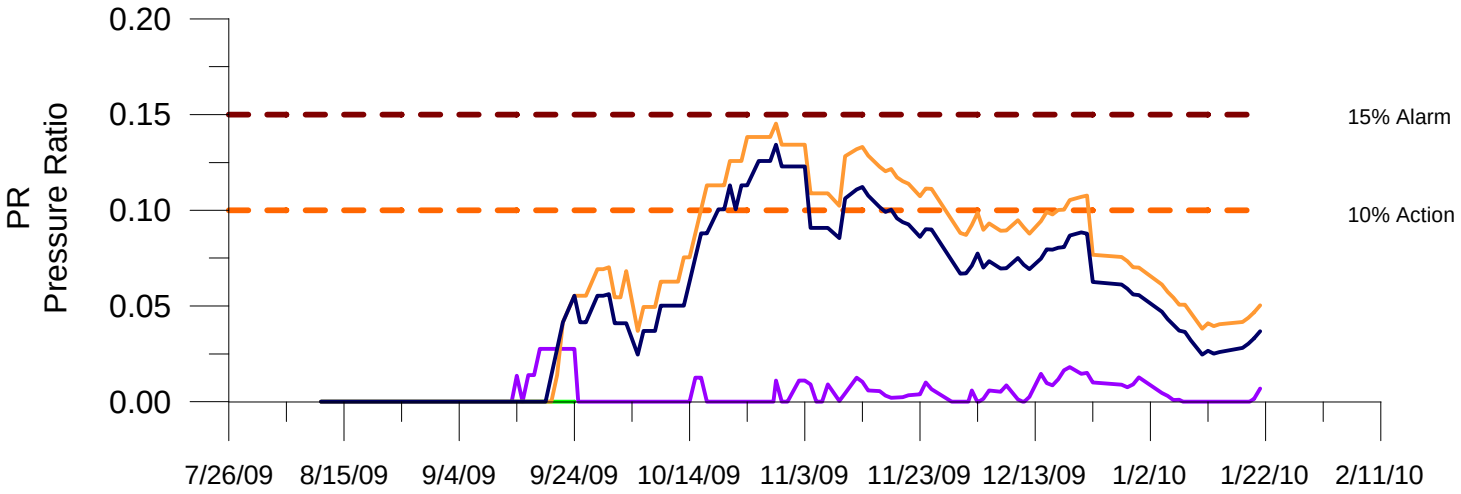
Kingston Test Embankment
175669015

Survey Section 1

PZ-1







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

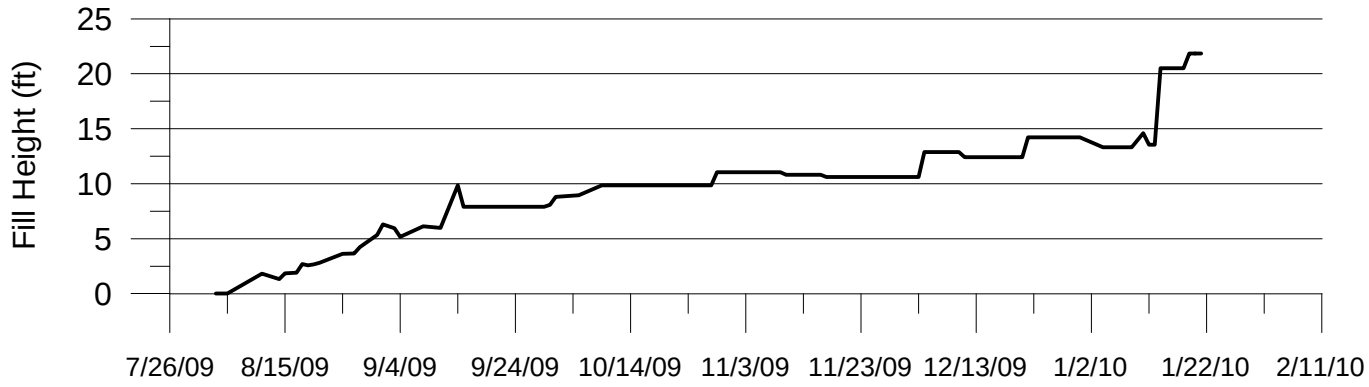
* △Z= Fill Height x 110 (pcf)

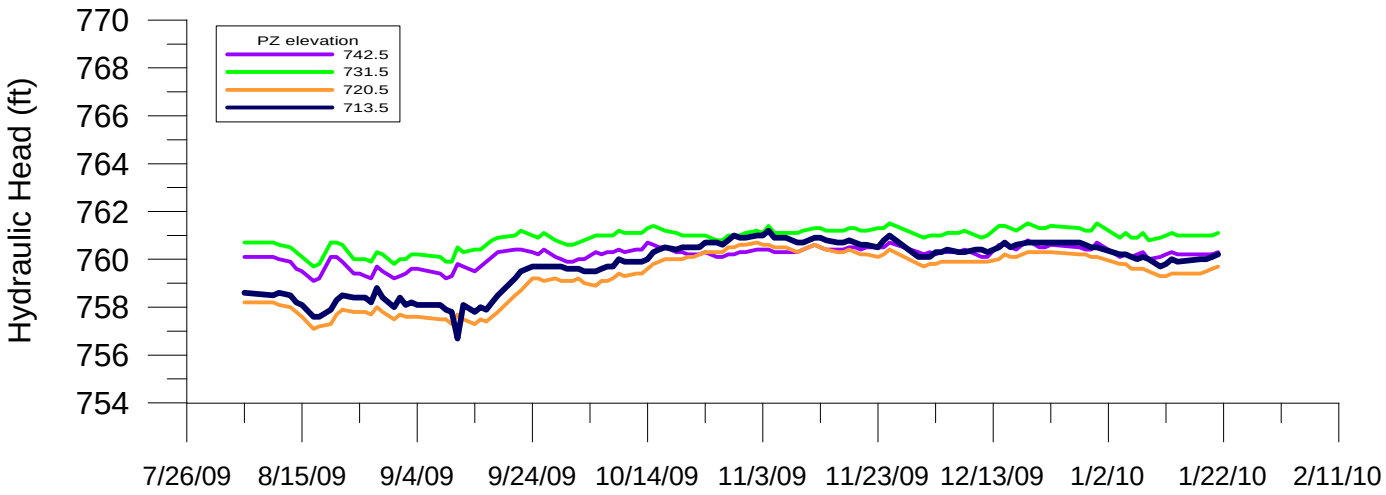
Stantec

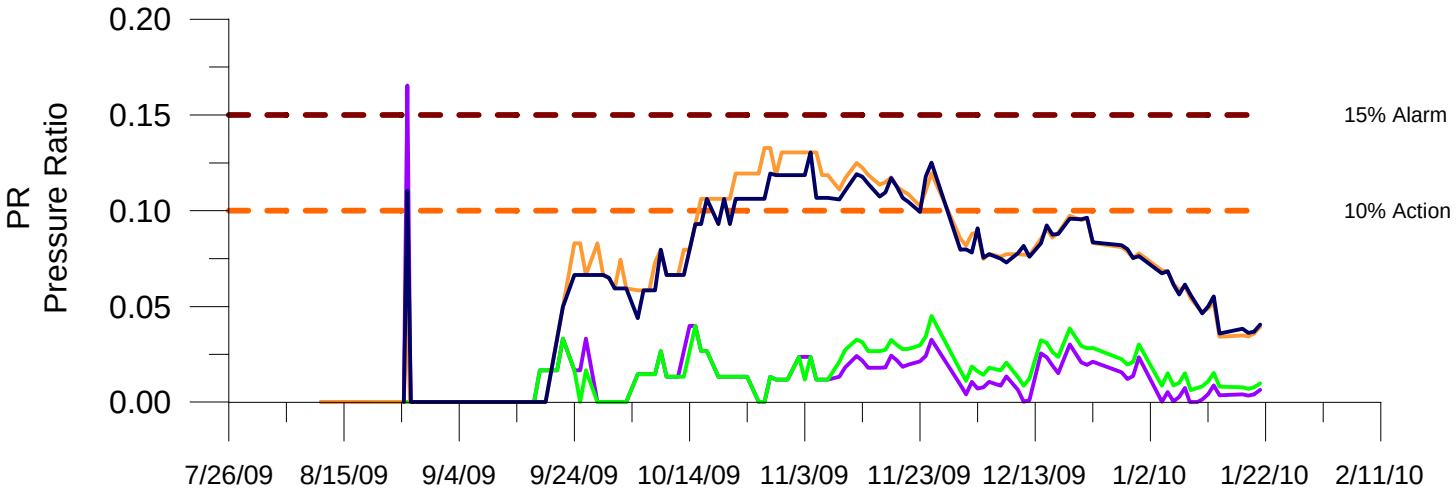
Kingston Test Embankment
175669015

Survey Section 2

PZ-2







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

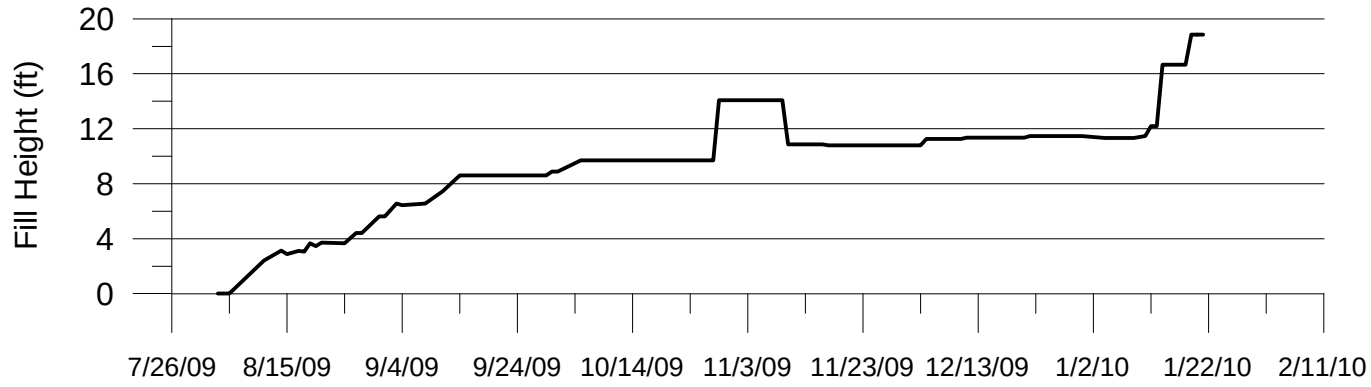
* △Z= Fill Height x 110 (pcf)

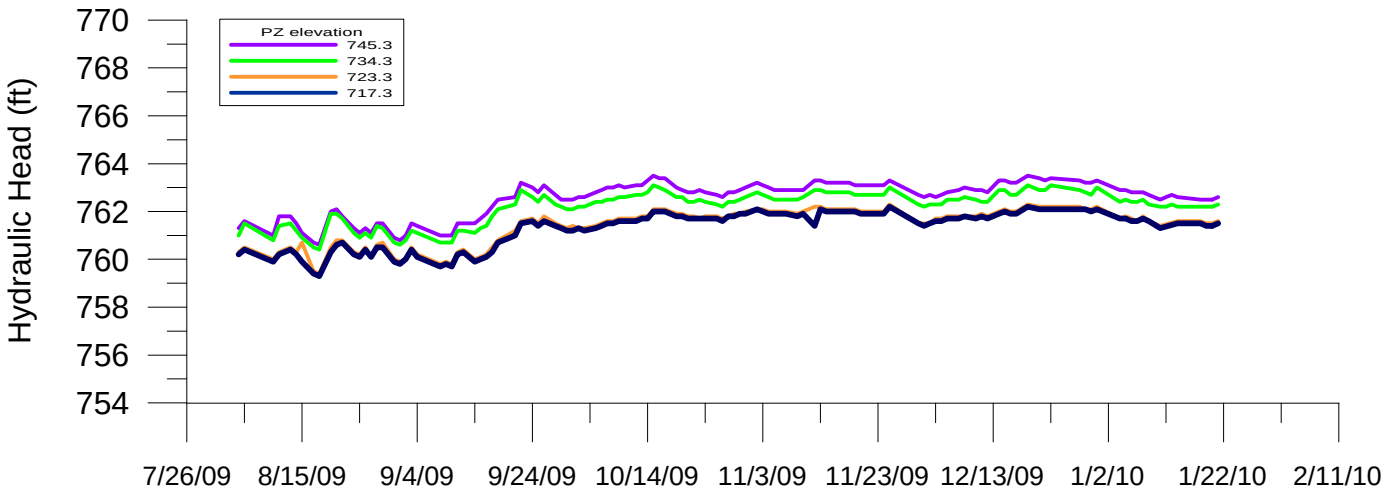
Stantec

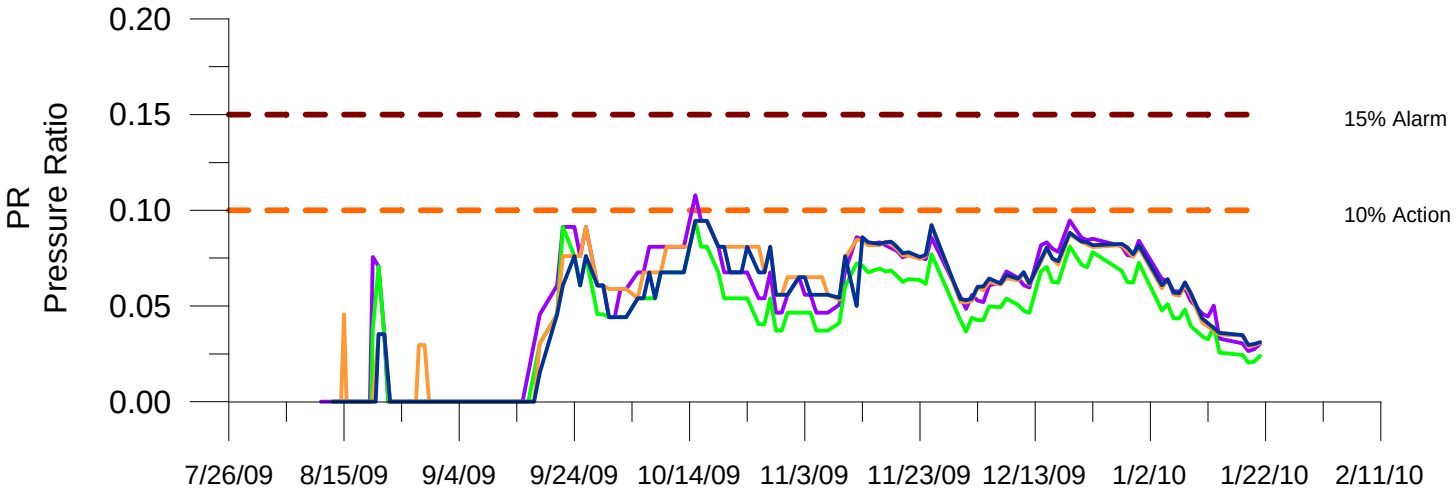
Survey Section 3

Kingston Test Embankment
175669015

PZ-3







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

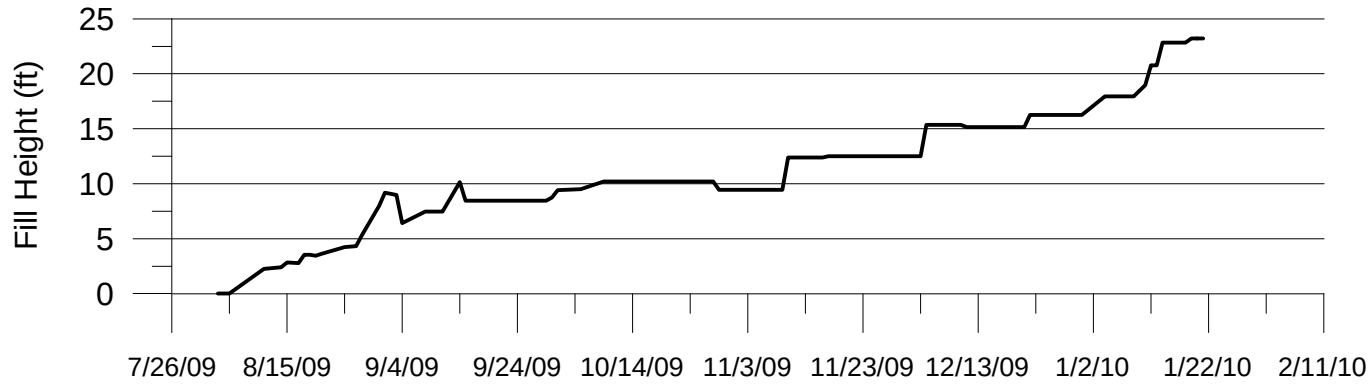
* △Z= Fill Height x 110 (pcf)

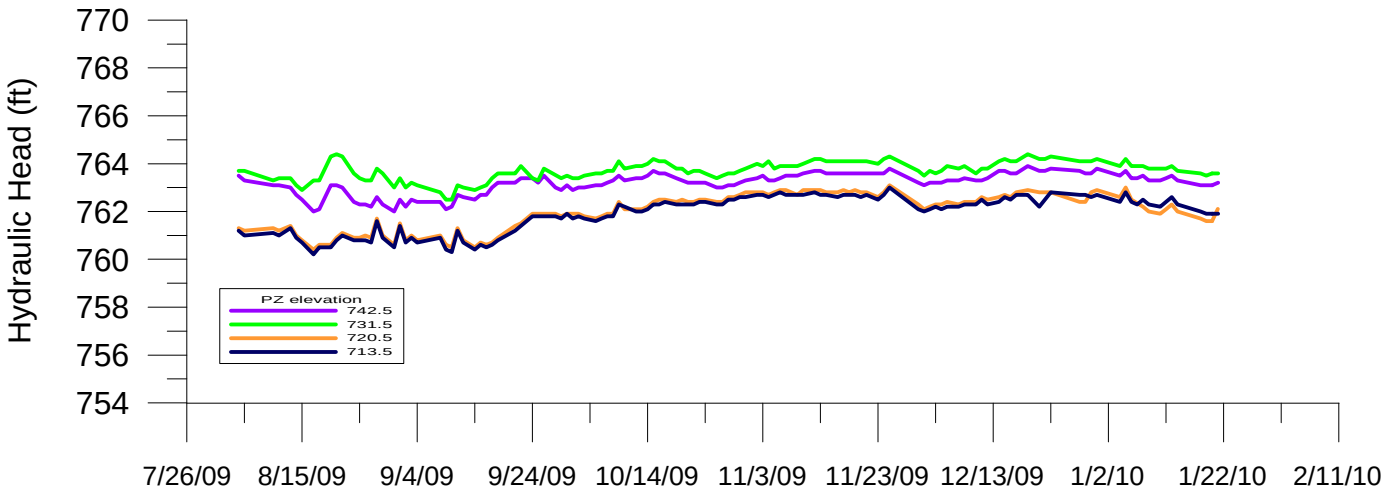
Stantec

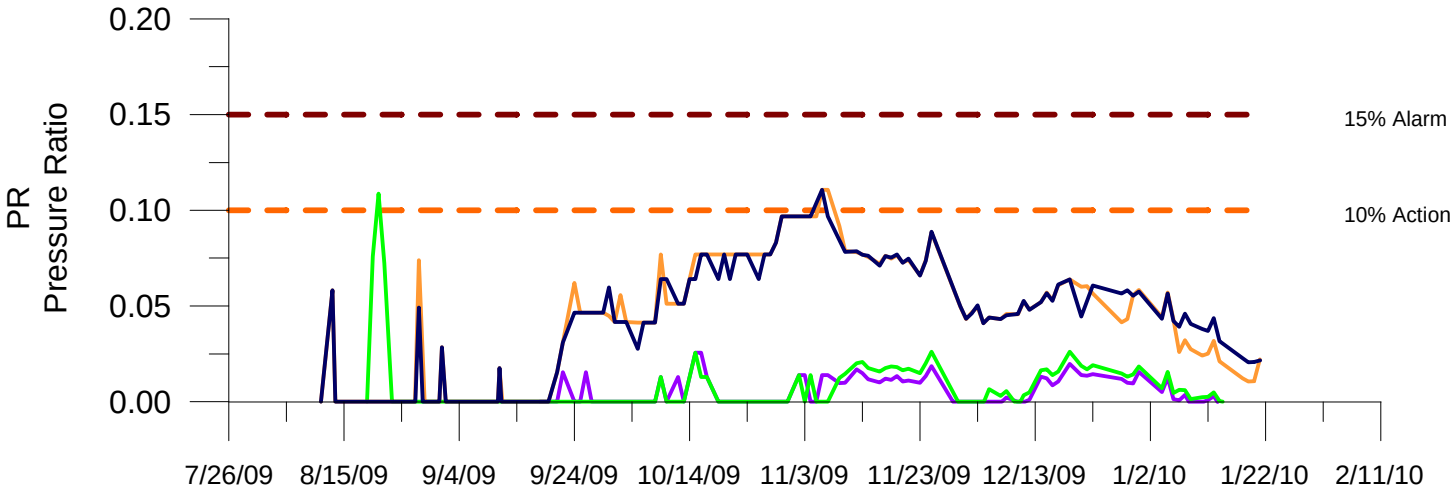
Survey Section 2

Kingston Test Embankment
175669015

PZ-4







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

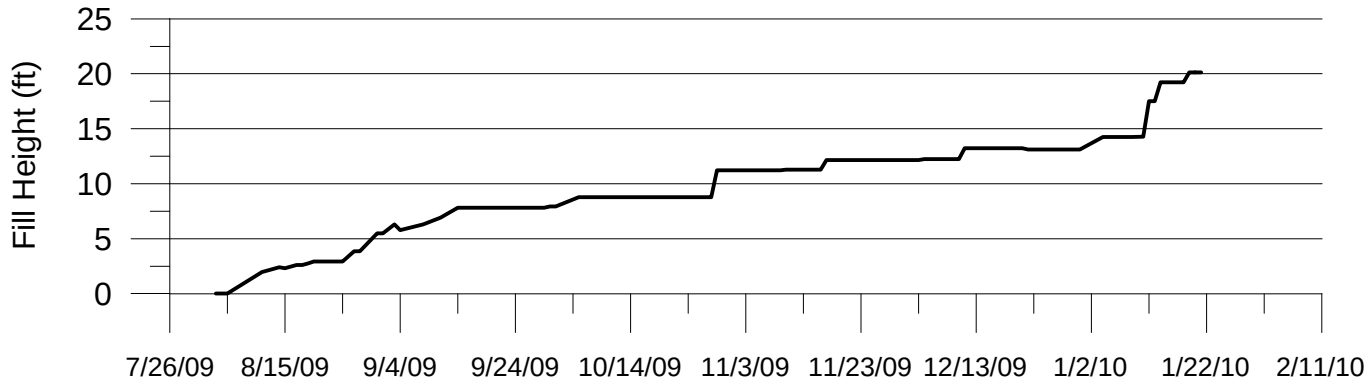
* △Z= Fill Height x 110 (pcf)

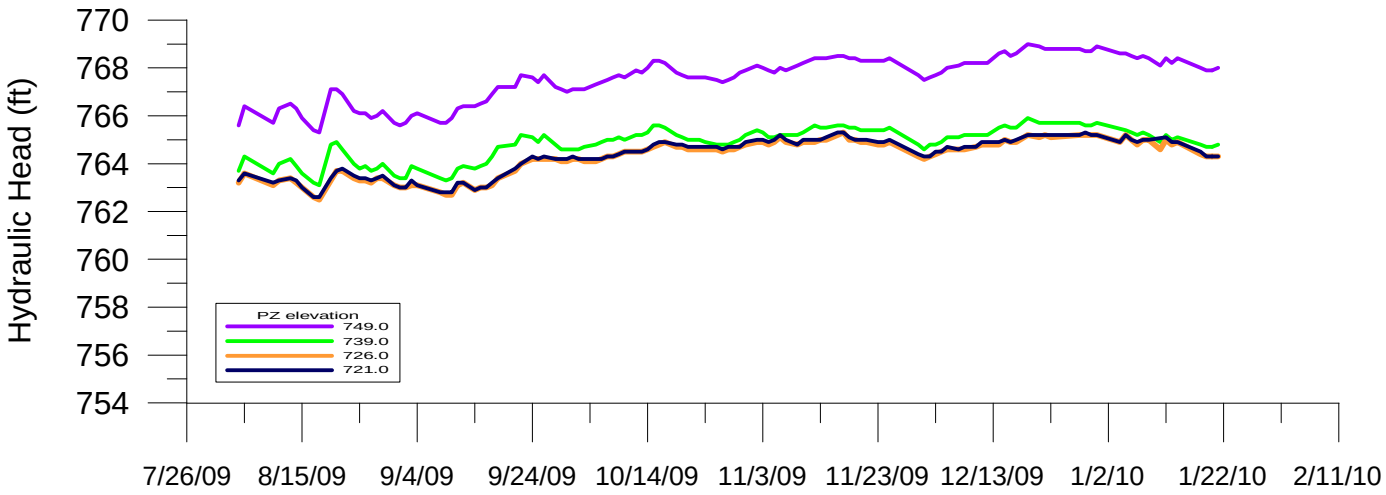
Stantec

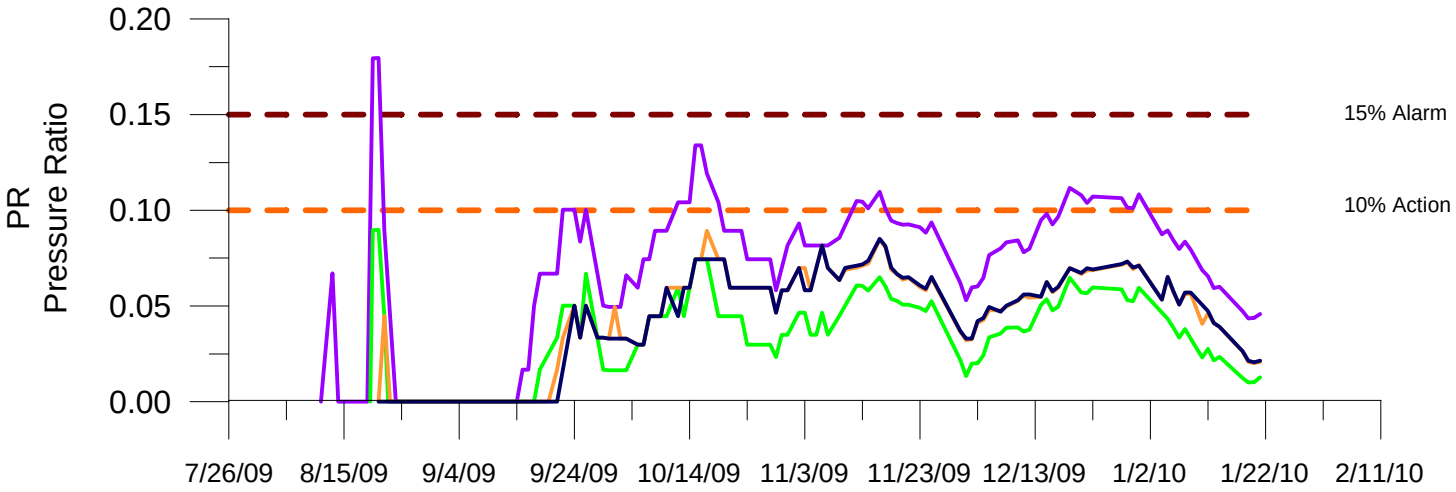
Kingston Test Embankment
175669015

Survey Section 3

PZ-5







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

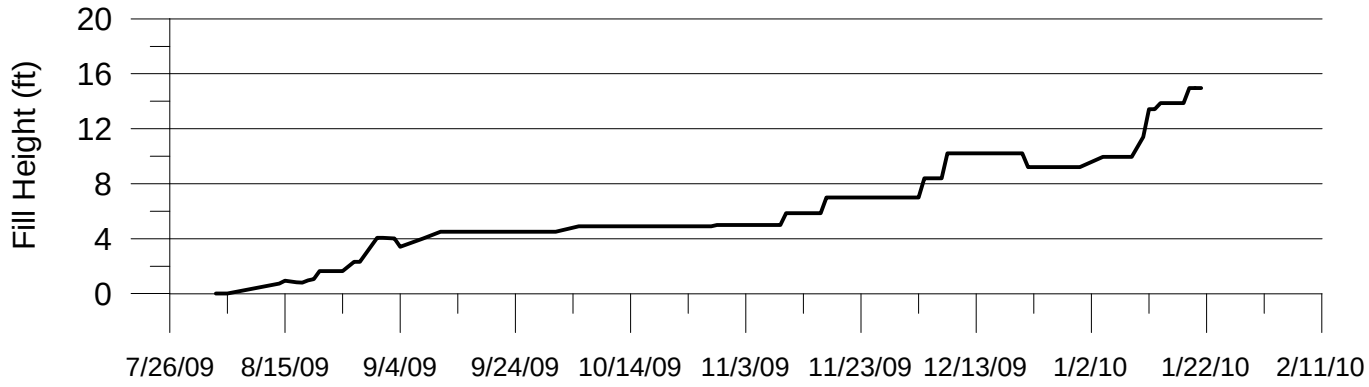
* △Z= Fill Height x 110 (pcf)

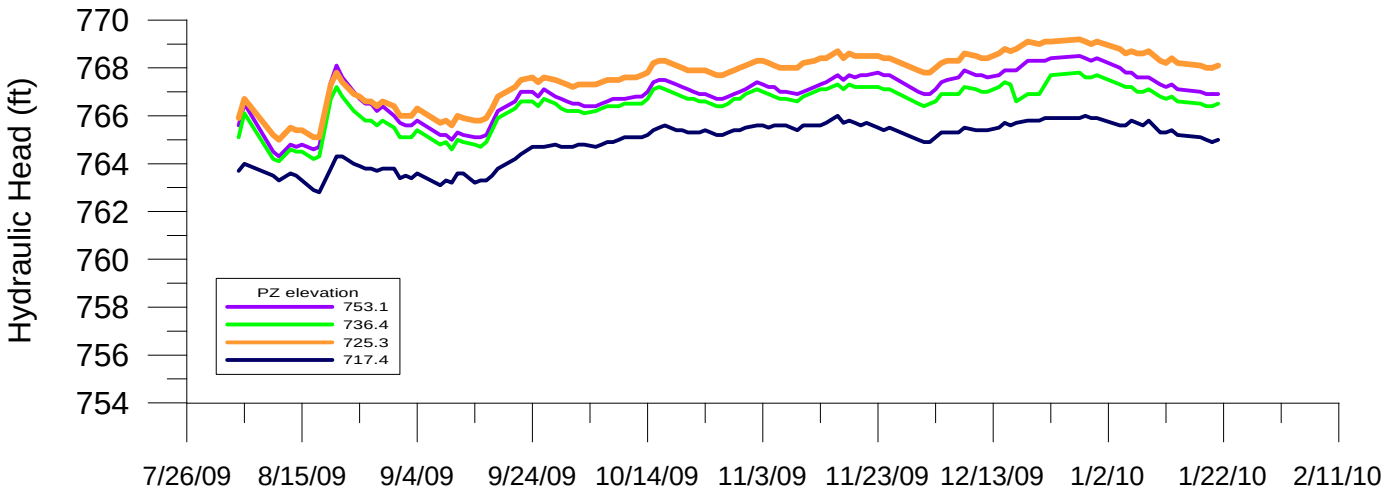
Stantec

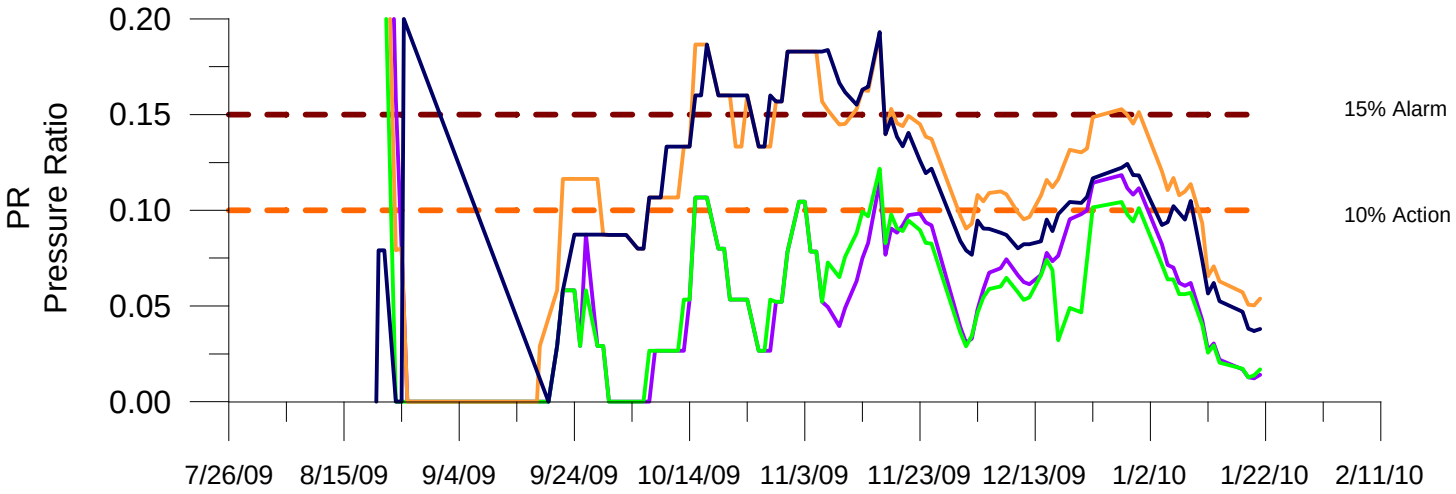
Kingston Test Embankment
175669015

Survey Section 4

PZ-6







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

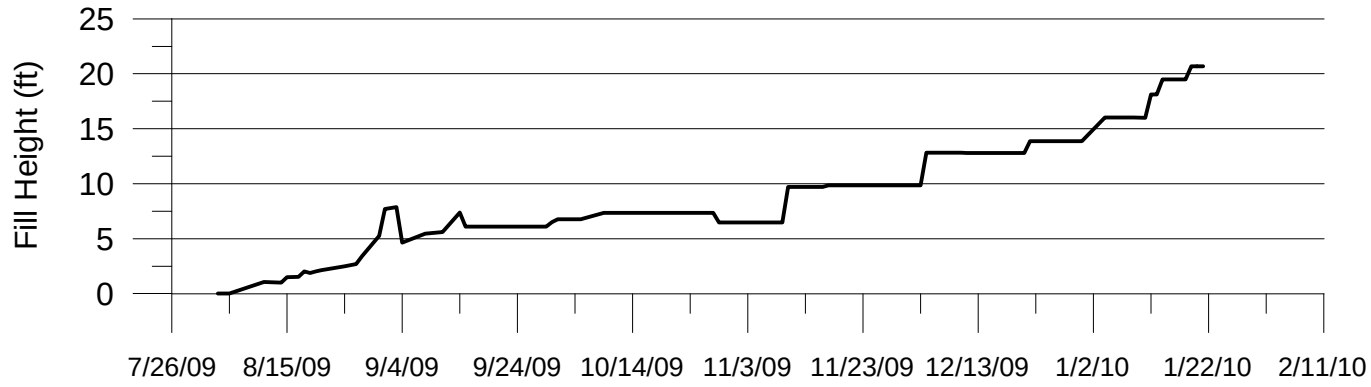
* △Z= Fill Height x 110 (pcf)

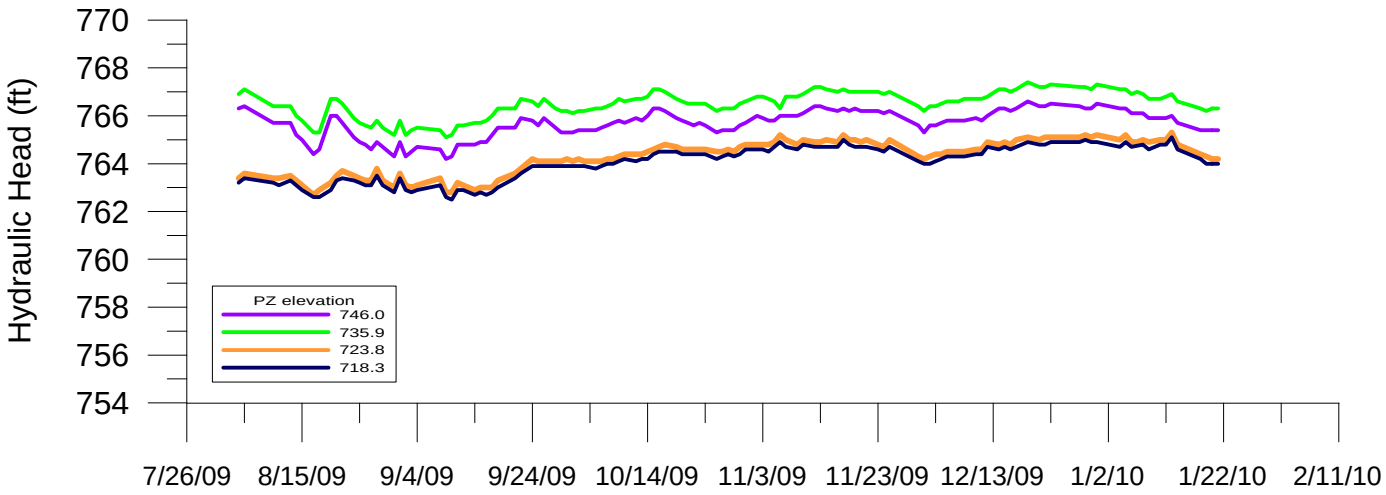
Stantec

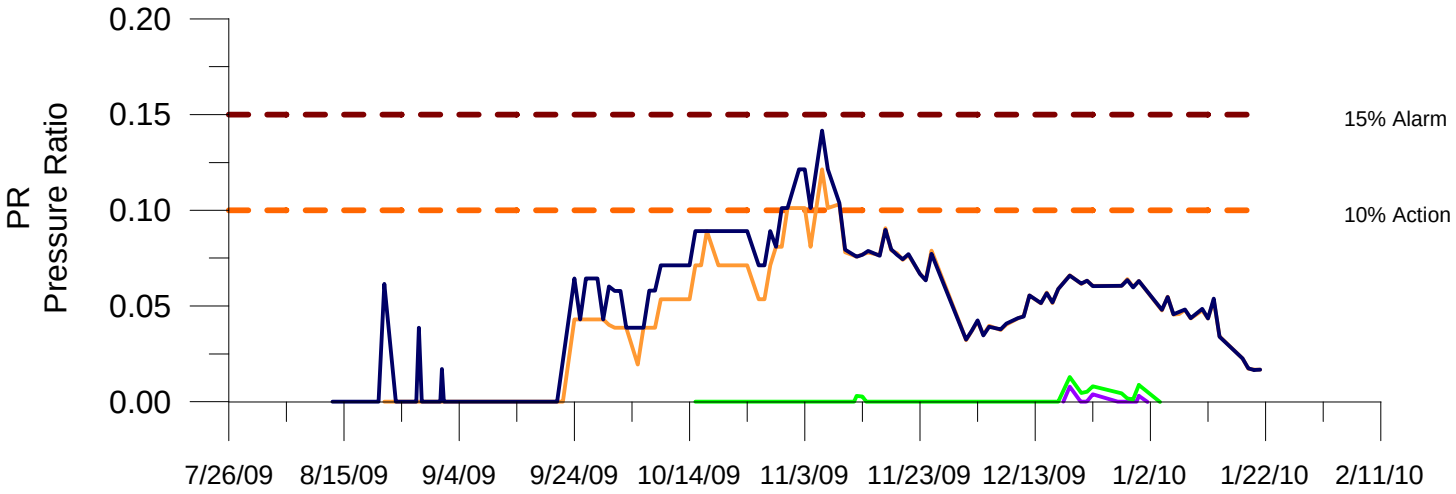
Kingston Test Embankment
175669015

Survey Section 2

PZ-7







* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

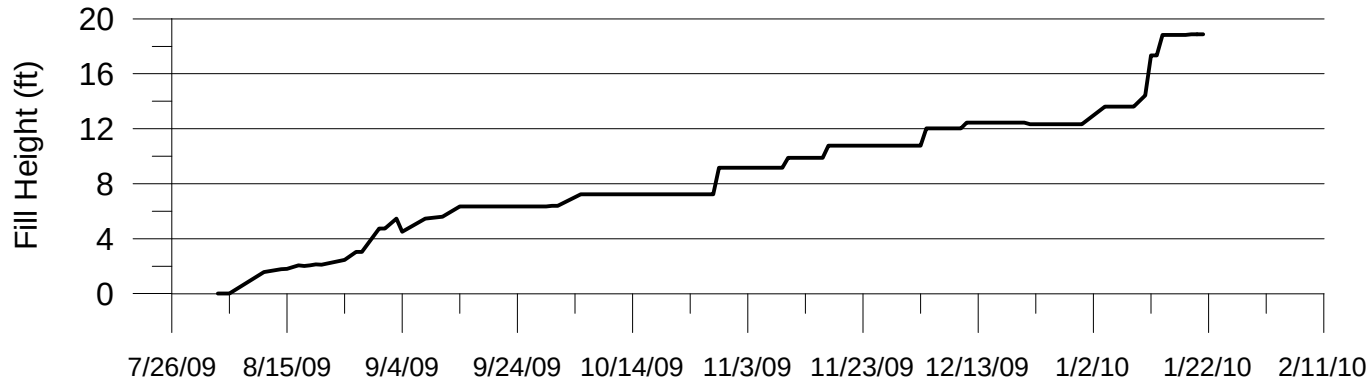
* △Z= Fill Height x 110 (pcf)

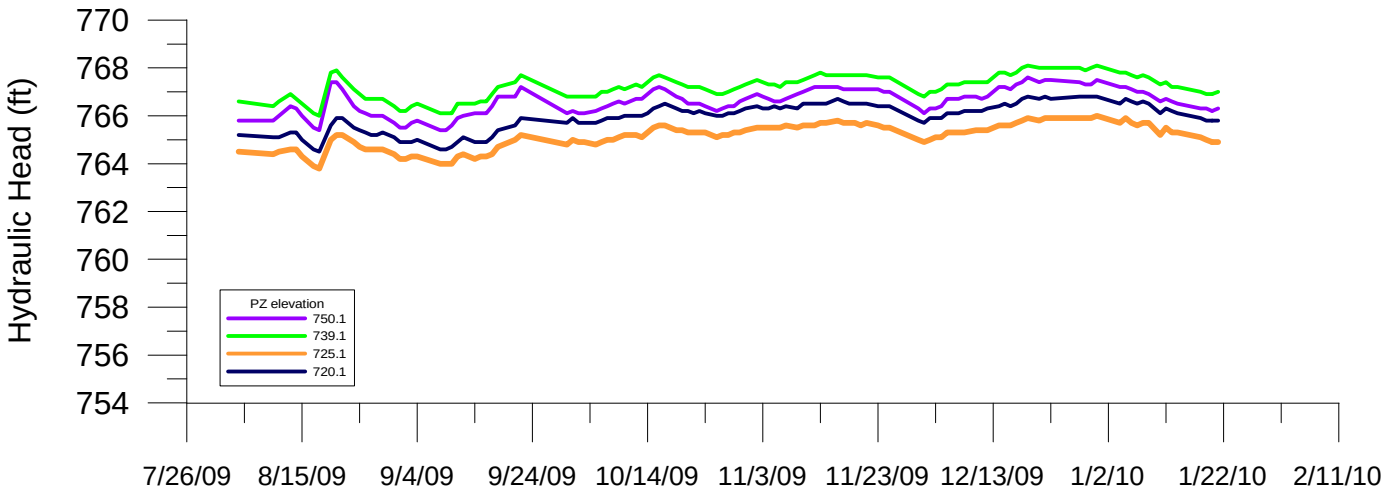
Stantec

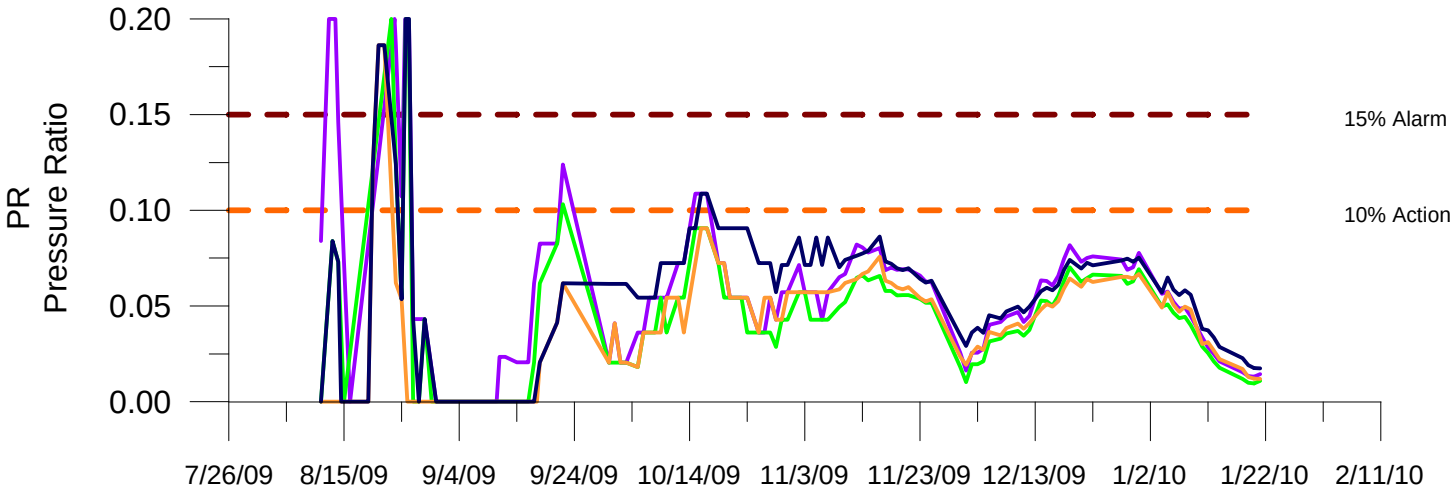
Kingston Test Embankment
175669015

Survey Section 3

PZ-8







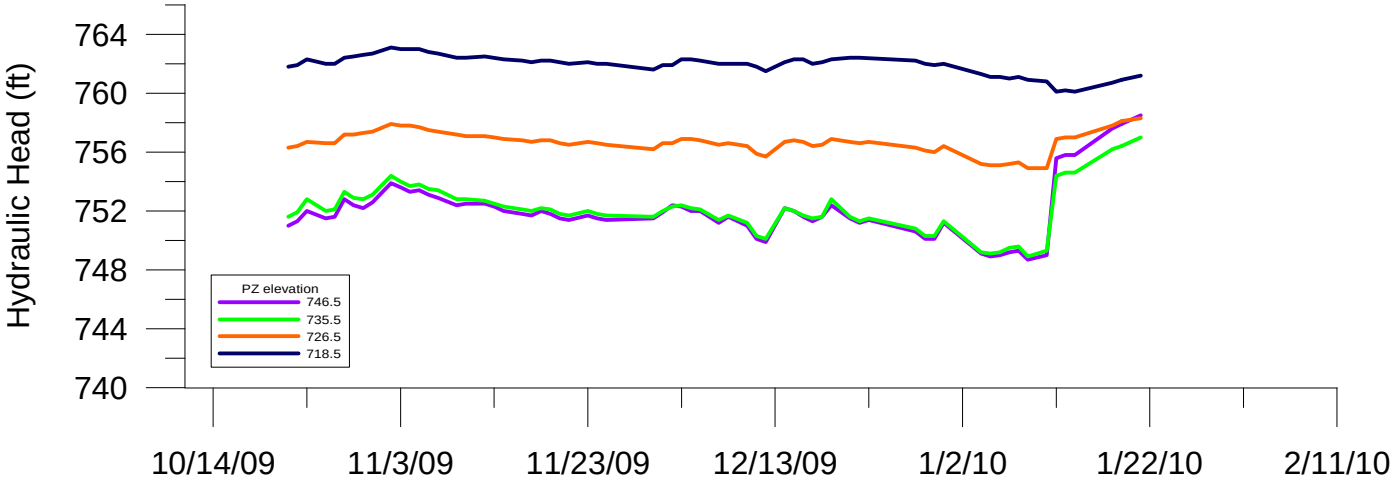
* PR(Pressure Ratio) = △U/△Z

* △U= Change in Pore Pressure (psf)

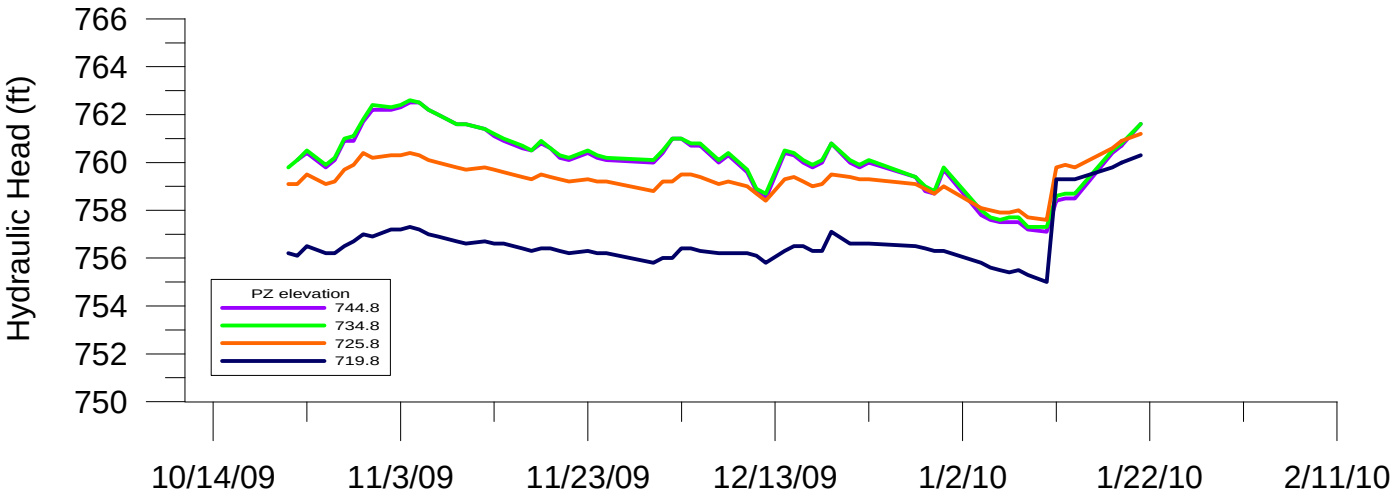
* △Z= Fill Height x 110 (pcf)

Kingston Test Embankment
175669015

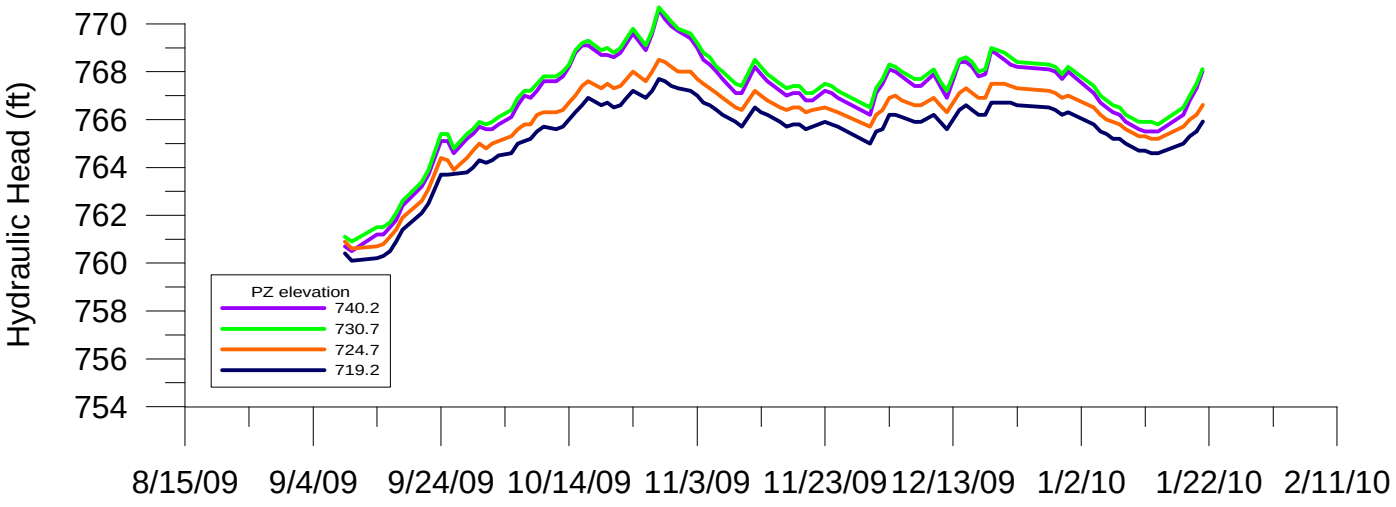
PZ-9



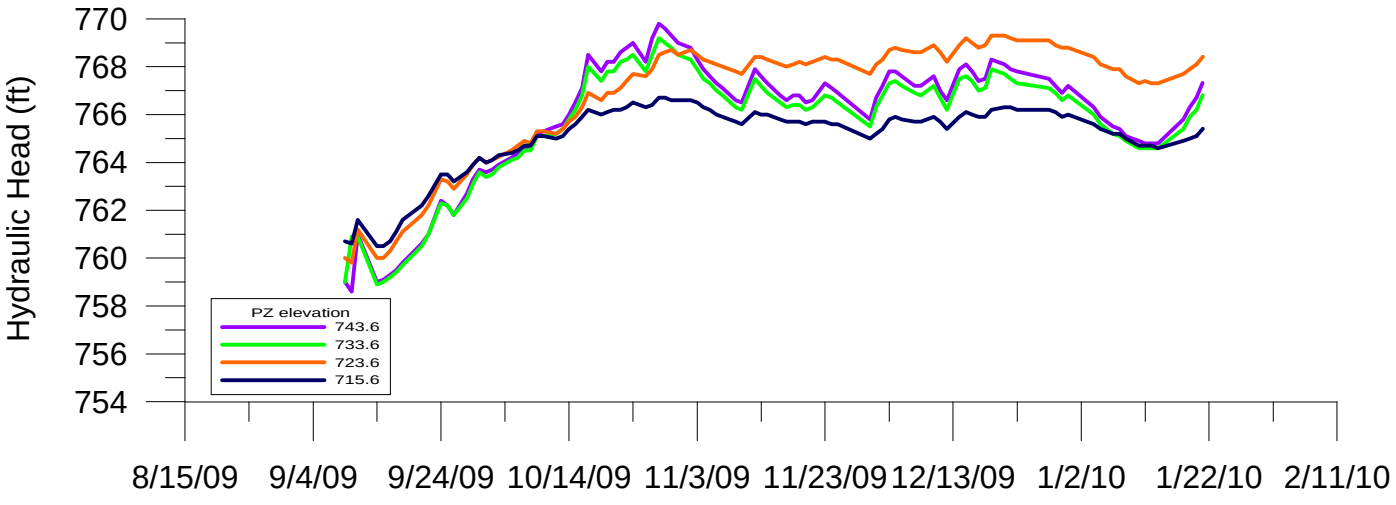
PZ-11



PZ-12


Hydraulic Head (ft)
770
768
766
764
762
760
758
756
754
PZ elevation
740.2
730.7
724.7
719.2
8/15/09
9/4/09
9/24/09
10/14/09
11/3/09
11/23/09
12/13/09
1/2/10
1/22/10
2/11/10

PZ-13

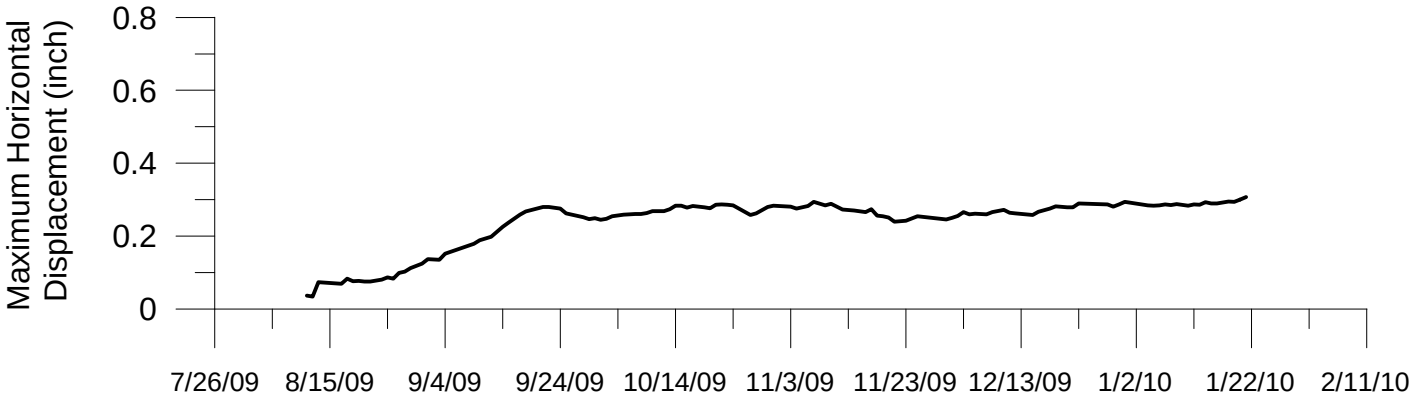

Hydraulic Head (ft)
770
768
766
764
762
760
758
756
754
PZ elevation
743.6
733.6
723.6
715.6
8/15/09
9/4/09
9/24/09
10/14/09
11/3/09
11/23/09
12/13/09
1/2/10
1/22/10
2/11/10

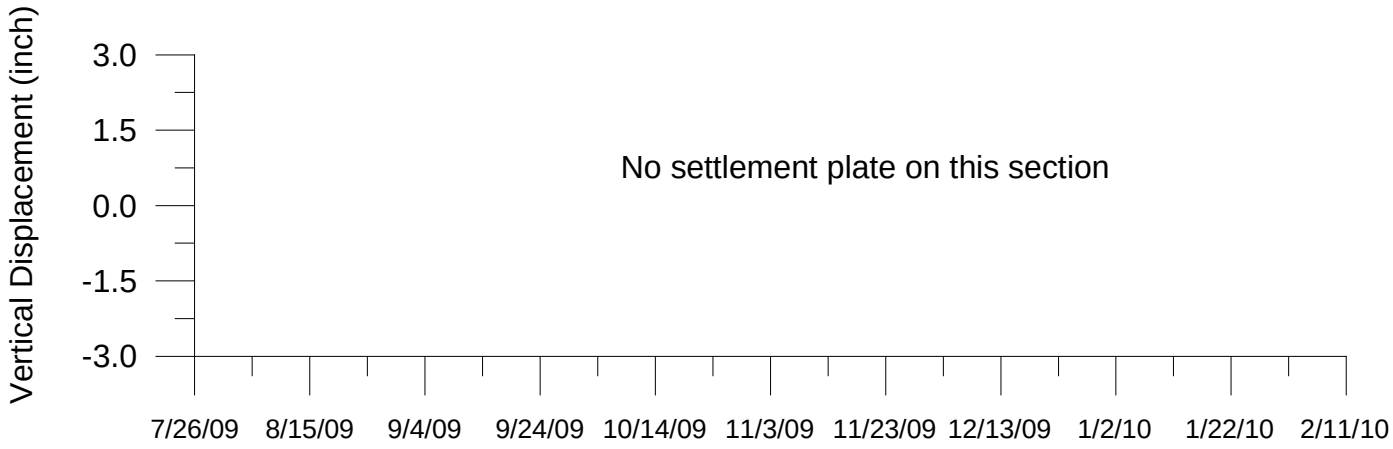
Stantec

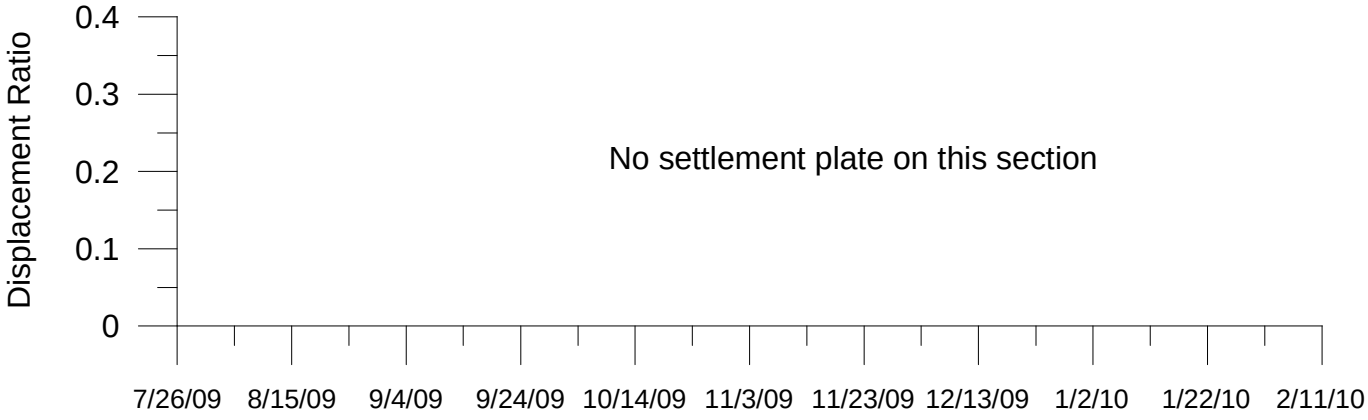
Kingston Test Embankment
175669015

Survey Section 1

SI-2







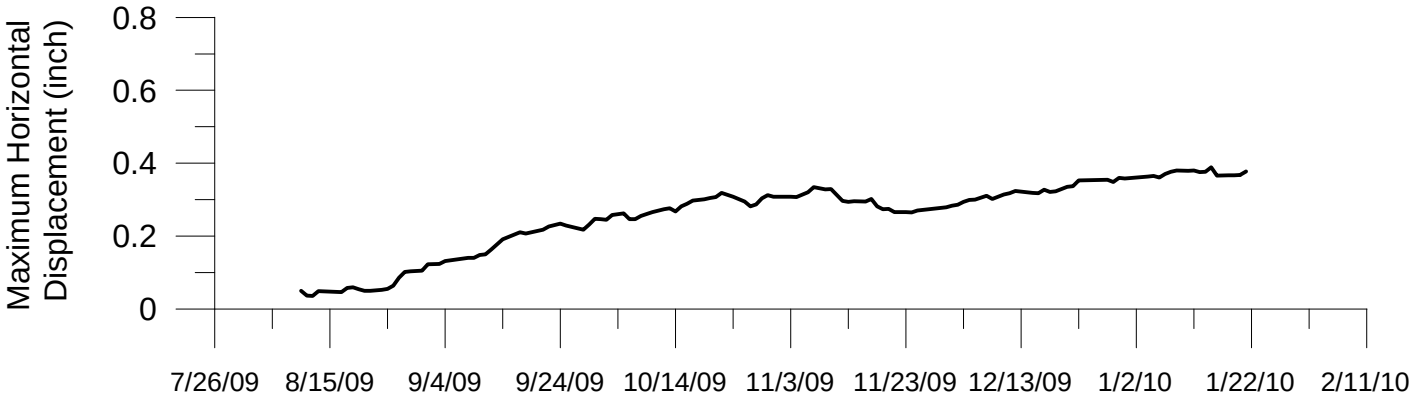
* DR (Displacement Ratio) = Max Horizontal Displacement / Vertical Displacement

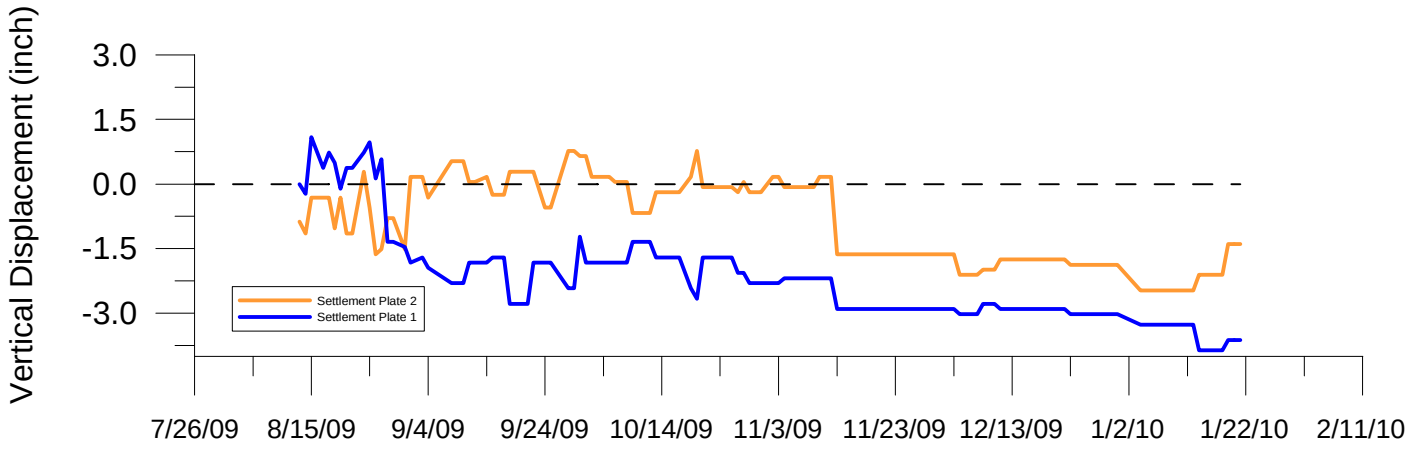
Stantec

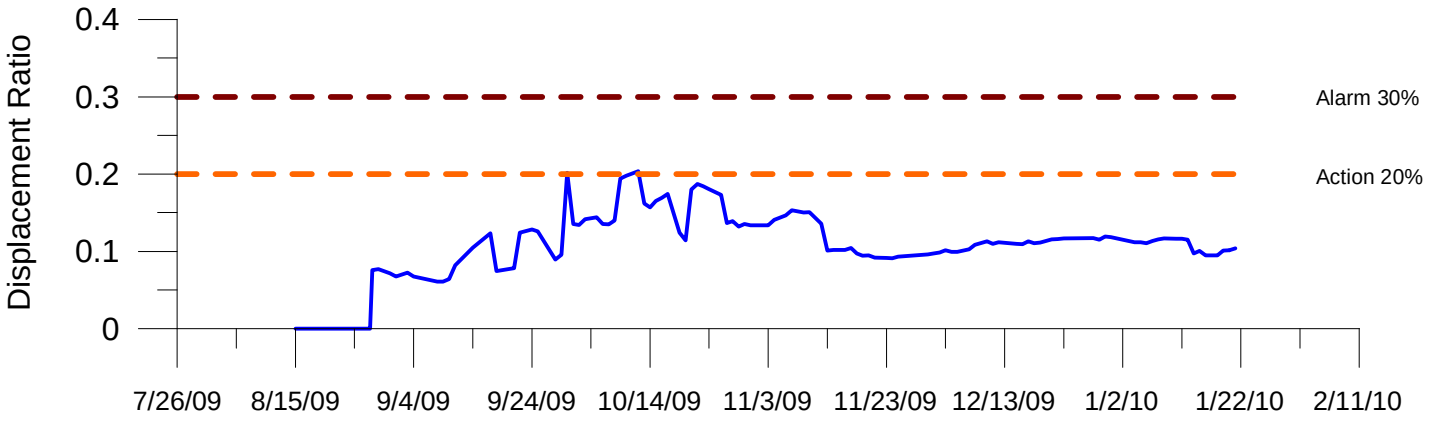
Kingston Test Embankment
175669015

Survey Section 2

SI-3







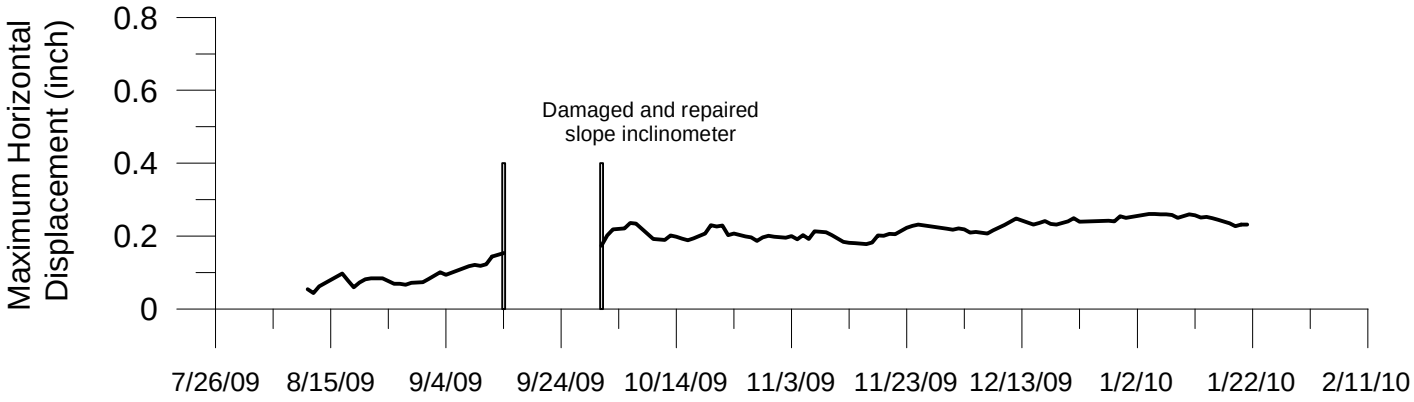
* DR (Displacement Ratio) = Max Horizontal Displacement / Vertical Displacement

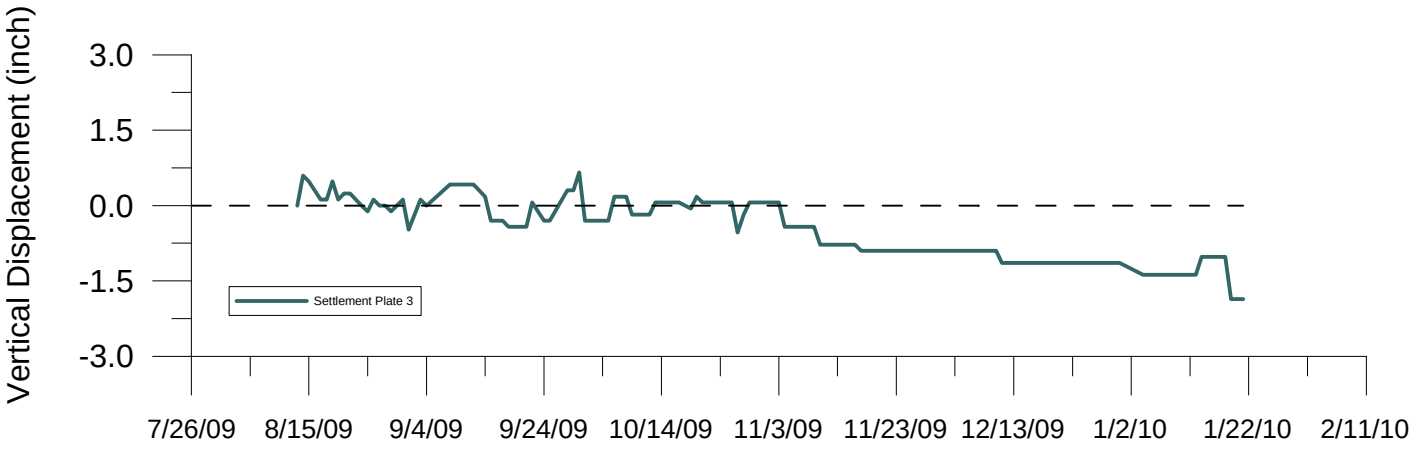
Stantec

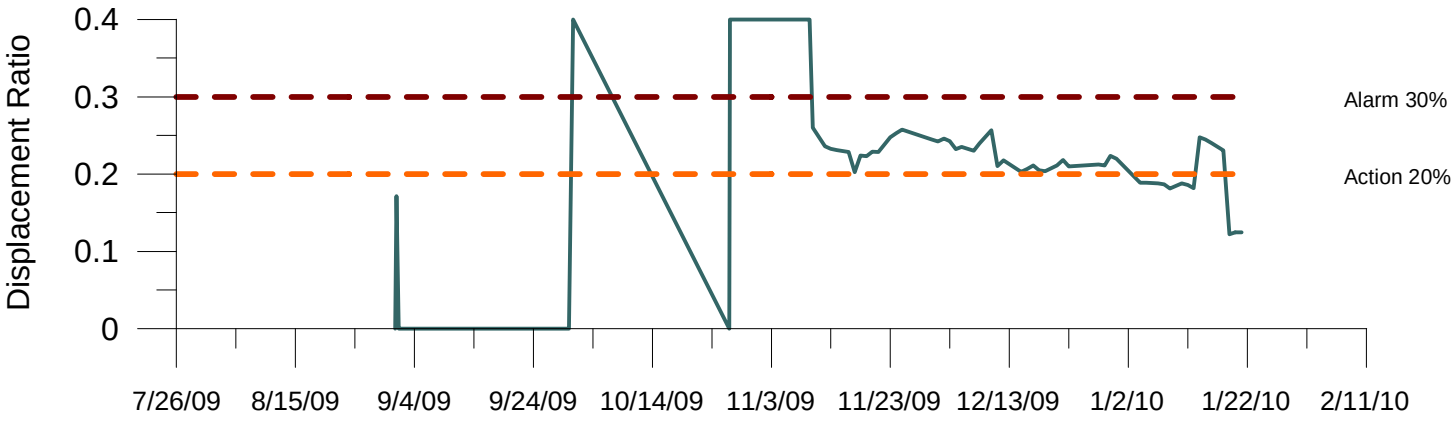
Kingston Test Embankment
175669015

Survey Section 3

SI-4







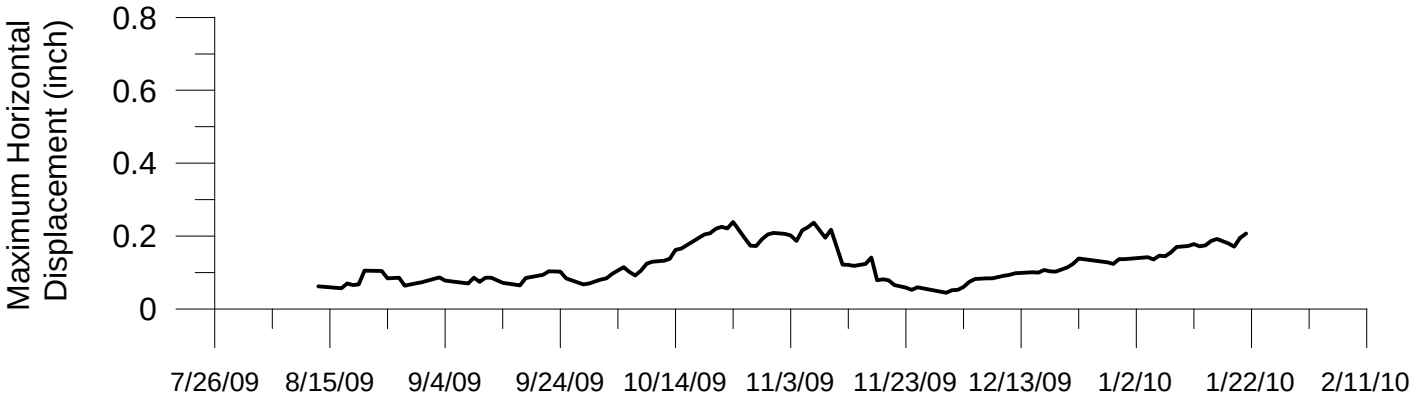
* DR (Displacement Ratio) = Max Horizontal Displacement / Vertical Displacement

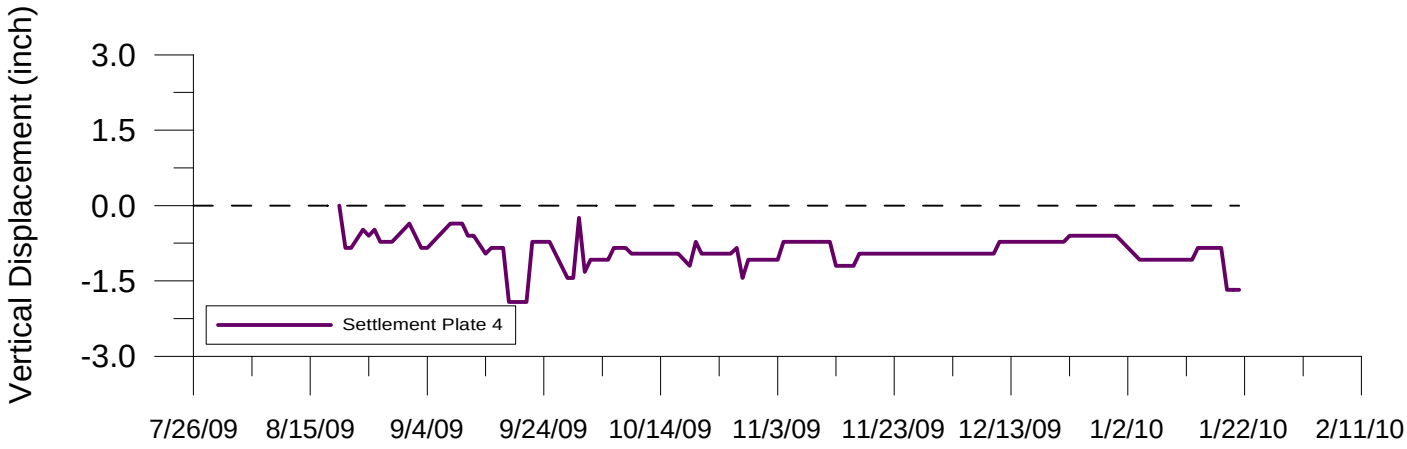
Stantec

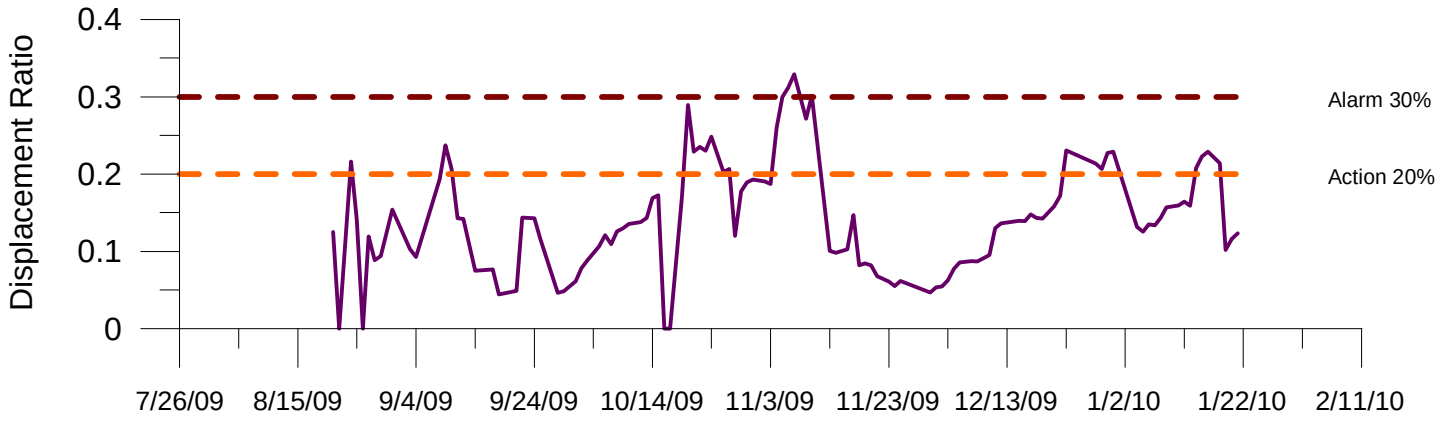
Kingston Test Embankment
175669015

Survey Section 4

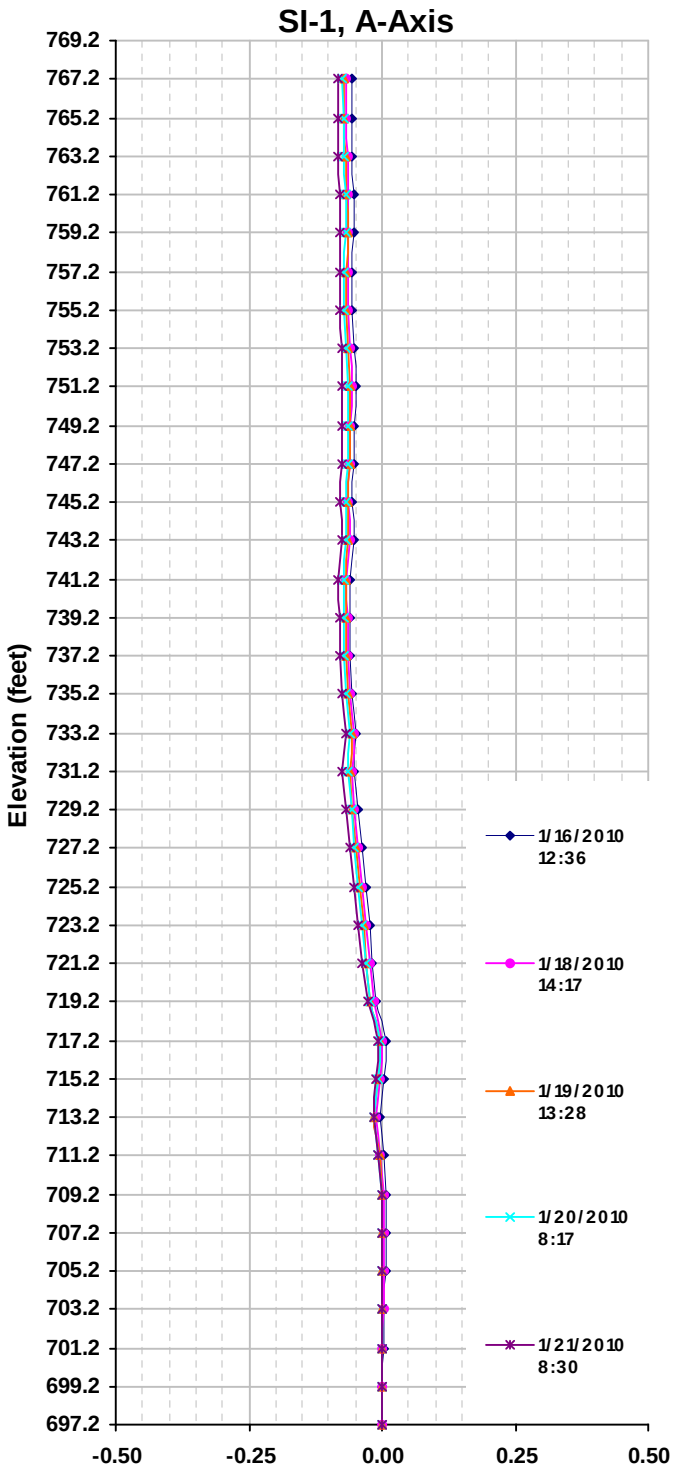
SI-5



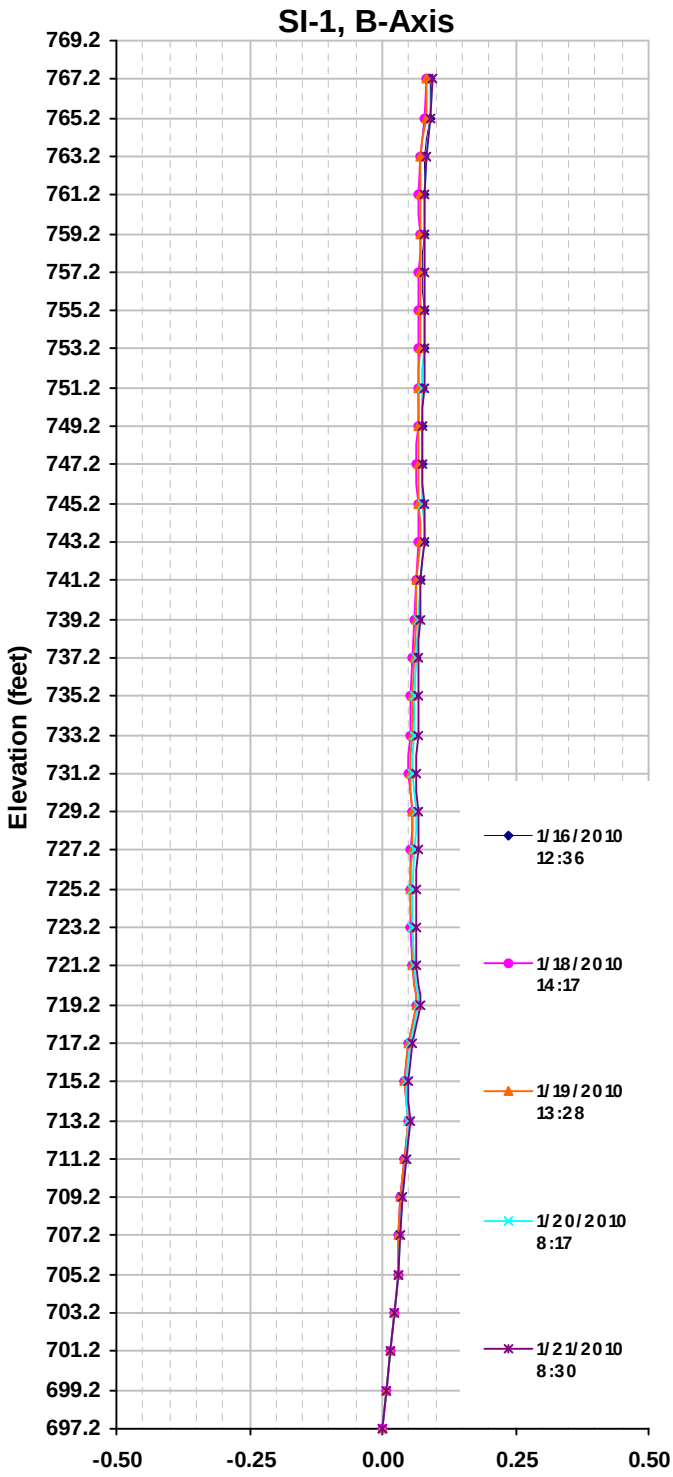




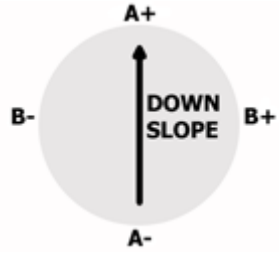
* DR (Displacement Ratio) = Max Horizontal Displacement / Vertical Displacement



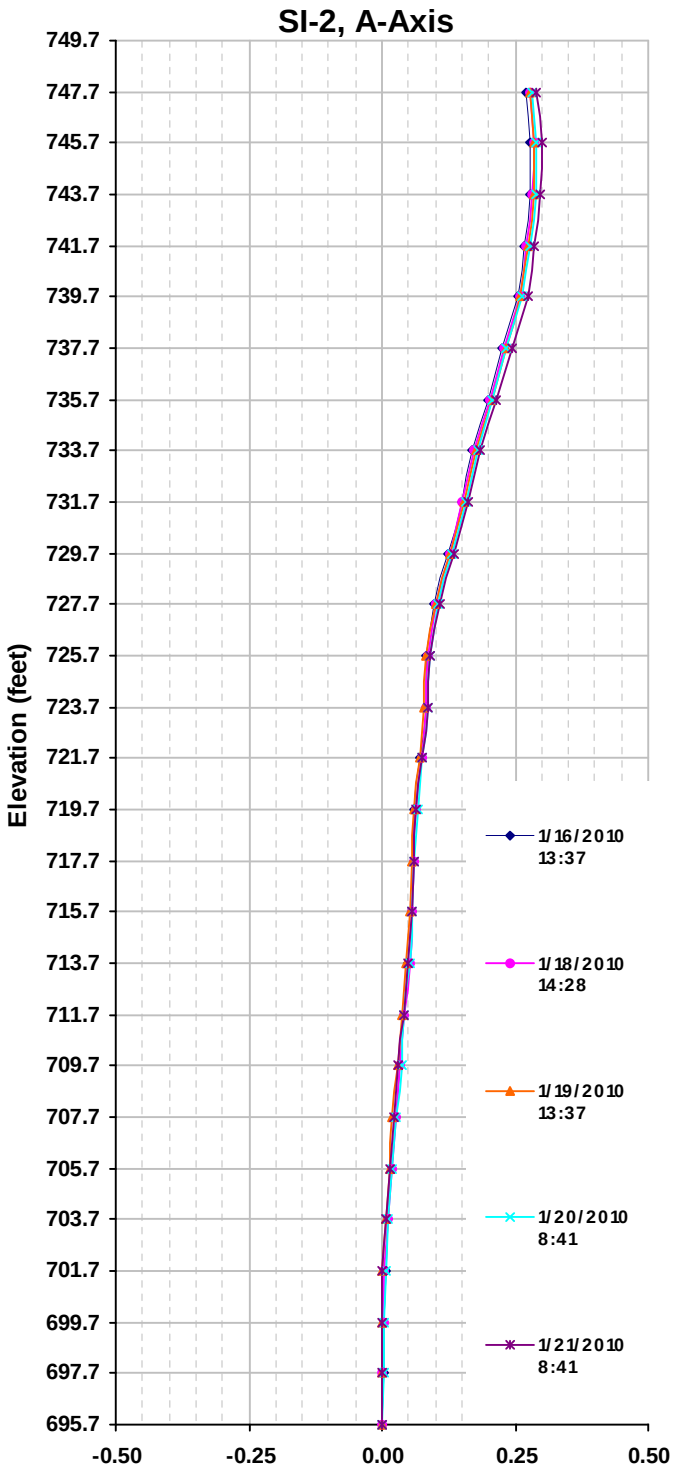
Maximum Displacement: .0840 (in)
Initial date: 8/8/2009



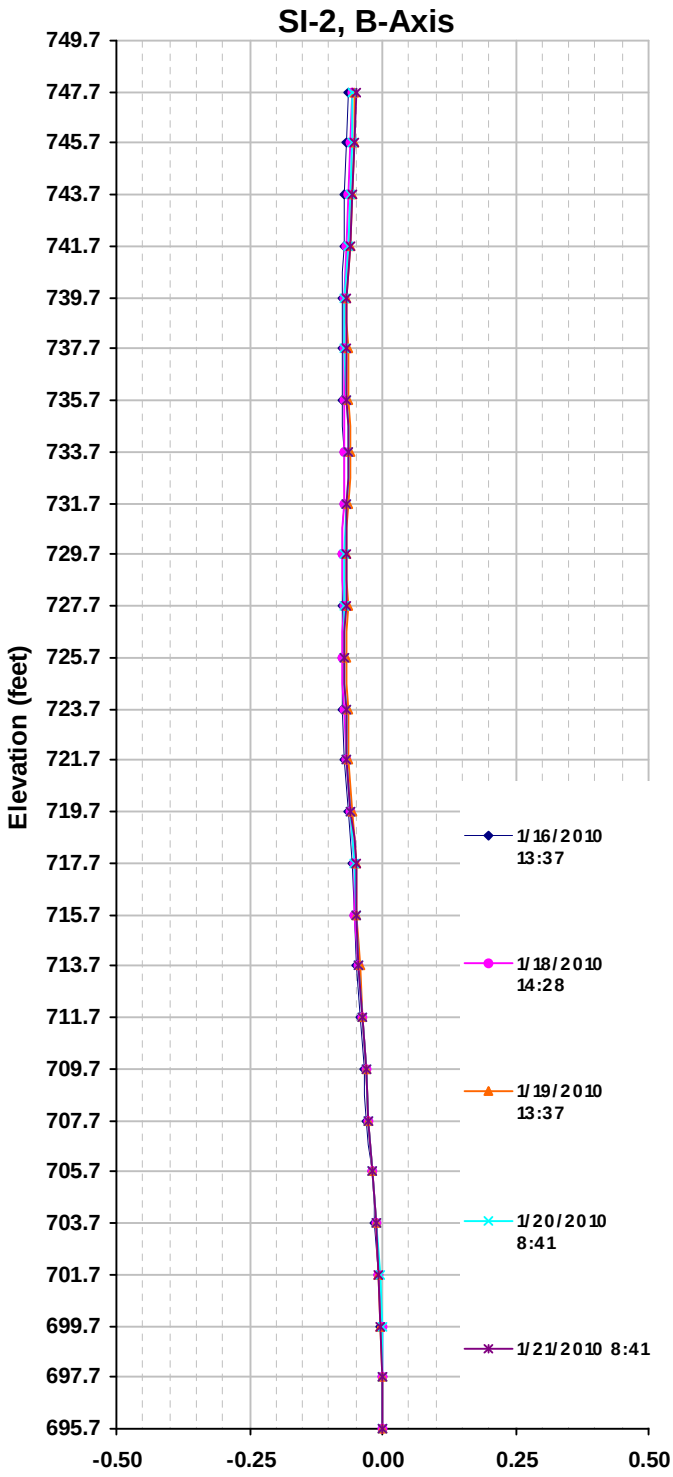
Maximum Displacement: .0936 (in)
Initial date: 8/8/2009



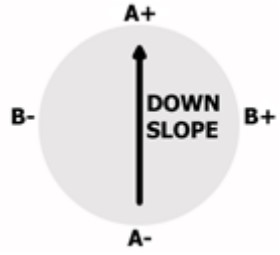
Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
1/22/2010



Maximum Displacement: .2994 (in)
Initial date: 8/8/2009

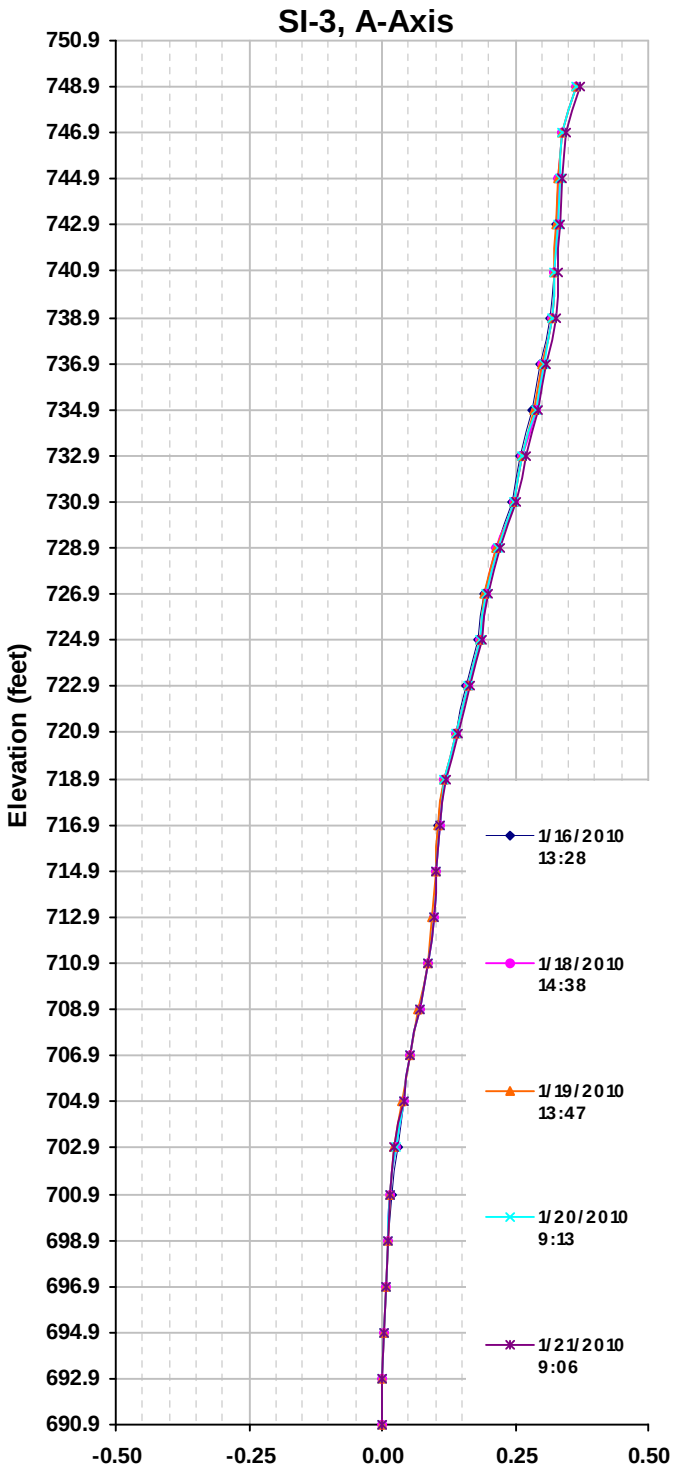


Maximum Displacement: .0768 (in)
Initial date: 8/8/2009

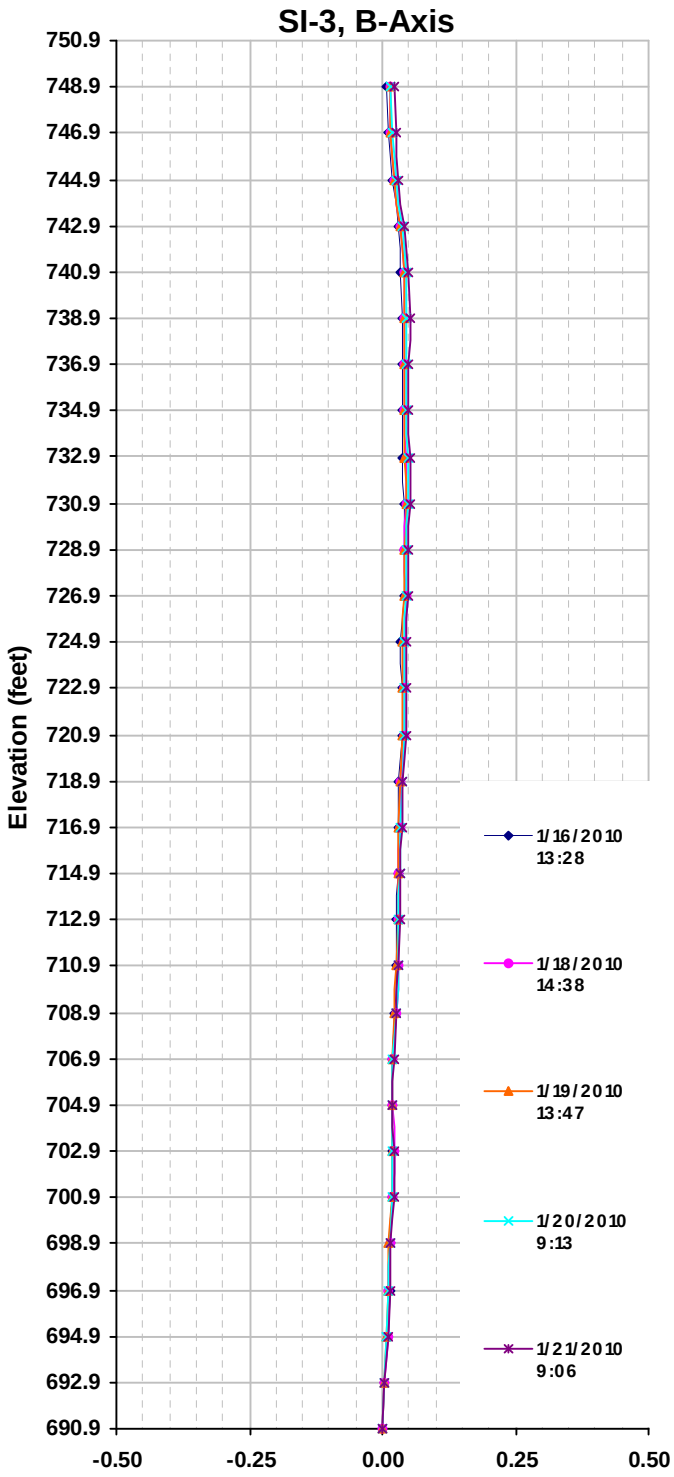


Stantec

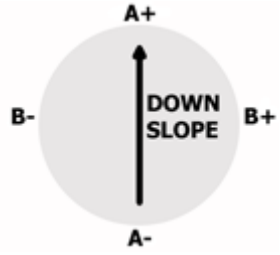
Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
1/22/2010



Maximum Displacement: .3726 (in)
Initial date: 8/8/2009

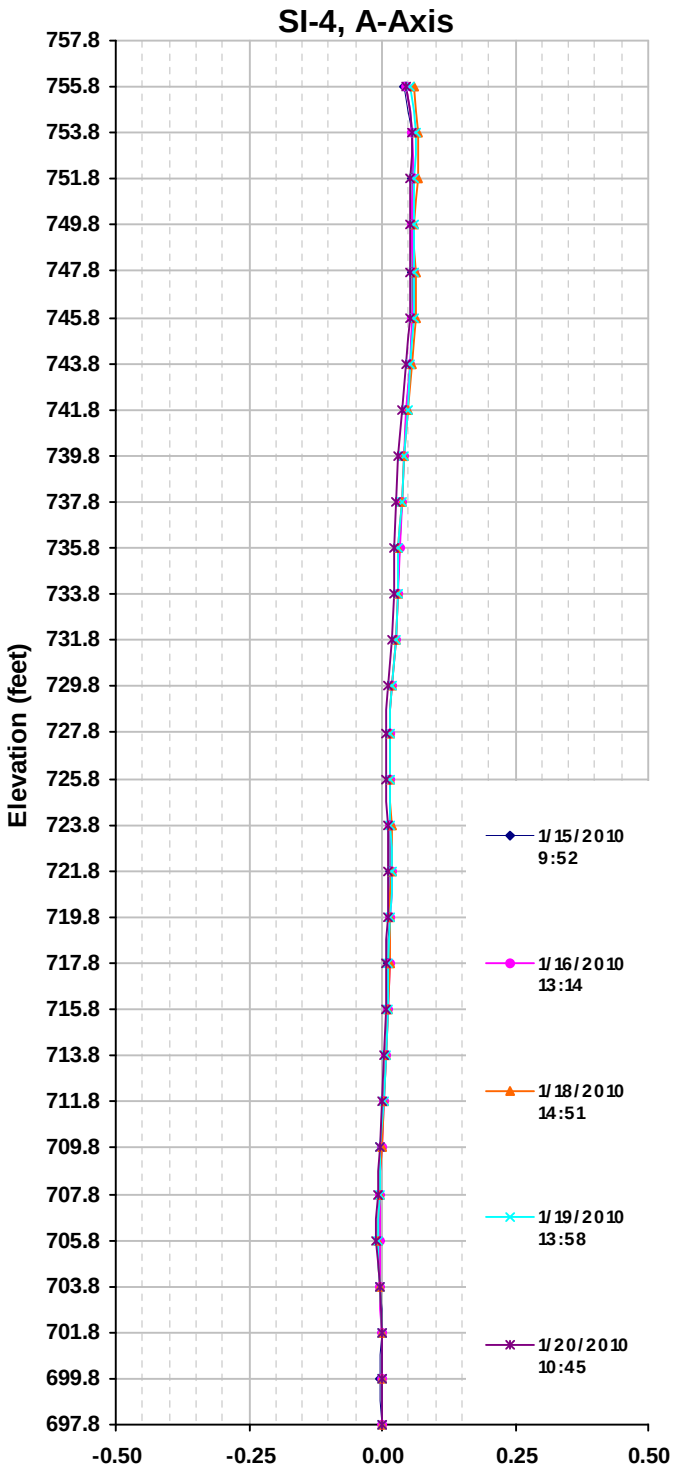


Maximum Displacement: .0522 (in)
Initial date: 8/8/2009

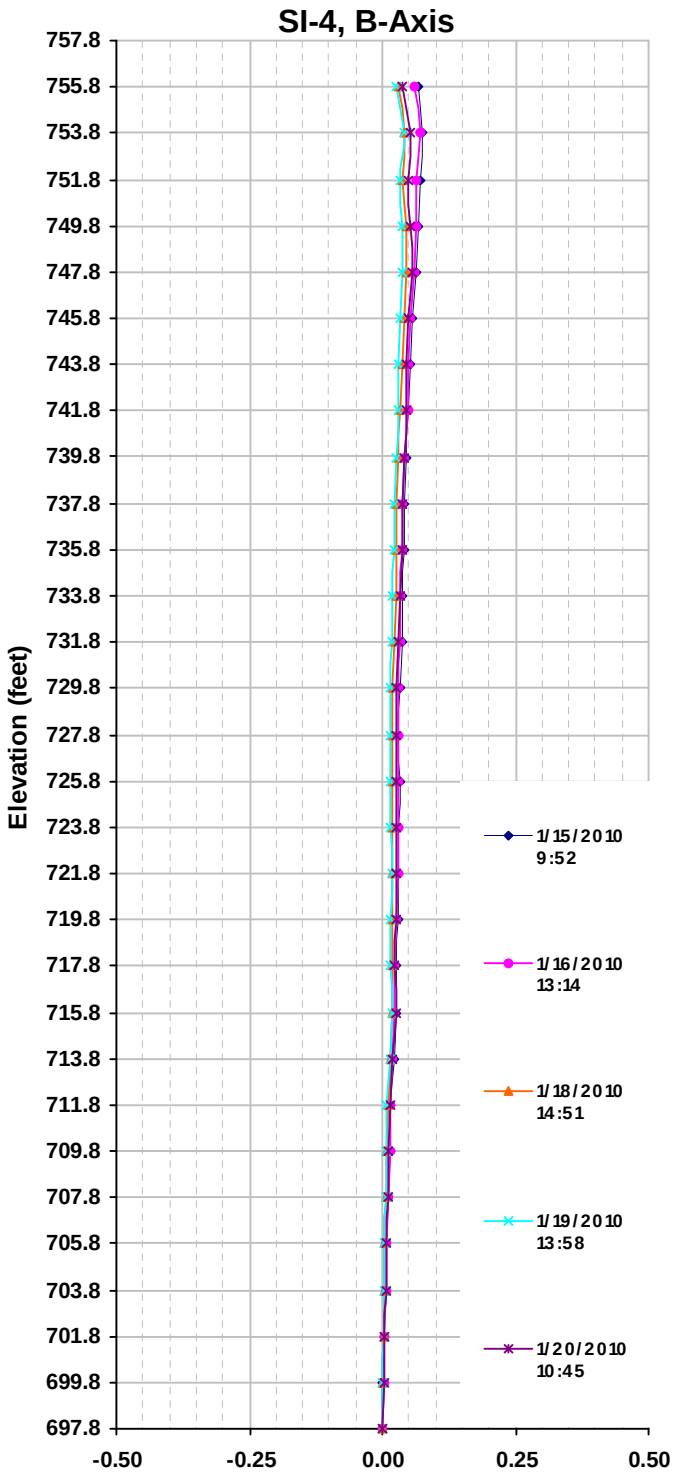


Stantec

Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
1/22/2010

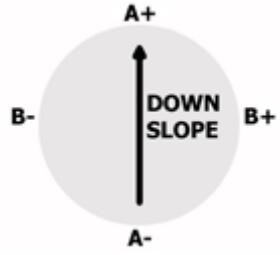


Maximum Displacement: .0684 (in)
Initial date: 10/9/2009

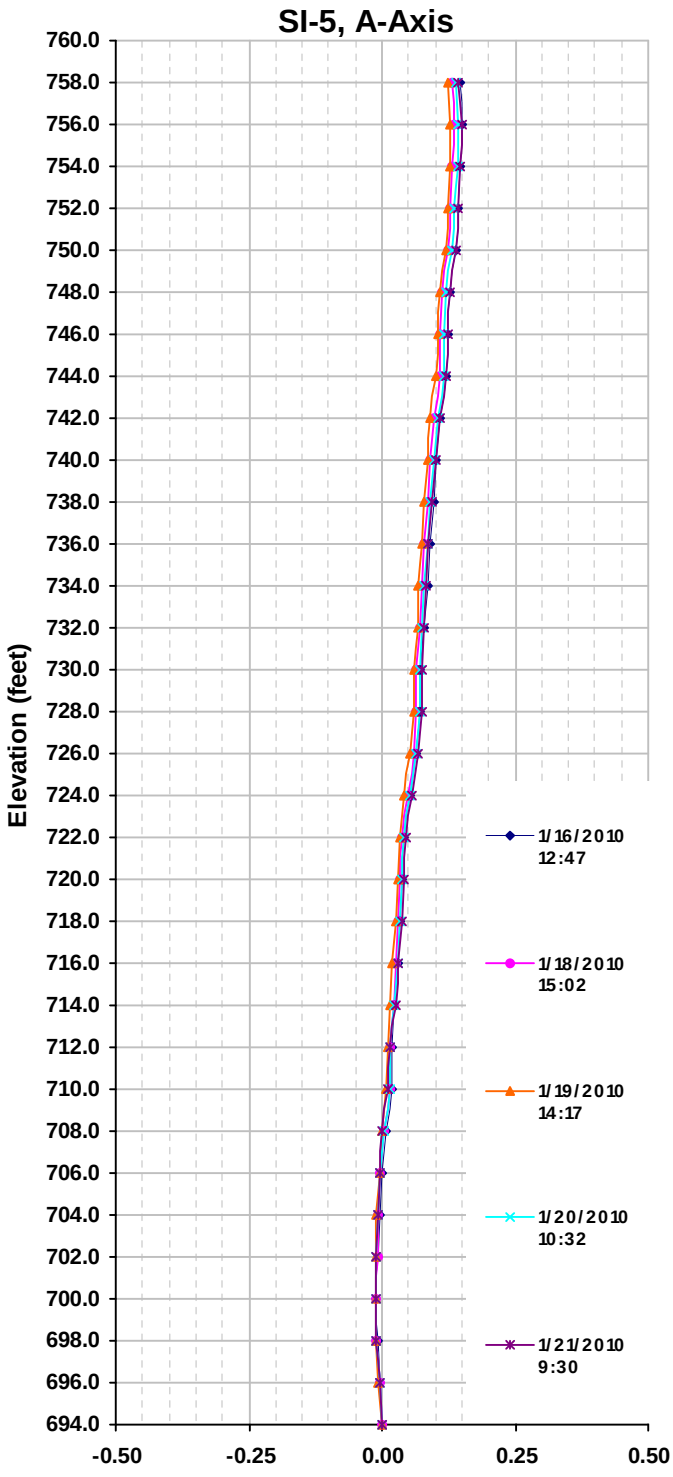


Maximum Displacement: .0768 (in)
Initial date: 10/9/2009

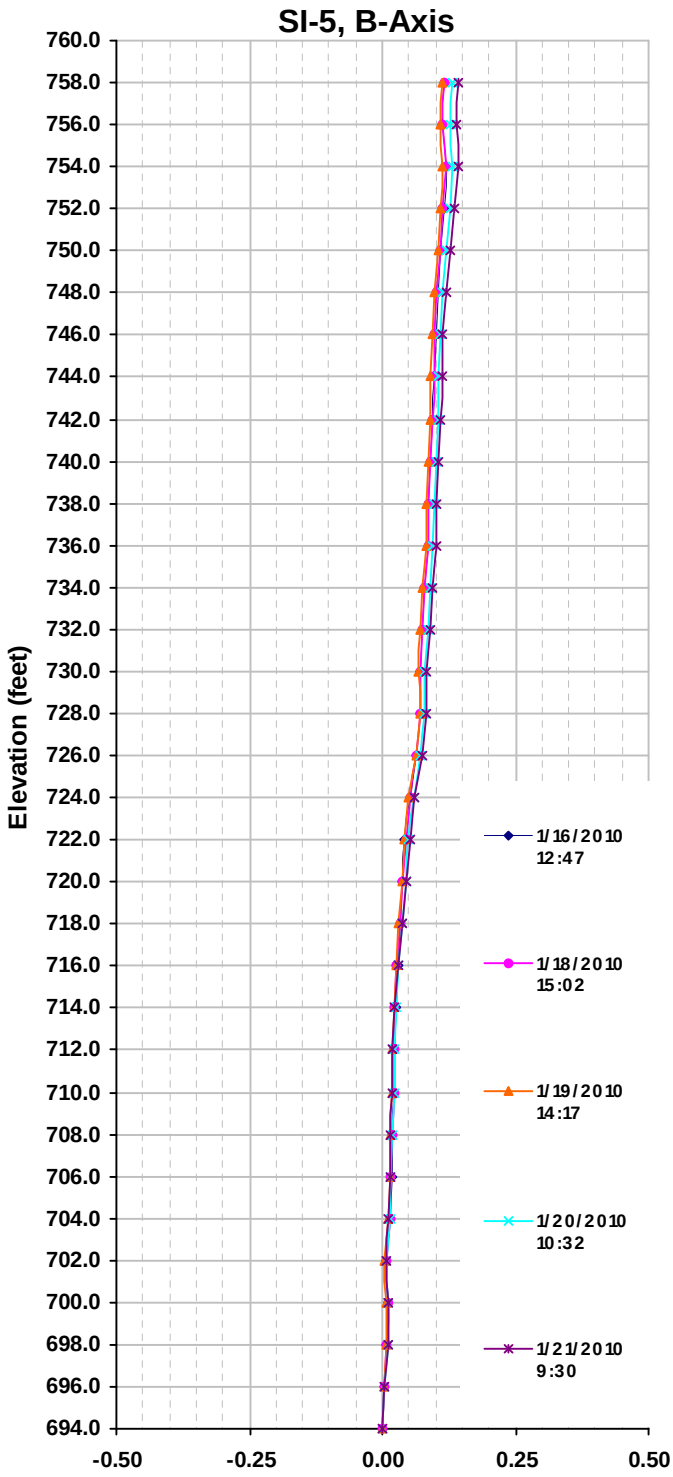
Stantec



Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
1/22/2010

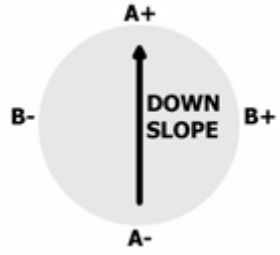


Maximum Displacement: .1512 (in)
Initial date: 8/8/2009

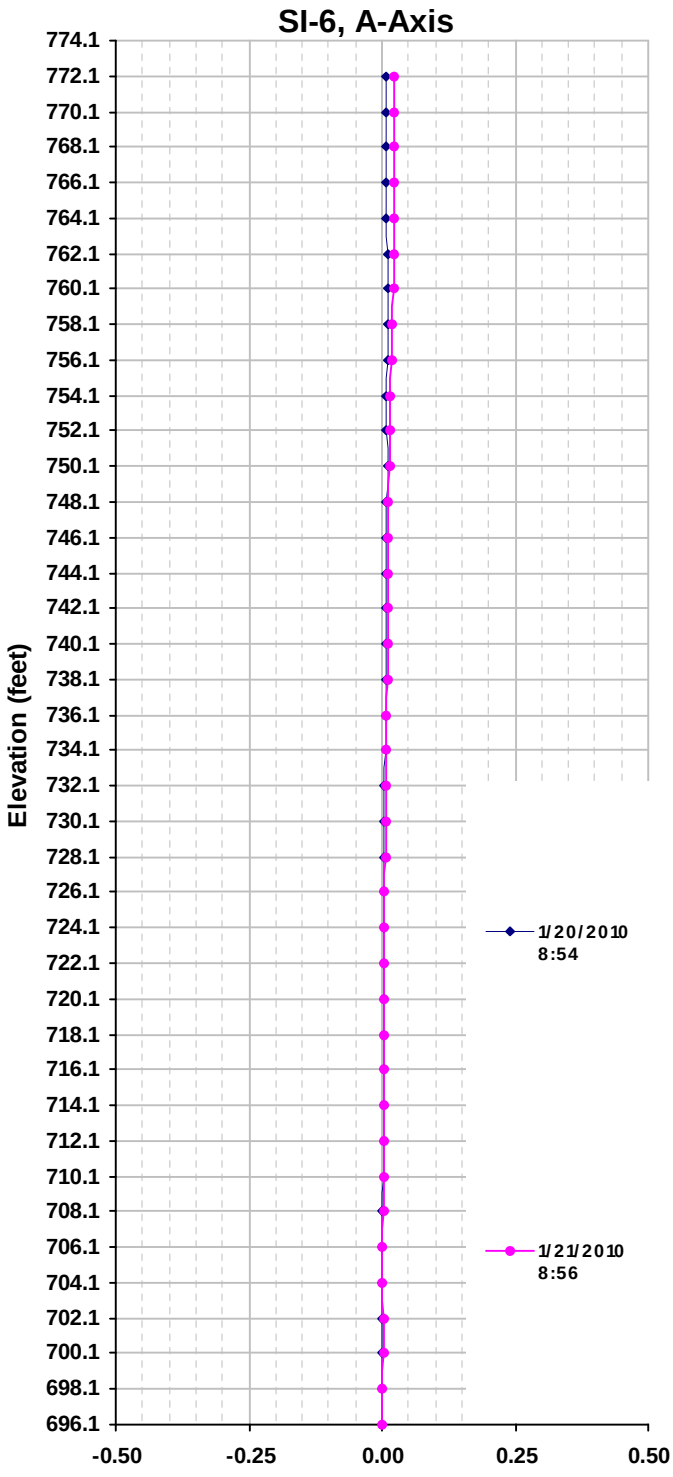


Maximum Displacement: .1428 (in)
Initial date: 8/8/2009

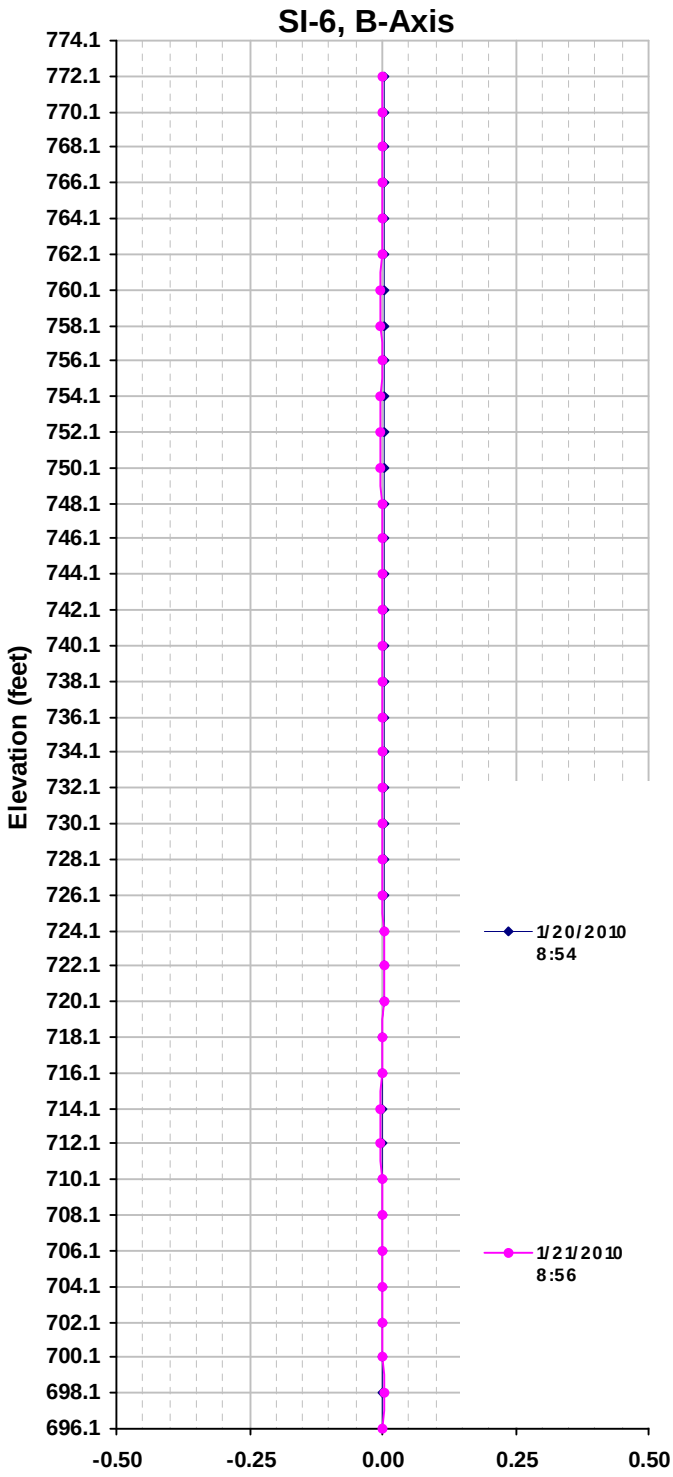
Stantec



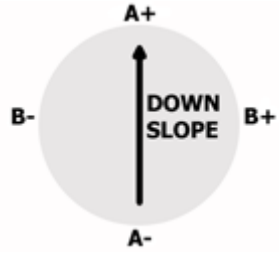
Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
1/22/2010



Maximum Displacement: .0240 (in)
Initial date: 1/19/2010



Maximum Displacement: .0054 (in)
Initial date: 1/19/2010



Stantec

Kingston Fossil Plant
Test Embankment
Kingston, TN
175669015
1/22/2010

B-21

Exhibit C

Stability of Section 2 at Completion of Tier 2

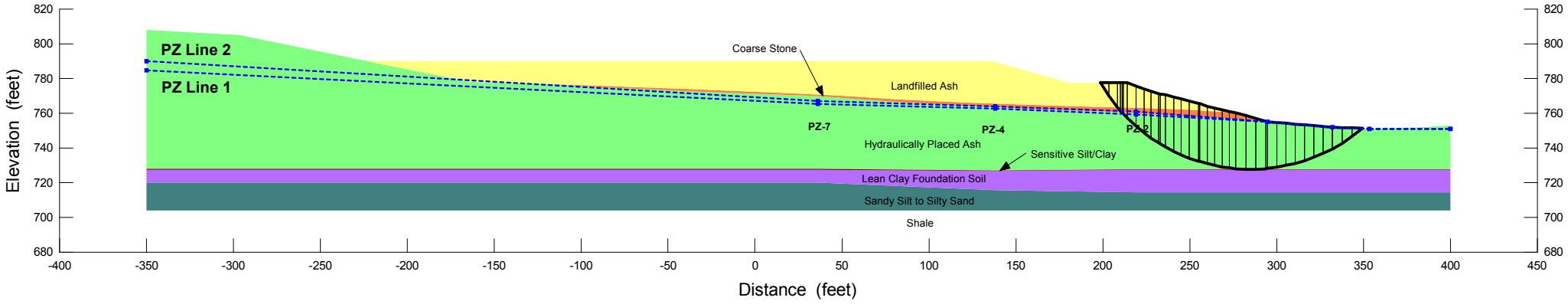
Slope Stability - Deep Failure Analysis
Test Embankment - Section 2
Trigger Event - Nov 1

Kingston Fossil Plant
Tennessee Valley Authority

Date Saved: 1/23/2010
Last Solved on 1/23/2010 at 4:14:04 PM
Method: Modified Spencer
File Name: Test Emb_Sec2_Slope_Stability (Existing).gsz

Material Type	Unit Weight		Cohesion	Friction Angle	PZ Line
	Saturated	Moist			
Landfilled Ash	111	109	0	30	2
Coarse Stone	128	115	0	38	2
Hydraulically Placed Ash	107	100	0	25	2
Sensitive Silt/Clay	107	100	0	28	2
Lean Clay Foundation Soil	130		0	32	1
Sandy Silt to Silty Sand	128		0	30	1
Shale	Impenetrable				1

Factor of Safety: 1.65
Center: (285, 827.5) ft
Radius: 99.8 ft
Minimum Slip Surface Depth: 1 ft



Directory: \\Us1243-f01\workgroup\1756\active\175669015\environmental\analysis\Trigger Event Nov 1\Test Embankment Stability Runs\2010-01-11\Test Emb_Sec2_Slope_Stability (Existing).gsz

TVA Kingston Test Embankment - Section 2

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	Cohesion: 0.0 Friction angle: 32	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	Cohesion: 0.0 Friction angle: 28	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	Cohesion: 0.0 Friction angle: 25	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	2-Stage Linear Intercept (Kc = 1): 1069.45 Slope (Kc = 1): 12.81 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 30.00	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 30.17 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 32.00	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.51 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 28.00	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.78 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 25.00	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2

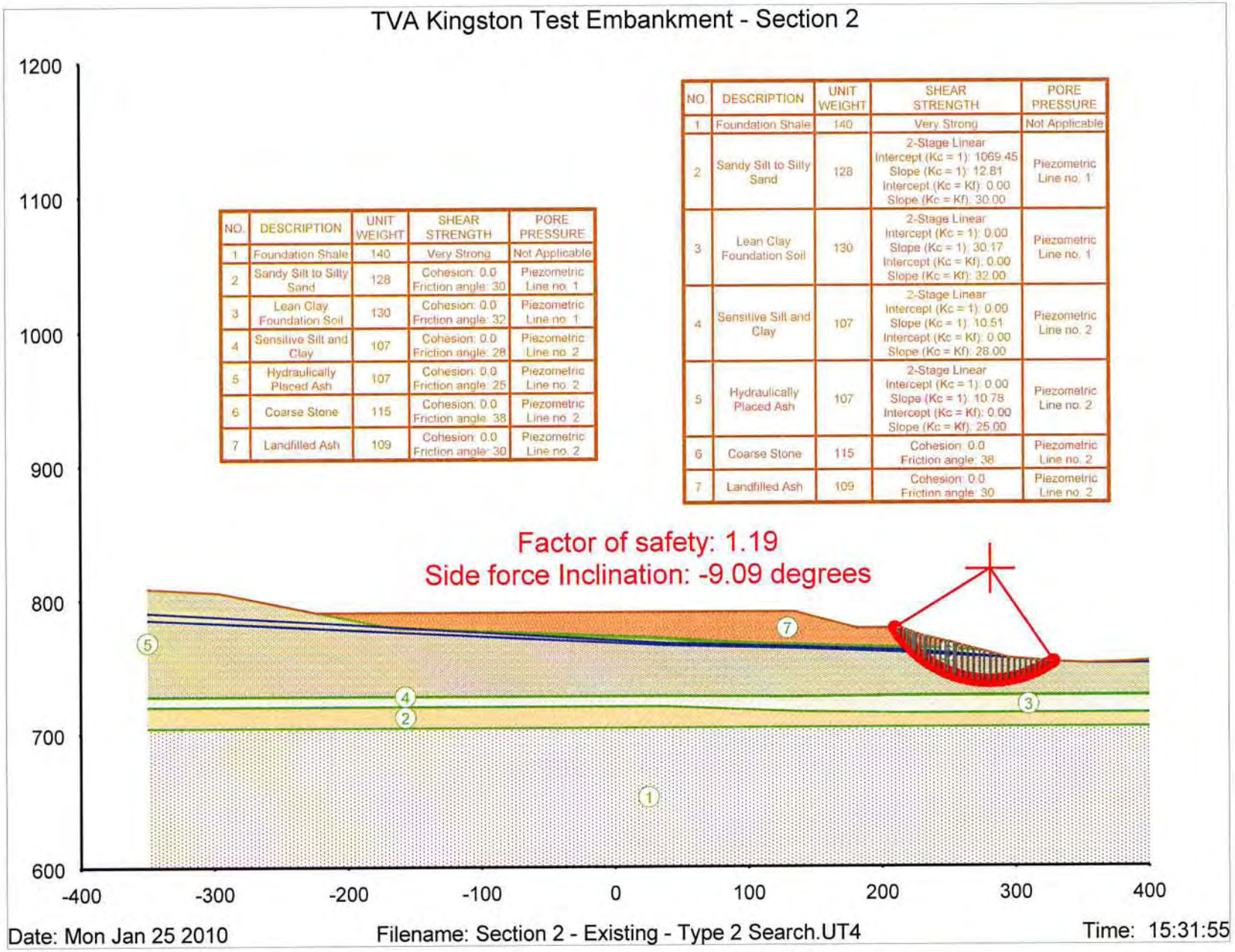
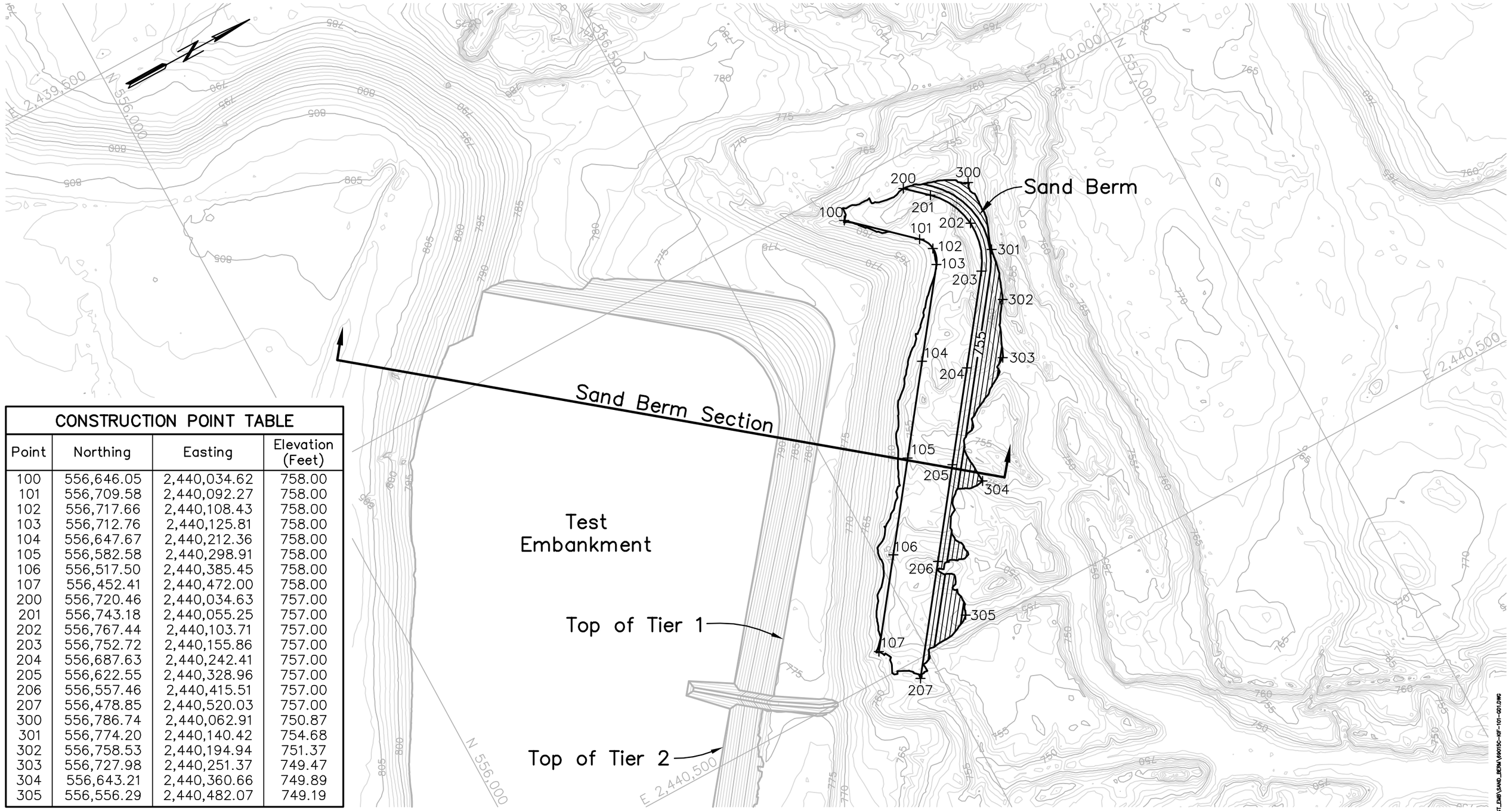


Exhibit D

Recommended Sand Berm at the Western End of the Test Embankment



CONSTRUCTION POINT TABLE			
Point	Northing	Easting	Elevation (Feet)
100	556,646.05	2,440,034.62	758.00
101	556,709.58	2,440,092.27	758.00
102	556,717.66	2,440,108.43	758.00
103	556,712.76	2,440,125.81	758.00
104	556,647.67	2,440,212.36	758.00
105	556,582.58	2,440,298.91	758.00
106	556,517.50	2,440,385.45	758.00
107	556,452.41	2,440,472.00	758.00
200	556,720.46	2,440,034.63	757.00
201	556,743.18	2,440,055.25	757.00
202	556,767.44	2,440,103.71	757.00
203	556,752.72	2,440,155.86	757.00
204	556,687.63	2,440,242.41	757.00
205	556,622.55	2,440,328.96	757.00
206	556,557.46	2,440,415.51	757.00
207	556,478.85	2,440,520.03	757.00
300	556,786.74	2,440,062.91	750.87
301	556,774.20	2,440,140.42	754.68
302	556,758.53	2,440,194.94	751.37
303	556,727.98	2,440,251.37	749.47
304	556,643.21	2,440,360.66	749.89
305	556,556.29	2,440,482.07	749.19

NOTES:

1. Topographic mapping was generated from a LIDAR survey performed on Nov., 25, 2009 by Tuck Mapping Solutions, Inc.
2. Topographic information on the Test Embankment between Tier 1 and Tier 2 depicts the approximate surface configuration in mid–January, 2010.

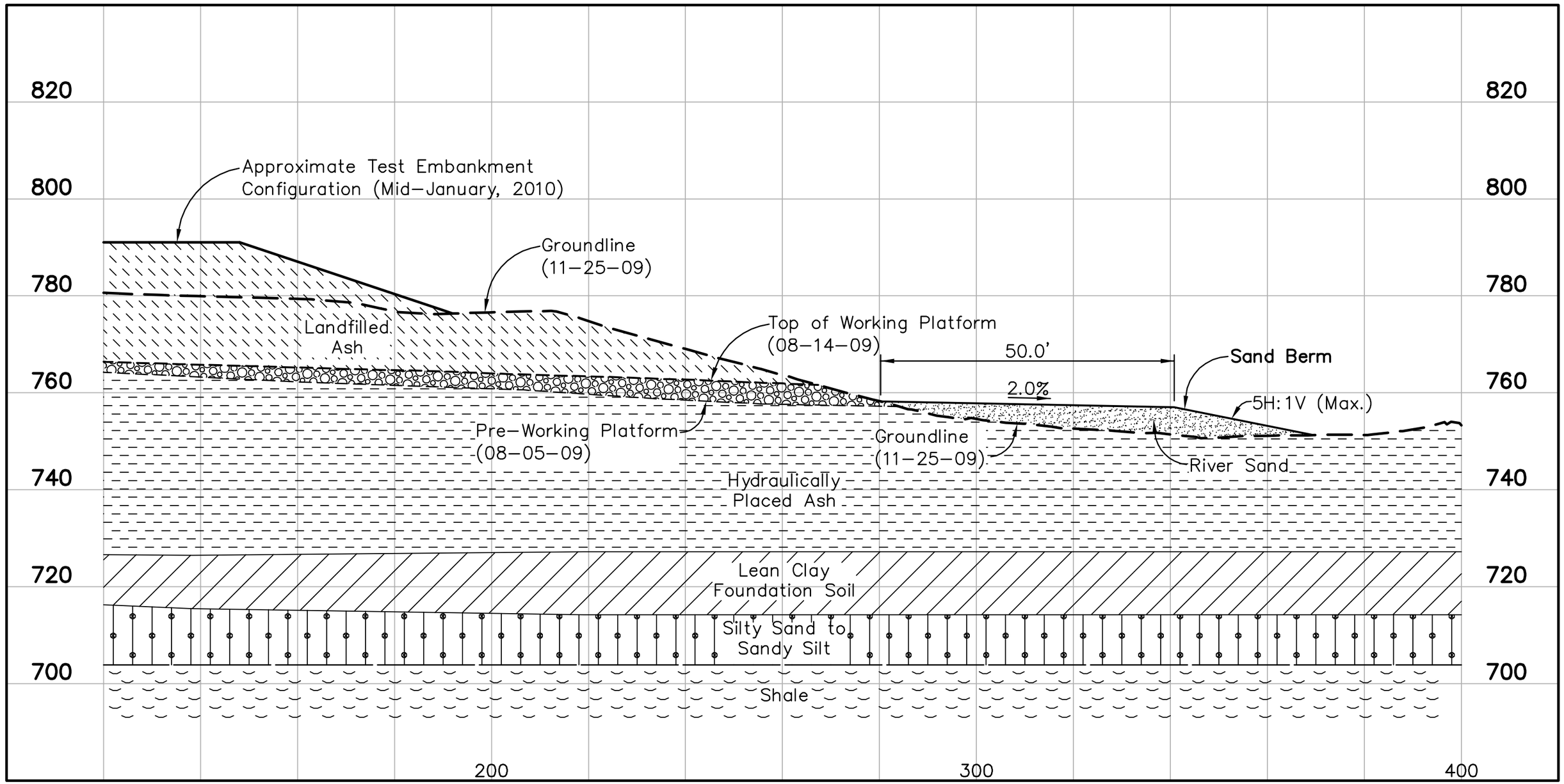
PLAN – SAND BERM
SCALE: 1"=100'

69015c-kif-101-gd1.DWG

50 0 100 200 FEET
GRAPHIC SCALE: 1" = 100'

D-1

PLOT DATE: 01/27/2010 USER: GRAHAM, DAVE
N:\7569_VISTAE\7569015 GEOTECHNICAL\DRAWING\TEST_EMB\SAND_BERM\69015C-KIF-101-GD1.DWG



SECTION – SAND BERM

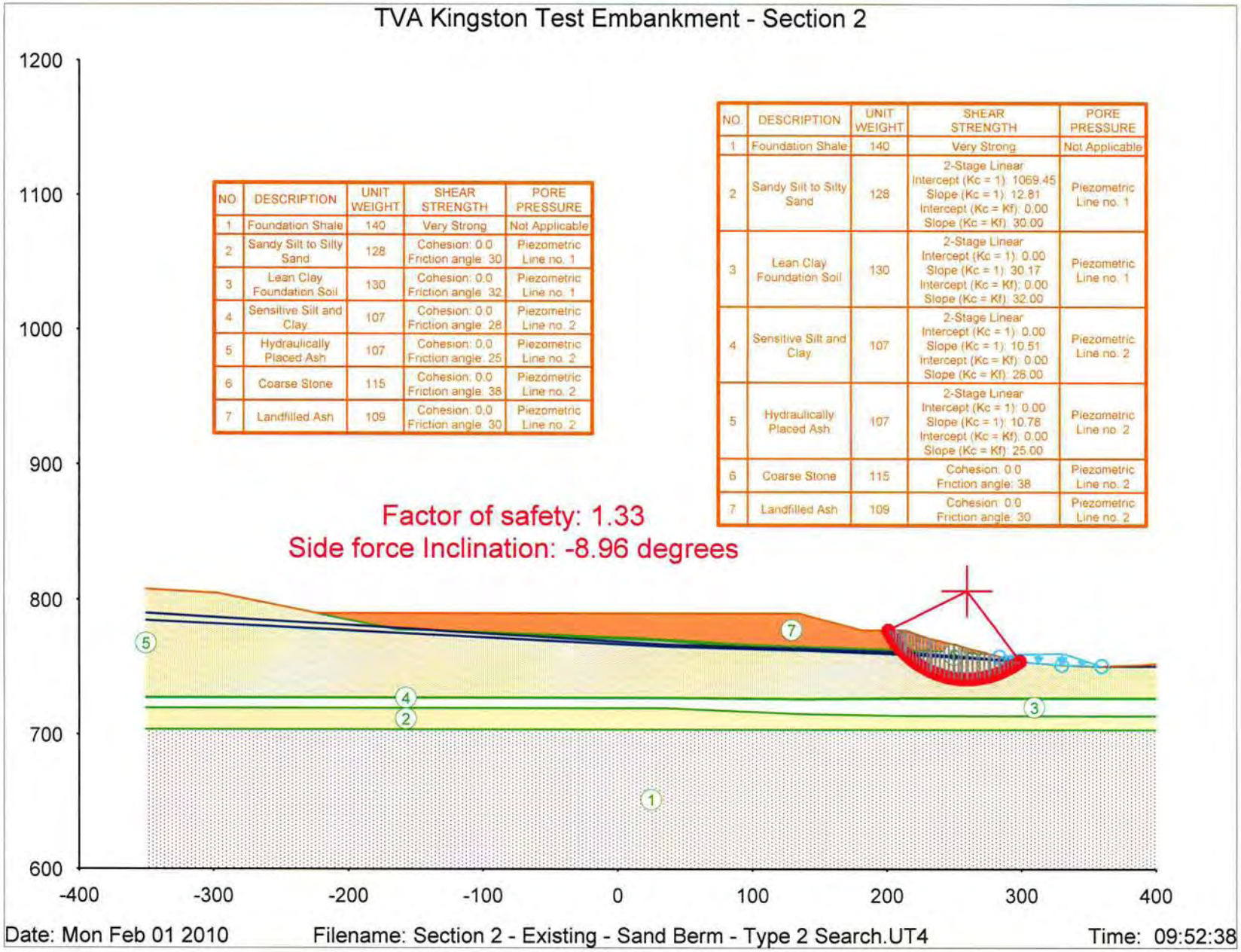
SCALE: 1"=20'

68118c–kif–301–sa1.DWG

NOTE:

Place sand berm against the existing test embankment slope at the coordinates and elevations illustrated on the plan view.

PLOT DATE: 01/27/2010 USER: GRAHAM, DAVE
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\TEST_EMB\SAND_BERM\68118C–KIF–301–SA1.DWG



NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	Cohesion: 0.0 Friction angle: 32	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	Cohesion: 0.0 Friction angle: 28	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	Cohesion: 0.0 Friction angle: 25	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	2-Stage Linear Intercept (Kc = 1): 1069.45 Slope (Kc = 1): 12.81 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 30.00	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 30.17 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 32.00	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.51 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 28.00	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.78 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 25.00	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2

Exhibit E

Drained Embankment Stability with Recommended Sand Berm upon Completion of Tier 2

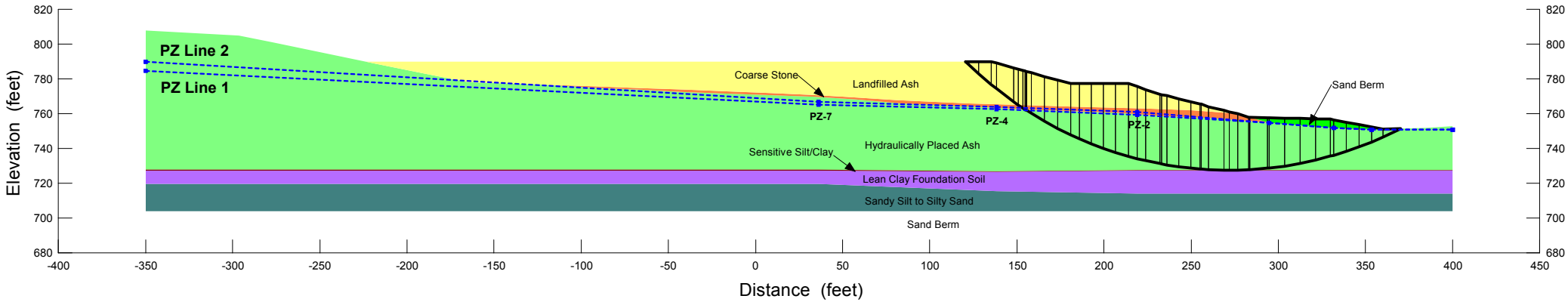
Slope Stability - Deep Failure Analysis
Test Embankment - Section 2
Trigger Event - Nov 1

Kingston Fossil Plant
Tennessee Valley Authority

Date Saved: 1/26/2010
Last Solved on 1/26/2010 at 11:06:24 AM
Method: Modified Spencer
File Name: Test Emb_Sec2_Slope_Stability (Existing with Berm3).gsz

Factor of Safety: 2.03
Center: (271.875, 942.375) ft
Radius: 214.675 ft
Minimum Slip Surface Depth: 1 ft

Material Type	Unit Weight		Cohesion	Friction Angle	PZ Line
	Saturated	Moist			
Landfilled Ash	111	109	0	30	2
Coarse Stone	128	115	0	38	2
Hydraulically Placed Ash	107	100	0	25	2
Sensitive Silt/Clay	107	100	0	28	2
Lean Clay Foundation Soil	130	130	0	32	1
Sandy Silt to Silty Sand	128	128	0	30	1
Sand Berm	110	110	0	30	1
Shale	Impenetrable				



Directory: \\Us1243-f01\workgroup\1756\active\175669015\environmental\analysis\Trigger Event Nov 1\Test Embankment Stability Runs\2010-01-11\Test Emb_Sec2_Slope_Stability (Existing with Berm3).gsz

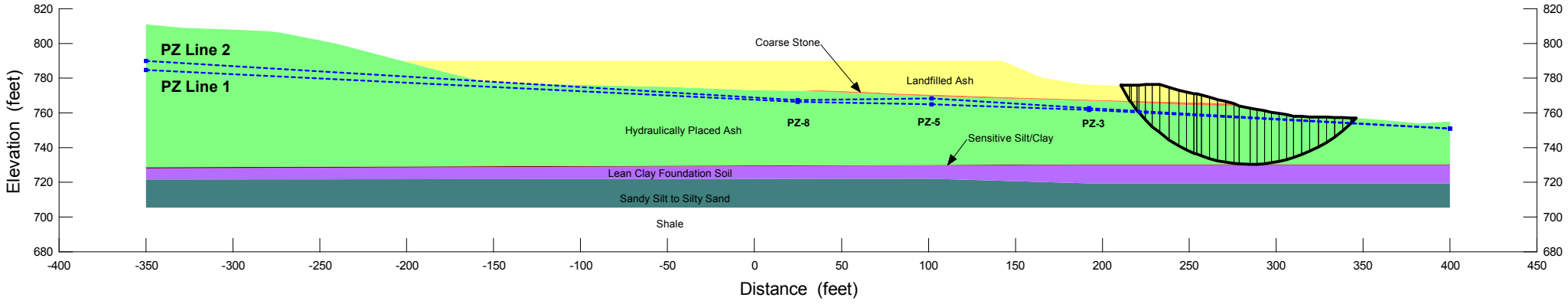
Slope Stability - Deep Failure Analysis
Test Embankment - Section 3
Trigger Event - Nov 1

Kingston Fossil Plant
Tennessee Valley Authority

Date Saved: 1/23/2010
Last Solved on 1/23/2010 at 4:23:09 PM
Method: Modified Spencer
File Name: Test Emb_Sec3_Slope_Stability (Existing).gsz

Material Type	Unit Weight		Cohesion	Friction Angle	PZ Line
	Saturated	Moist			
Landfilled Ash	111	109	0	30	2
Coarse Stone	128	115	0	38	2
Hydraulically Placed Ash	107	100	0	25	2
Sensitive Silt/Clay	107	100	0	28	2
Lean Clay Foundation Soil	130	130	0	32	1
Sandy Silt to Silty Sand	128	128	0	30	1
Shale	Impenetrable				1

Factor of Safety: 2.20
Center: (285, 813.75) ft
Radius: 83.45 ft
Minimum Slip Surface Depth: 1 ft



Directory: \\Us1243-f01\workgroup\1756\active\175669015\environmental\analysis\Trigger Event Nov 1\Test Embankment Stability Runs\2010-01-11\Test Emb_Sec3_Slope_Stability (Existing).gsz

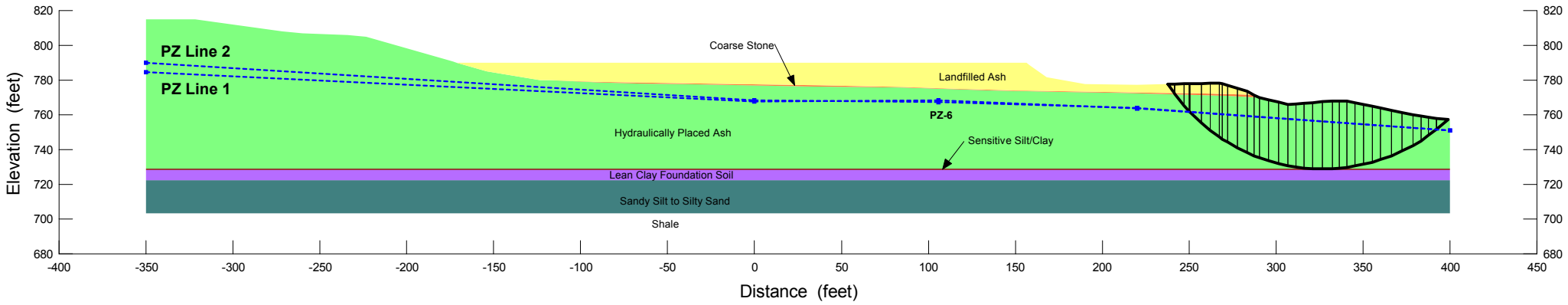
Slope Stability - Deep Failure Analysis
Test Embankment - Section 4
Trigger Event - Nov 1

Kingston Fossil Plant
Tennessee Valley Authority

Date Saved: 1/23/2010
Last Solved on 1/23/2010 at 5:10:15 PM
Method: Modified Spencer
File Name: Test Emb_Sec4_Slope_Stability (Existing).gsz

Material Type	Unit Weight		Cohesion	Friction Angle	PZ Line
	Saturated	Moist			
Landfilled Ash	111	109	0	30	2
Coarse Stone	128	115	0	38	2
Hydraulically Placed Ash	107	100	0	25	2
Sensitive Silt/Clay	107	100	0	28	2
Lean Clay Foundation Soil	130	130	0	32	1
Sandy Silt to Silty Sand	128	128	0	30	1
Shale	Impenetrable				1

Factor of Safety: 3.10
Center: (326.875, 834.375) ft
Radius: 105.575 ft
Minimum Slip Surface Depth: 1 ft



Directory: \\Us1243-f01\workgroup\1756\active\175669015\environmental\analysis\Trigger Event Nov 1\Test Embankment Stability Runs\2010-01-11\Test Emb_Sec4_Slope_Stability (Existing).gsz

Exhibit F

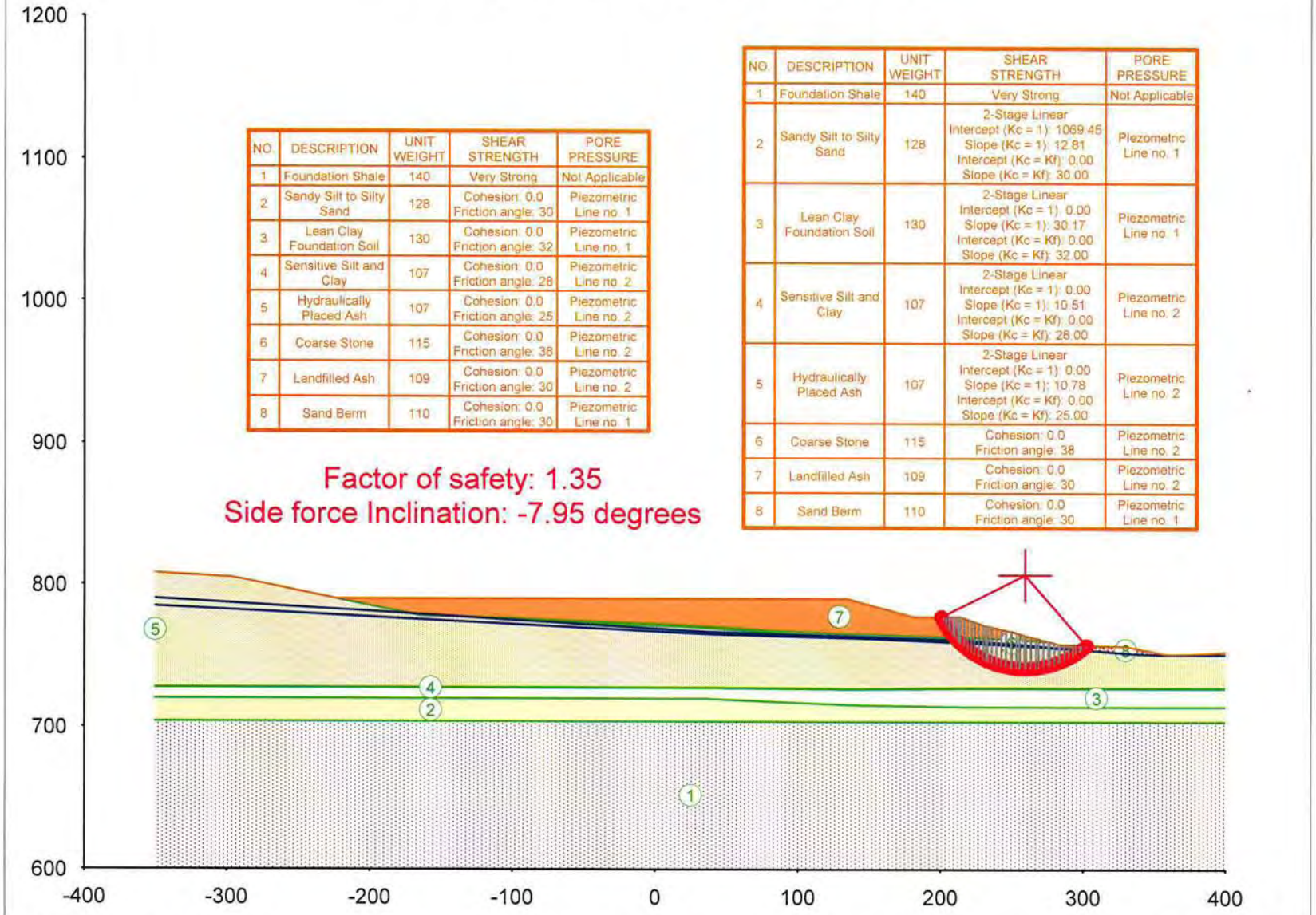
Undrained Embankment Stability with Recommended Sand Berm upon Completion of Tier 2

TVA Kingston Test Embankment - Section 2

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	Cohesion: 0.0 Friction angle: 32	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	Cohesion: 0.0 Friction angle: 28	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	Cohesion: 0.0 Friction angle: 25	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2
8	Sand Berm	110	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	2-Stage Linear Intercept (Kc = 1): 1069.45 Slope (Kc = 1): 12.81 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 30.00	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 30.17 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 32.00	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.51 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 28.00	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.78 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 25.00	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2
8	Sand Berm	110	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1

Factor of safety: 1.35
Side force Inclination: -7.95 degrees



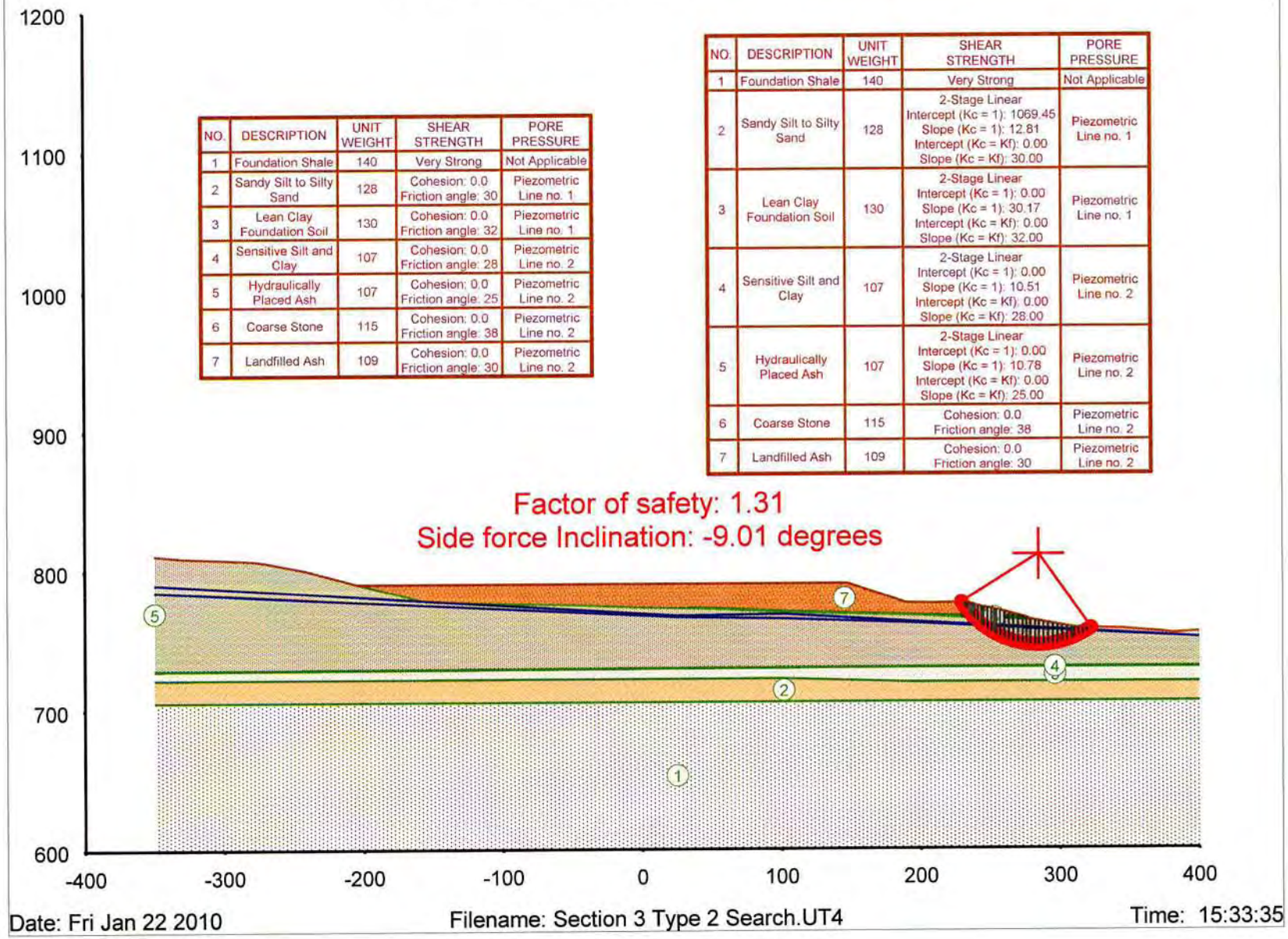
Date: Fri Jan 29 2010 Filename: Section 2 - Existing w Berm - Type 2 Search.UT4 Time: 09:35:28

TVA Kingston Test Embankment - Section 3

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	Cohesion: 0.0 Friction angle: 32	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	Cohesion: 0.0 Friction angle: 28	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	Cohesion: 0.0 Friction angle: 25	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	2-Stage Linear Intercept (Kc = 1): 1069.45 Slope (Kc = 1): 12.81 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 30.00	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 30.17 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 32.00	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.51 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 28.00	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.78 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 25.00	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2

Factor of safety: 1.31
Side force Inclination: -9.01 degrees



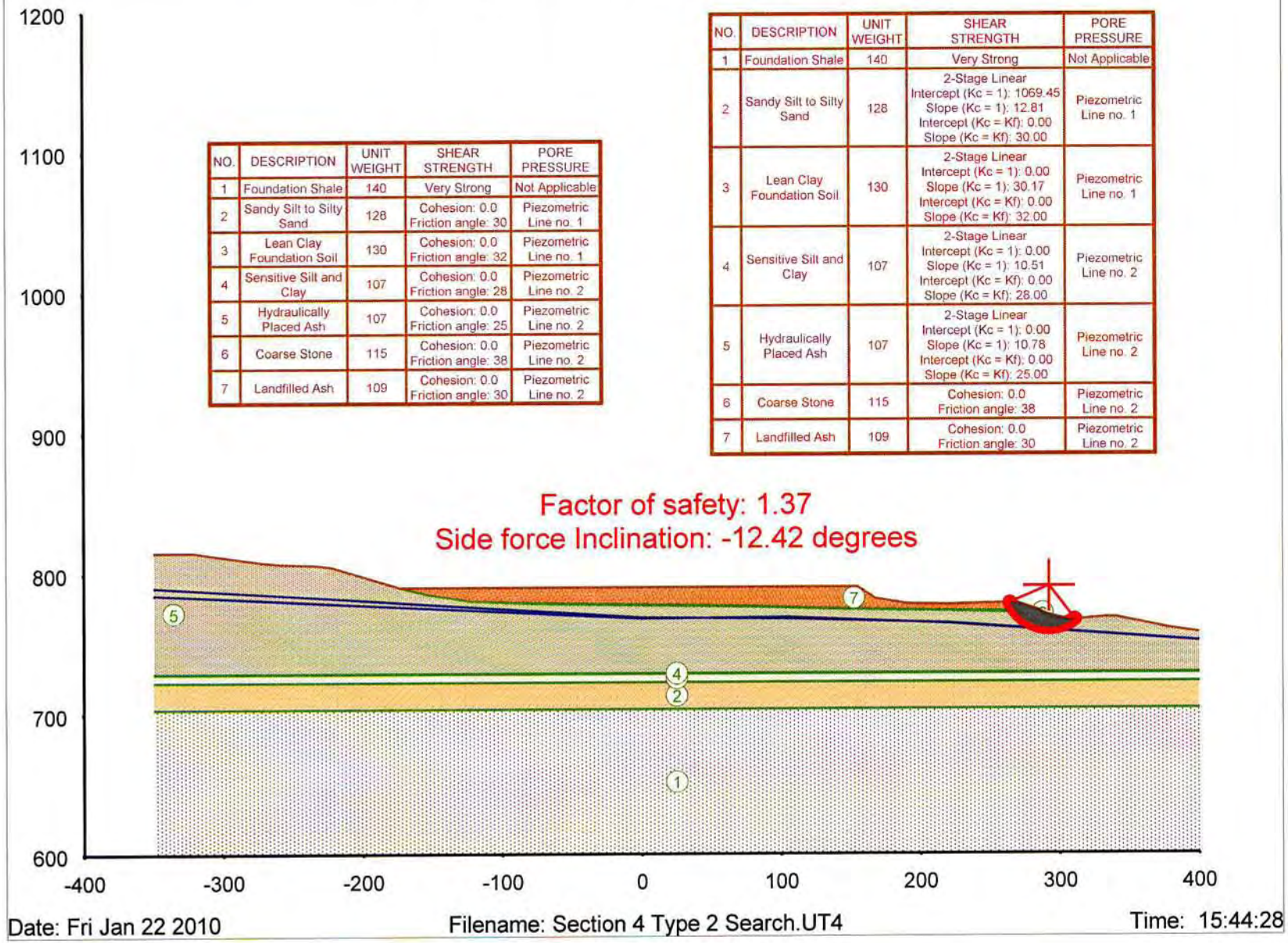
Date: Fri Jan 22 2010 Filename: Section 3 Type 2 Search.UT4 Time: 15:33:35

TVA Kingston Test Embankment - Section 4

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	Cohesion: 0.0 Friction angle: 32	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	Cohesion: 0.0 Friction angle: 28	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	Cohesion: 0.0 Friction angle: 25	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	2-Stage Linear Intercept (Kc = 1): 1069.45 Slope (Kc = 1): 12.81 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 30.00	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 30.17 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 32.00	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.51 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 28.00	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.78 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 25.00	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2

Factor of safety: 1.37
Side force Inclination: -12.42 degrees



Date: Fri Jan 22 2010 Filename: Section 4 Type 2 Search.UT4 Time: 15:44:28

Exhibit G

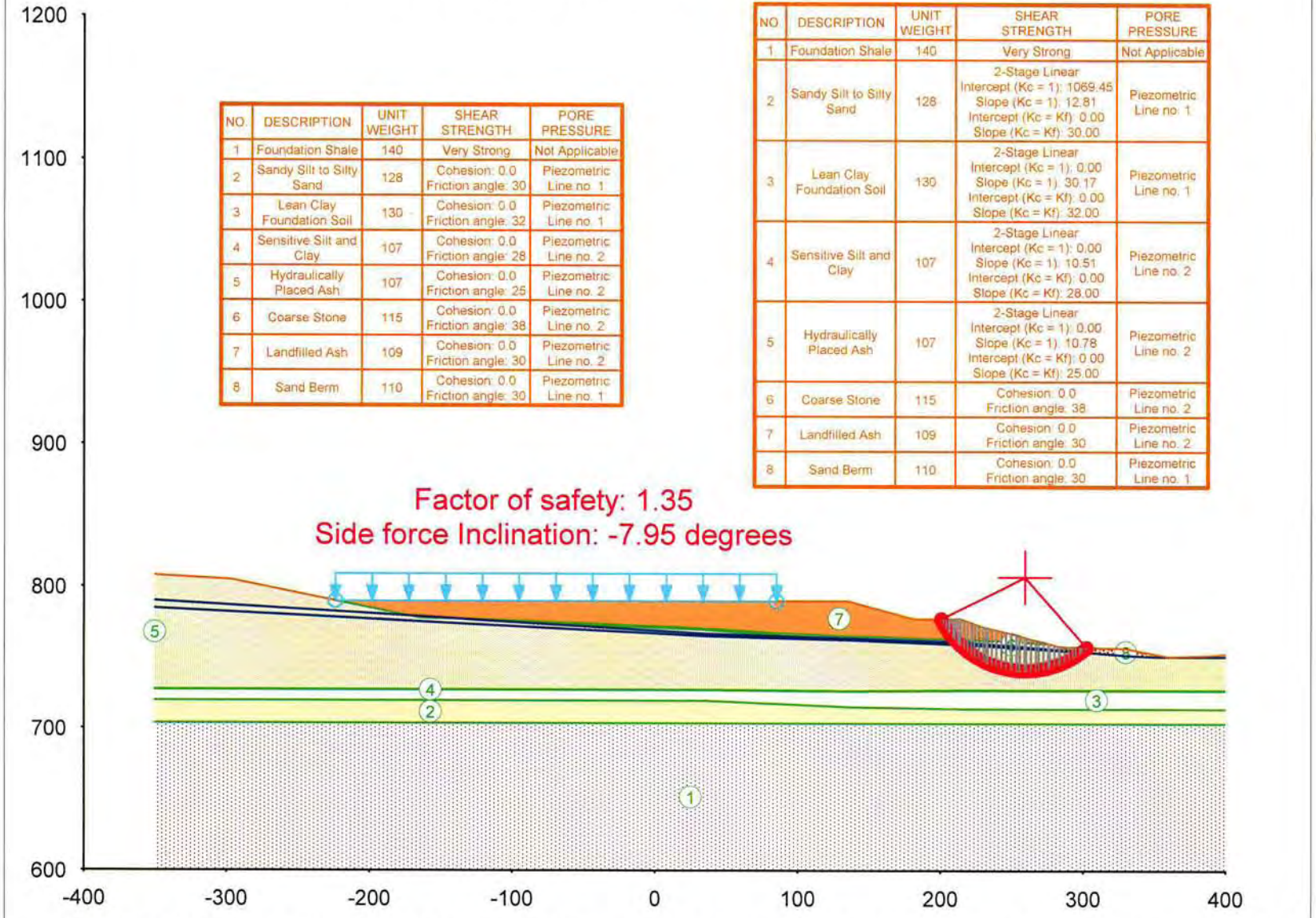
Undrained Embankment Stability with Recommended Sand Berm upon Completion of Tier 3

TVA Kingston Test Embankment - Section 2

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	Cohesion: 0.0 Friction angle: 32	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	Cohesion: 0.0 Friction angle: 28	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	Cohesion: 0.0 Friction angle: 25	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2
8	Sand Berm	110	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1

NO	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	2-Stage Linear Intercept (Kc = 1): 1069.45 Slope (Kc = 1): 12.81 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 30.00	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 30.17 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 32.00	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.51 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 28.00	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.78 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 25.00	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2
8	Sand Berm	110	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1

Factor of safety: 1.35
Side force Inclination: -7.95 degrees



Date: Fri Jan 29 2010 Filename: Section 2 - Existing w Berm - 11 ft Load - Type 2 Search.UT4 Time: 09:44:28

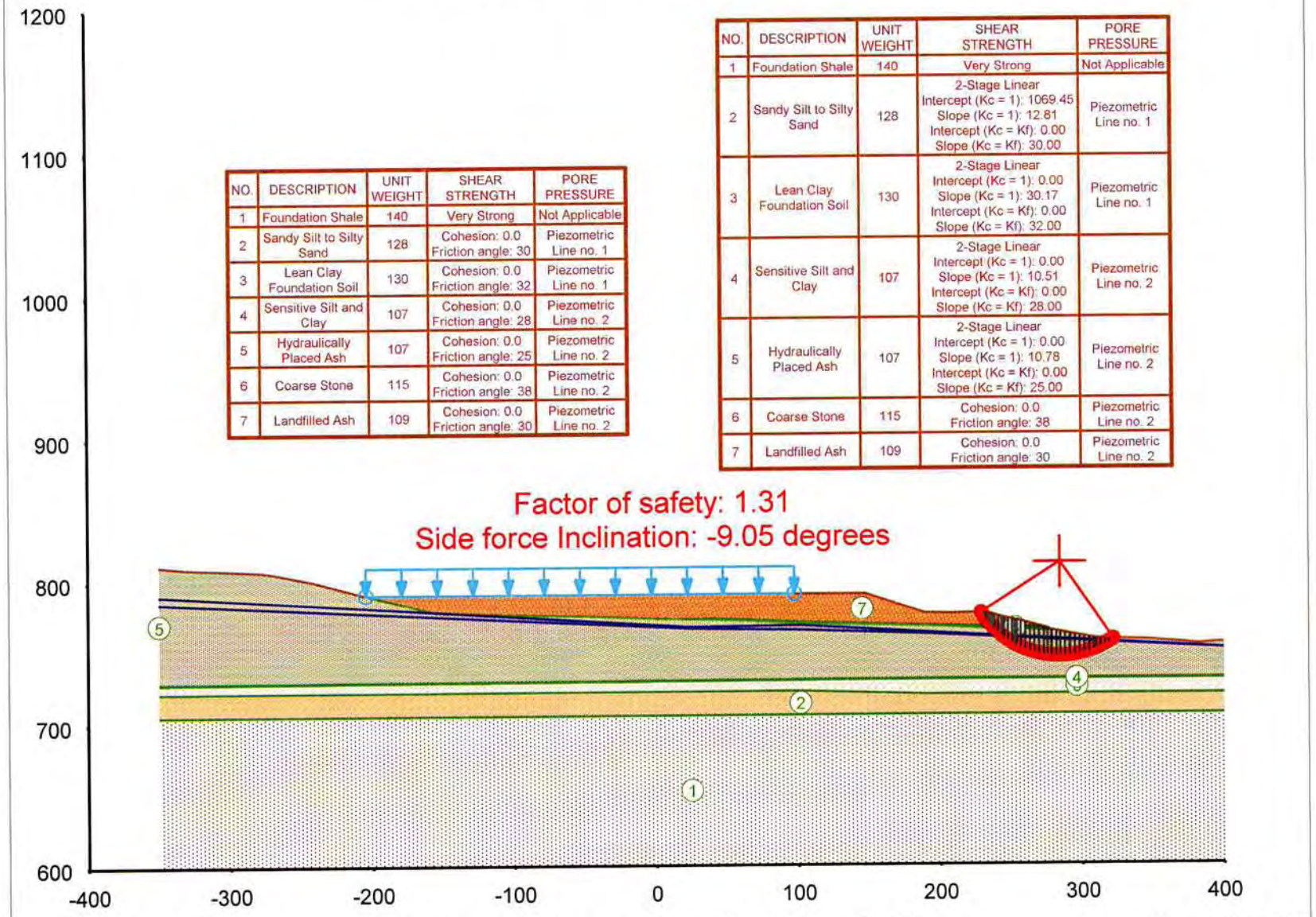
TVA Kingston Test Embankment - Section 3

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	Cohesion: 0.0 Friction angle: 32	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	Cohesion: 0.0 Friction angle: 28	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	Cohesion: 0.0 Friction angle: 25	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	2-Stage Linear Intercept (Kc = 1): 1069.45 Slope (Kc = 1): 12.81 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 30.00	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 30.17 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 32.00	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.51 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 28.00	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.78 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 25.00	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2

Factor of safety: 1.31

Side force Inclination: -9.05 degrees

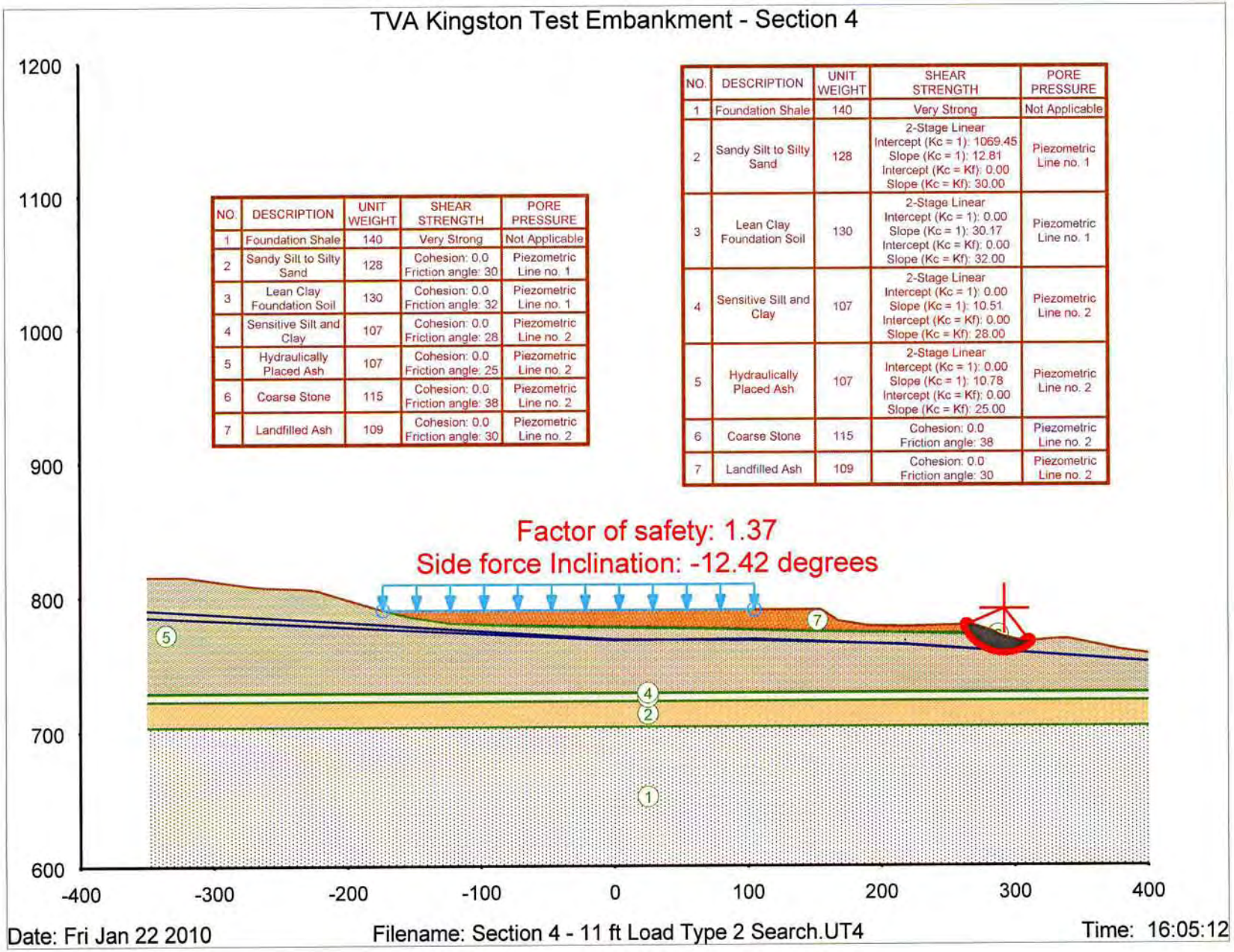


Date: Fri Jan 22 2010 Filename: Section 3 - 11 ft Load Type 2 Search.UT4 Time: 15:46:26

TVA Kingston Test Embankment - Section 4

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	Cohesion: 0.0 Friction angle: 32	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	Cohesion: 0.0 Friction angle: 28	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	Cohesion: 0.0 Friction angle: 25	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Foundation Shale	140	Very Strong	Not Applicable
2	Sandy Silt to Silty Sand	128	2-Stage Linear Intercept (Kc = 1): 1069.45 Slope (Kc = 1): 12.81 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 30.00	Piezometric Line no. 1
3	Lean Clay Foundation Soil	130	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 30.17 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 32.00	Piezometric Line no. 1
4	Sensitive Silt and Clay	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.51 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 28.00	Piezometric Line no. 2
5	Hydraulically Placed Ash	107	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 10.78 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 25.00	Piezometric Line no. 2
6	Coarse Stone	115	Cohesion: 0.0 Friction angle: 38	Piezometric Line no. 2
7	Landfilled Ash	109	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 2



Date: Fri Jan 22 2010 Filename: Section 4 - 11 ft Load Type 2 Search.UT4 Time: 16:05:12

Appendix L

As-Built Drawings

RECORD DRAWINGS

TEST EMBANKMENT PROGRAM
KINGSTON FOSSIL PLANT

HARRIMAN, ROANE COUNTY, TENNESSEE

PREPARED FOR

TENNESSEE VALLEY AUTHORITY

PREPARED BY

VICINITY MAP

1000 0 2000 4000 FEET
GRAPHIC SCALE

Stantec

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

INDEX OF SHEETS

1 COVER SHEET
2 INITIAL SITE CONDITIONS
3 BASE OF WORKING PLATFORM
4 INTERIM CONFIGURATION 1
5 TOP OF WORKING PLATFORM
6 INTERIM CONFIGURATION 2
7 INTERIM CONFIGURATION 3
8 INTERIM CONFIGURATION 4
9 INTERIM CONFIGURATION 5
10 INTERIM CONFIGURATION 6
11 INTERIM CONFIGURATION 7
12 FINAL GRADING PLAN

RECORD DRAWING

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	04/23/10	KDL	DMG	KDL	MJS	MJS	MJS	TJ	–	–	–
RECORD DRAWING											

DISCIPLINE INTERFACE

SCALE: 1"=50' EXCEPT AS NOTED

YARD
–

DREDGE CELL
TEST EMBANKMENT PROGRAM
COVER SHEET

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
K. LINDQUIST	D. GRAHAM	K. LINDQUIST	M. STEELE	M. STEELE	M. STEELE	T. JOHNSON

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2000 | DATE 04/23/10 | 36 | C | 10W297–01 | R 0

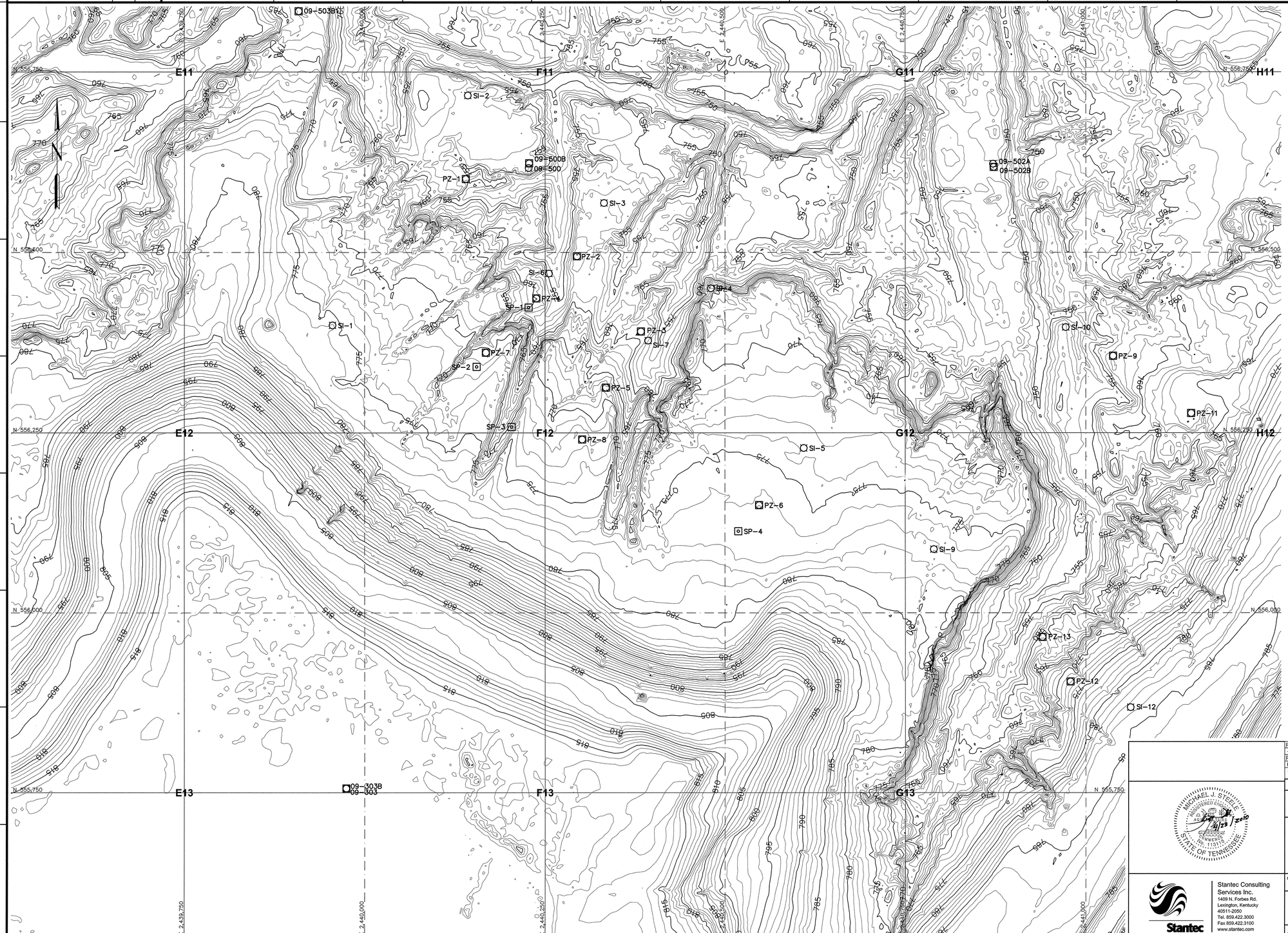
PLOT FACTOR:XX
W_TVA

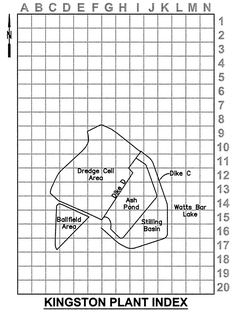
C.A.D. DRAWING
DO NOT ALTER MANUALLY

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT DATE: 04/22/2010 USER: JOHNSON, TRACY
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\TEST_EMB\REV0_RECORD\10W297-01-R0.DWG

36 C 10W297–01





KINGSTON PLANT INDEX
NOT TO SCALE

NOTE:
Topographic mapping was generated from a LIDAR survey performed on June 12, 2009 by Tuck Mapping Solutions, Inc.

LEGEND

- SI-1 ⬡ Slope Inclinometer (SI)
- PZ-2 ⬡ Piezometer (PZ)
- SP-3 ⊙ Settlement Platform (SP)
- —700— Index Contour (June 12, 2009)
- ——— Intermediate Contour (June 12, 2009)

RECORD DRAWING

25 0 50 100 FEET
GRAPHIC SCALE: 1" = 50'
CONTOUR INTERVAL = 1 FOOT

PLOT DATE: 04/23/2010 - 10:07:31
V:\07300\ACTIVE\273589101\ENVIRONMENTAL\DRAWING\TEST_EMB\REVIT_RECORD\10W297-02-R0.DWG

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. NO.
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	04/23/10	KDL	DMG	KDL	MJS	MJS	MJS	TJ	–	–	–
RECORD DRAWING											

DISCIPLINE INTERFACE
1 2 3 4 5 6

SCALE: 1"=50' EXCEPT AS NOTED

YARD
–

DREDGE CELL
TEST EMBANKMENT PROGRAM
INITIAL SITE CONDITIONS

MICHAEL J. STEELE — REGISTERED CIVIL ENGINEER — 113119 — STATE OF TENNESSEE — 4/23/2010

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
K. LINDQUIST	D. GRAHAM	K. LINDQUIST	M. STEELE	M. STEELE	M. STEELE	T. JOHNSON

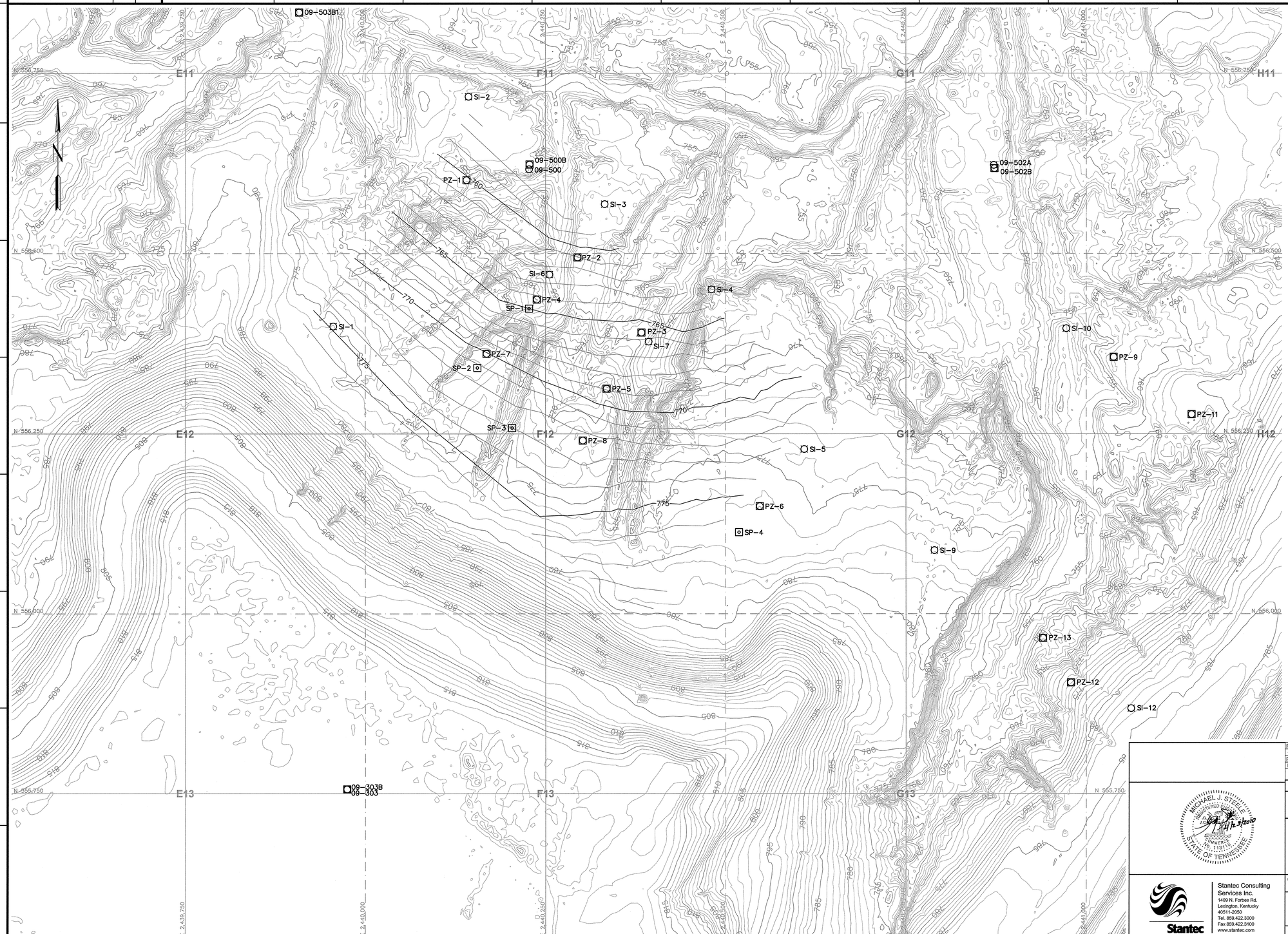
KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

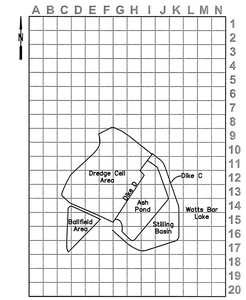
AUTOCAD R 2000	DATE 04/23/10	36	C	10W297-02	R 0

STANTEC	0
TASK COMPLETED BY:	REV NO.

PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY





KINGSTON PLANT INDEX
NOT TO SCALE

NOTE:
Topographic mapping was generated from a LIDAR survey performed on June 12, 2009 by Tuck Mapping Solutions, Inc. and supplemented with a survey by the Tennessee Valley Authority Surveying and Project Services performed on August 5, 2009.

LEGEND

SI-1	Slope Inclinometer (SI)
PZ-2	Piezometer (PZ)
SP-3	Settlement Platform (SP)
—700—	Index Contour (June 12, 2009)
	Intermediate Contour (June 12, 2009)
—700—	Index Contour (August 5, 2009)
	Intermediate Contour (August 5, 2009)

RECORD DRAWING

25 0 50 100 FEET
GRAPHIC SCALE: 1" = 50'
CONTOUR INTERVAL = 1 FOOT

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	04/23/10	KDL	DMG	KDL	MJS	MJS	MJS	TJ	–	–	–

RECORD DRAWING

SCALE: 1"=50' EXCEPT AS NOTED

YARD
–

DREDGE CELL
TEST EMBANKMENT PROGRAM
BASE OF WORKING PLATFORM

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
K. LINDQUIST	D. GRAHAM	K. LINDQUIST	M. STEELE	M. STEELE	M. STEELE	T. JOHNSON

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

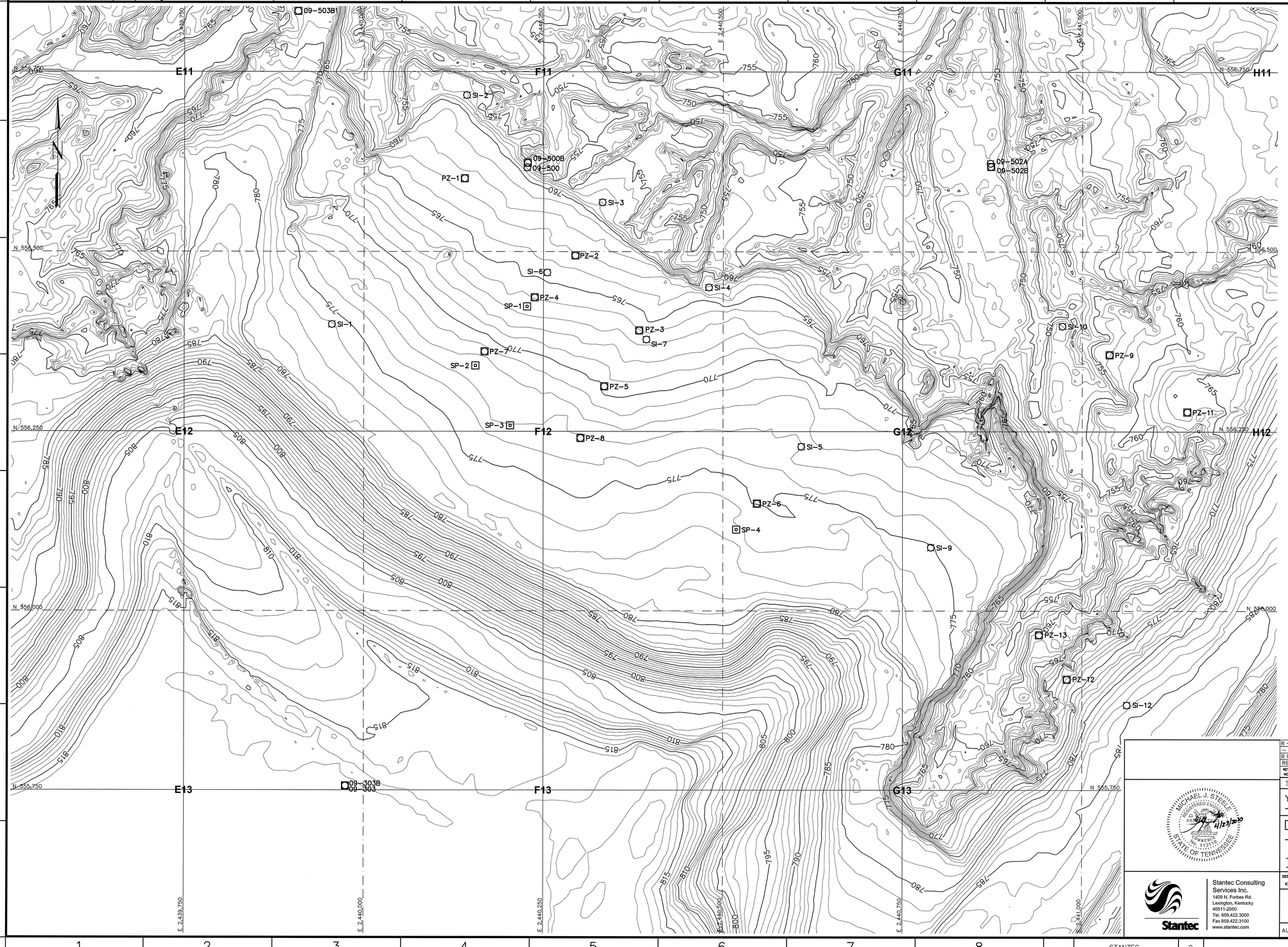
AUTOCAD R 2000 | DATE 04/23/10 | 36 | C | 10W297-03 | R 0

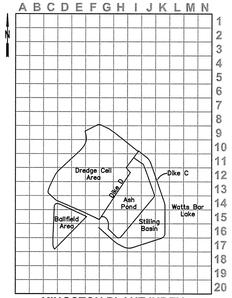
PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

STANTEC	0
TASK COMPLETED BY:	REV NO.

36 C 10W297-03





KINGSTON PLANT INDEX
NOT TO SCALE

NOTE:
Topographic mapping was generated from a LIDAR survey performed on August 14, 2009 by Tuck Mapping Solutions, Inc.

LEGEND

- SI-1 Slope Inclinometer (SI)
- PZ-2 Piezometer (PZ)
- SP-3 Settlement Platform (SP)
- —700— Index Contour (August 14, 2009)
- Intermediate Contour (August 14, 2009)

RECORD DRAWING

25 0 50 100 FEET
GRAPHIC SCALE: 1" = 50'
CONTOUR INTERVAL = 1 FOOT

PLOT DATE: 04/23/2010 USER: GRAHAM, TRACY
V:\1735\ACAD\MC1735SS05\03\MXRDMD01A_10AWING\TEST_EMB\REVIS_RES2009\10W297-04-R0.DWG

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV BY
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	04/23/10	KDL	DMG	KDL	MJS	MJS	MJS	TJ	–	–	–

RECORD DRAWING
SCALE: 1"=50' EXCEPT AS NOTED

YARD
–

DREDGE CELL
TEST EMBANKMENT PROGRAM
INTERIM CONFIGURATION 1

MICHAEL J. STEELE — REGISTERED ENGINEER — 22 — AGENCY — SUMMERS — No. 112115 — STATE OF TENNESSEE

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
K. LINDQUIST	D. GRAHAM	K. LINDQUIST	M. STEELE	M. STEELE	M. STEELE	T. JOHNSON

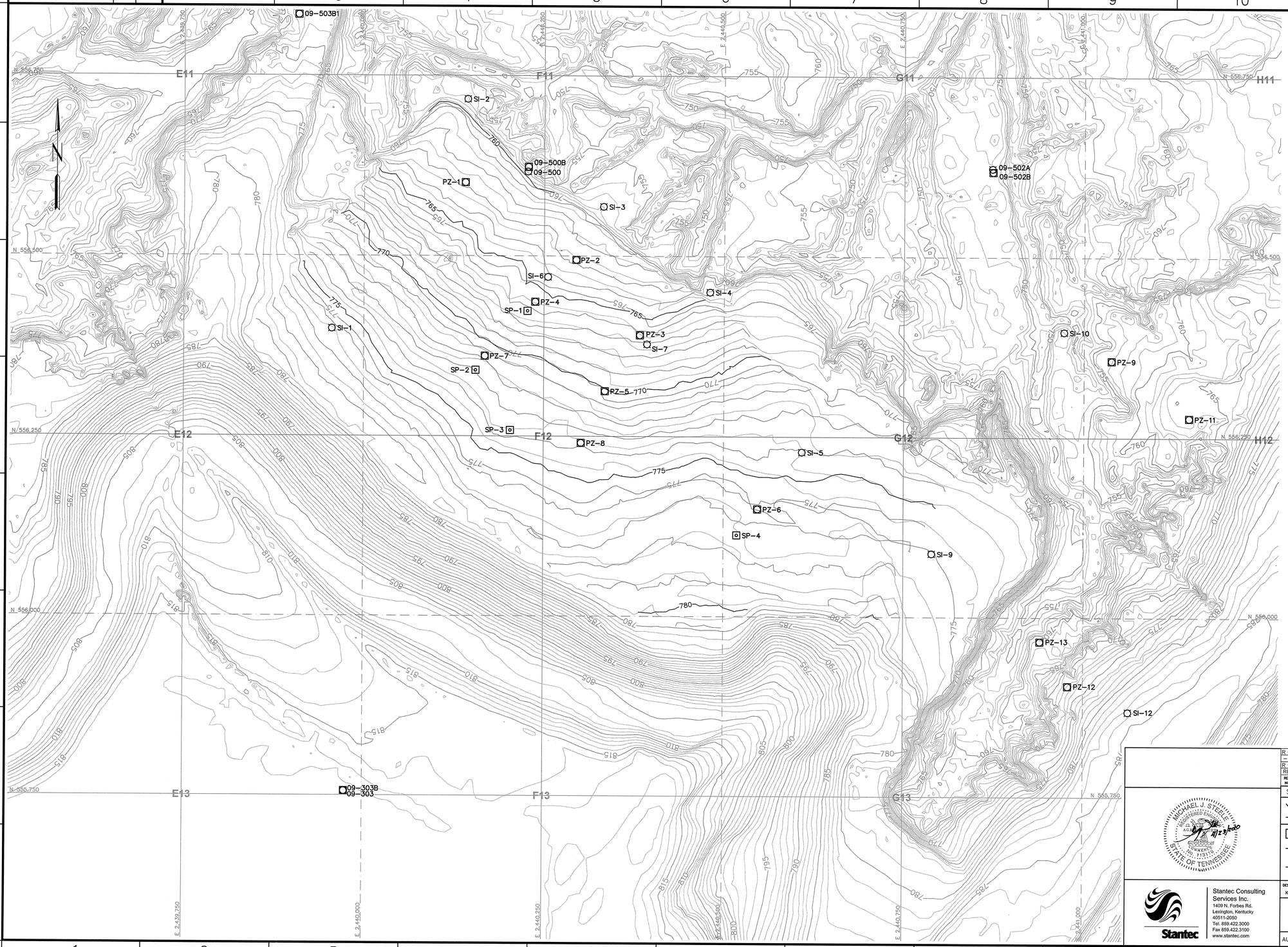
KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

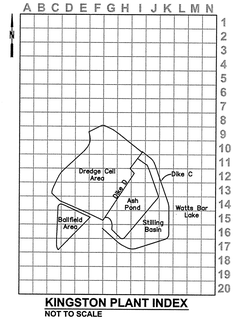
AUTOCAD R 2000	DATE: 04/23/10	36	C	10W297-04	R 0

STANTEC	0
TASK COMPLETED BY:	REV NO.

PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY





KINGSTON PLANT INDEX
NOT TO SCALE

NOTE:
Topographic mapping was generated from a LIDAR survey performed on August 14, 2009 by Tuck Mapping Solutions, Inc. and supplemented with a survey by the Tennessee Valley Authority Surveying and Project Services performed on August 20, 2009.

LEGEND

- SI-1 Slope Inclinometer (SI)
- PZ-2 Piezometer (PZ)
- SP-3 Settlement Platform (SP)
- —700— Index Contour (August 14, 2009)
- Intermediate Contour (August 14, 2009)
- —700— Index Contour (August 20, 2009)
- Intermediate Contour (August 20, 2009)

RECORD DRAWING

25 0 50 100 FEET
GRAPHIC SCALE: 1" = 50'
CONTOUR INTERVAL = 1 FOOT

PLOT DATE: 04/22/2010 USER: JOHNSON, TRACY
V:\1785\ACTIVE\TVA\SURVEY\DRAWINGS\TEST_EMBANKMENT\TOP_OF_WORKING_PLATFORM\10W297-05_RECORD.DWG

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST
R 0	04/23/10	KDL	DMG	KDL	MJS	MJS	MJS	TJ	–	–
RECORD DRAWING										

DISCIPLINE INTERFACE
REV. 1 2 3 4

SCALE: 1"=50' EXCEPT AS NOTED

YARD
–

DREDGE CELL
TEST EMBANKMENT PROGRAM
TOP OF WORKING PLATFORM

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
K. LINDQUIST	D. GRAHAM	K. LINDQUIST	M. STEELE	M. STEELE	M. STEELE	T. JOHNSON

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

MICHAEL J. STEELE — REGISTERED ENGINEER — AGENT — 111231 — COMMERCE — STATE OF TENNESSEE

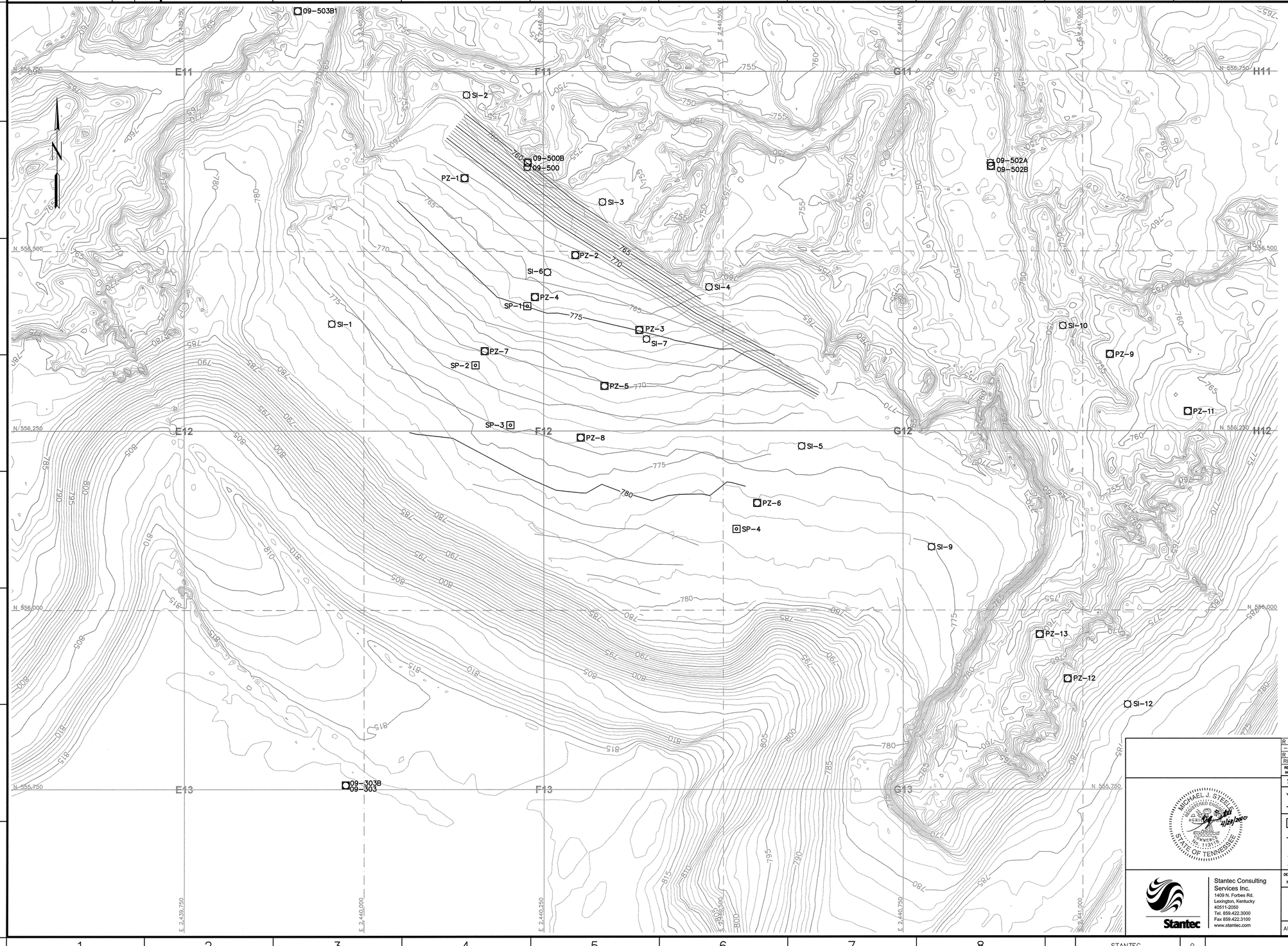
Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

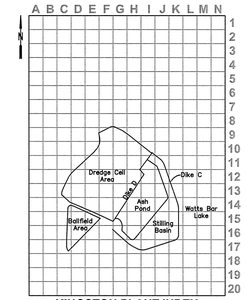
AUTOCAD R 2000	DATE 04/23/10	36	C	10W297-05	R 0

STANTEC	0
TASK COMPLETED BY:	REV NO.

PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY





KINGSTON PLANT INDEX
NOT TO SCALE

NOTE:
Topographic mapping was generated from a LIDAR survey performed on August 14, 2009 by Tuck Mapping Solutions, Inc. and supplemented with surveys by the Tennessee Valley Authority Surveying and Project Services performed on August 20, 2009 and October 5, 2009.

LEGEND

SI-1	Slope Inclinometer (SI)
PZ-2	Piezometer (PZ)
SP-3	Settlement Platform (SP)
—700—	Index Contour (August 14 & 20, 2009)
	Intermediate Contour (August 14 & 20, 2009)
—700—	Index Contour (October 5, 2009)
	Intermediate Contour (October 5, 2009)

RECORD DRAWING

25 0 50 100 FEET
GRAPHIC SCALE: 1" = 50'
CONTOUR INTERVAL = 1 FOOT

PLOT DATE: 04/22/2010 USER: JOHNSON, TRACY
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\TEST_EMB\REV0_RECORD\10W297-06-R0.DWG

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	04/23/10	KDL	DMG	KDL	MJS	MJS	MJS	TJ	–	–	–

RECORD DRAWING

DISCIPLINE INTERFACE
1
2
3
4

SCALE: 1"=50' EXCEPT AS NOTED

YARD
–

DREDGE CELL
TEST EMBANKMENT PROGRAM
INTERIM CONFIGURATION 2

MICHAEL J. STEELE
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 113115
STATE OF TENNESSEE
4/23/2010

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
K. LINDQUIST	D. GRAHAM	K. LINDQUIST	M. STEELE	M. STEELE	M. STEELE	T. JOHNSON

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

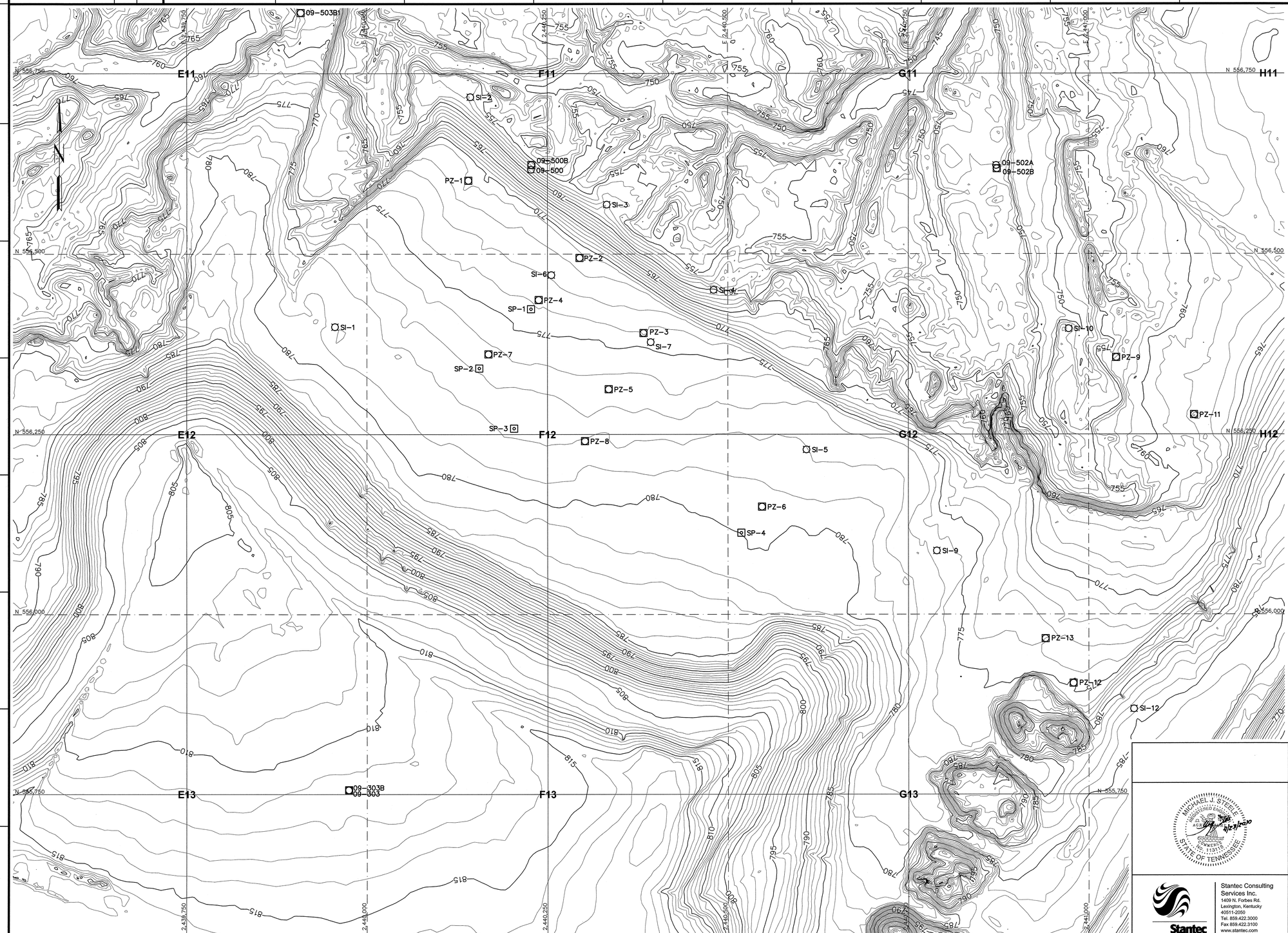
AUTOCAD R 2000 | DATE 04/23/10 | 36 | C | 10W297-06 | R 0

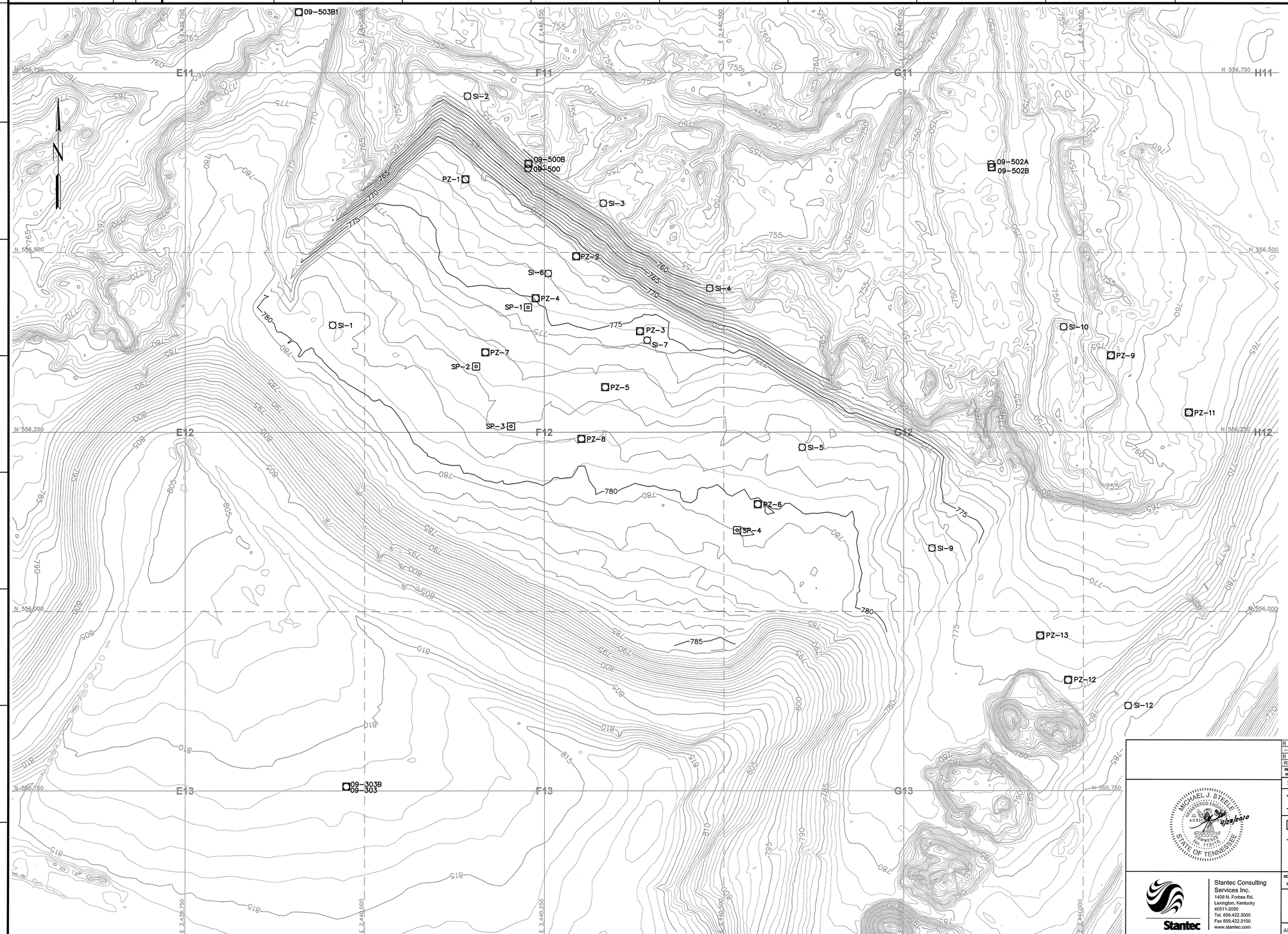
PLOT FACTOR:XX
W_TVA

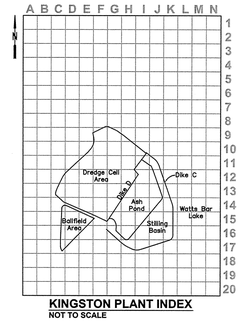
C.A.D. DRAWING
DO NOT ALTER MANUALLY

STANTEC	0
TASK COMPLETED BY:	REV NO.

36 C 10W297-06


09-503B1
09-503B
09-500B
09-500
09-502A
09-502B
09-303B
09-303
PZ-1
PZ-2
PZ-3
PZ-4
PZ-5
PZ-6
PZ-7
PZ-8
PZ-9
PZ-10
PZ-11
PZ-12
PZ-13
SI-1
SI-2
SI-3
SI-4
SI-5
SI-6
SI-7
SI-8
SI-9
SI-10
SI-12
SP-1
SP-2
SP-3
SP-4
E11
F11
G11
H11
E12
F12
G12
H12
E13
F13
G13
N 556,750
N 556,500
N 556,250
N 556,000
N 555,750
E 2,439,750
E 2,440,000
E 2,440,250
E 2,440,500
E 2,440,750
E 2,441,000
E 2,441,250
E 2,441,500
E 2,441,750
E 2,442,000
E 2,442,250
E 2,442,500
E 2,442,750
E 2,443,000
E 2,443,250
E 2,443,500
E 2,443,750
E 2,444,000
E 2,444,250
E 2,444,500
E





KINGSTON PLANT INDEX
NOT TO SCALE

NOTE:
Topographic mapping was generated from a LIDAR survey performed on October 8, 2009 by Tuck Mapping Solutions, Inc. and supplemented with a survey by the Tennessee Valley Authority Surveying and Project Services performed on October 25 and October 28, 2009.

LEGEND

- SI-1 — Slope Inclinometer (SI)
- PZ-2 — Piezometer (PZ)
- SP-3 — Settlement Platform (SP)
- 700 — Index Contour (October 8, 2009)
- Intermediate Contour (October 8, 2009)
- 700 — Index Contour (October 25 & 28, 2009)
- Intermediate Contour (October 25 & 28, 2009)

RECORD DRAWING

25 0 50 100 FEET
GRAPHIC SCALE: 1" = 50'
CONTOUR INTERVAL = 1 FOOT

PLOT DATE: 04/22/2010 USER: JOHNSON, TRACY
V:\1795\ACTIVE\TVA000010\ENVIRONMENTAL\DRAWING\TEST_EMB\REVS_RECORD\10W297-08-R0.DWG

R	–	–	–	–	–	–	–	–	–	–	–	–
R 0	04/23/10	KDL	DMG	KDL	MJS	MJS	MJS	TJ	–	–	–	–
RECORD DRAWING												

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ED	AS CONST	REV CD

DISCIPLINE INTERFACE: 1 2 3 4

SCALE: 1"=50' EXCEPT AS NOTED

YARD
–

DREDGE CELL
TEST EMBANKMENT PROGRAM
INTERIM CONFIGURATION 4

MICHAEL J. STEELE — REGISTERED ENGINEER — No. 111111 — STATE OF TENNESSEE

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
K. LINDQUIST	D. GRAHAM	K. LINDQUIST	M. STEELE	M. STEELE	M. STEELE	T. JOHNSON

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

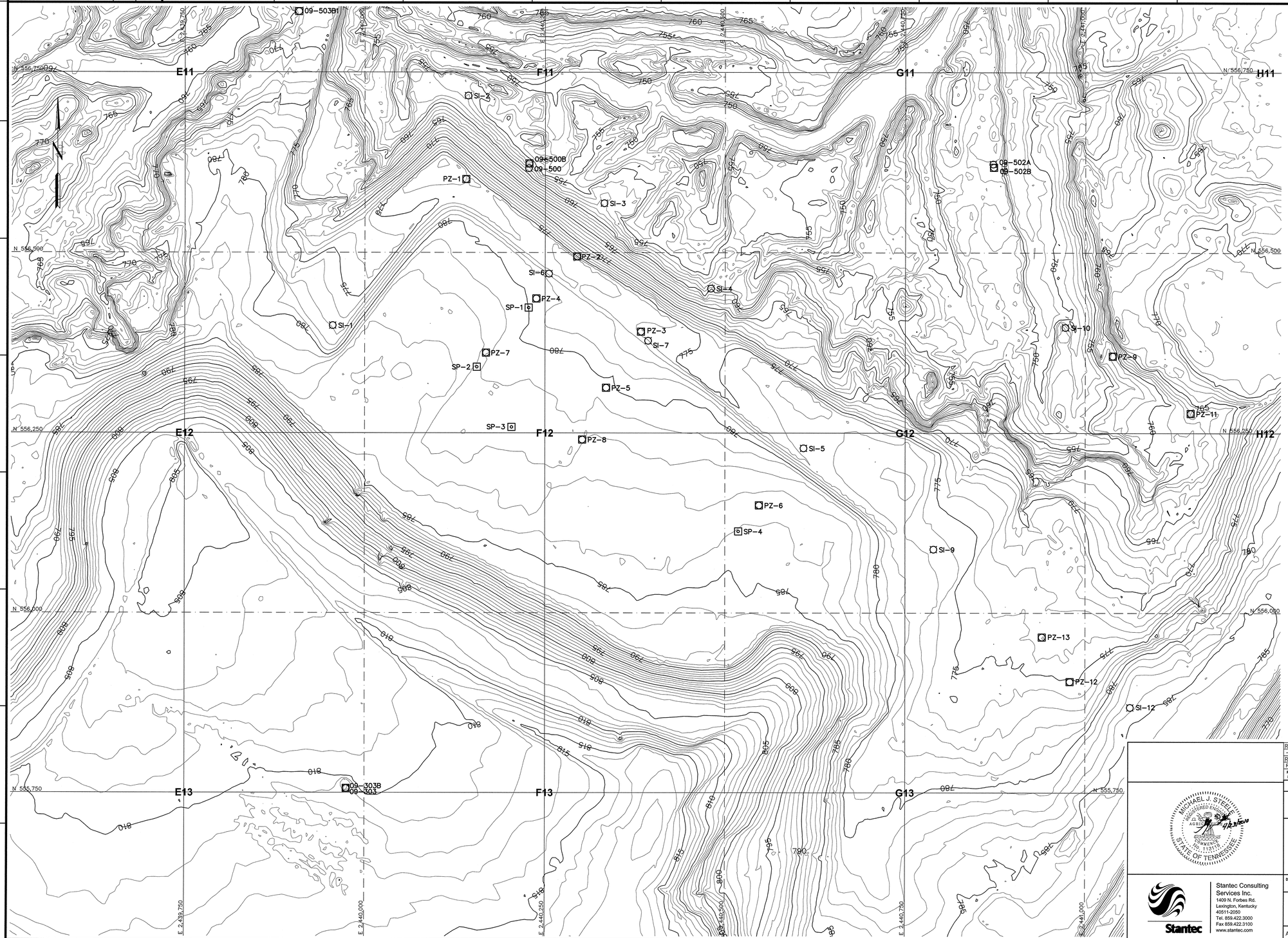
KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

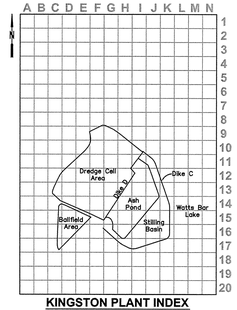
AUTOCAD R 2000	DATE 04/23/10	36	C	10W297-08	R 0

PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

STANTEC	0
TASK COMPLETED BY:	REV NO.





KINGSTON PLANT INDEX
NOT TO SCALE

NOTE:
Topographic mapping was generated from a LIDAR survey performed on November 25, 2009 by Tuck Mapping Solutions, Inc.

LEGEND

- SI-1 Slope Inclinometer (SI)
- PZ-2 Piezometer (PZ)
- SP-3 Settlement Platform (SP)
- —700— Index Contour (November 25, 2009)
- Intermediate Contour (November 25, 2009)

RECORD DRAWING

25 0 50 100 FEET
GRAPHIC SCALE: 1" = 50'
CONTOUR INTERVAL = 1 FOOT

PLOT DATE: 04/23/2010 USER: JOHNSON, TRACY
N:\CAD\Projects\10W297-09\Engineering\TEST EMBANKMENT\DGN\10W297-09-R0.DWG

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV. ID
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	04/23/10	KDL	DMG	KDL	MJS	MJS	MJS	TJ	–	–	–
RECORD DRAWING											

DISCIPLINE INTERFACE

SCALE: 1"=50' EXCEPT AS NOTED

YARD
–

MICHAEL J. STEELE REGISTERED ENGINEER AGENCY Tennessee NO. 113116 STATE OF TENNESSEE 4/23/2010

DREDGE CEL
TEST EMBANKMENT PROGRAM
INTERIM CONFIGURATION 5

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
K. LINDQUIST	D. GRAHAM	K. LINDQUIST	M. STEELE	M. STEELE	M. STEELE	T. JOHNSON

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

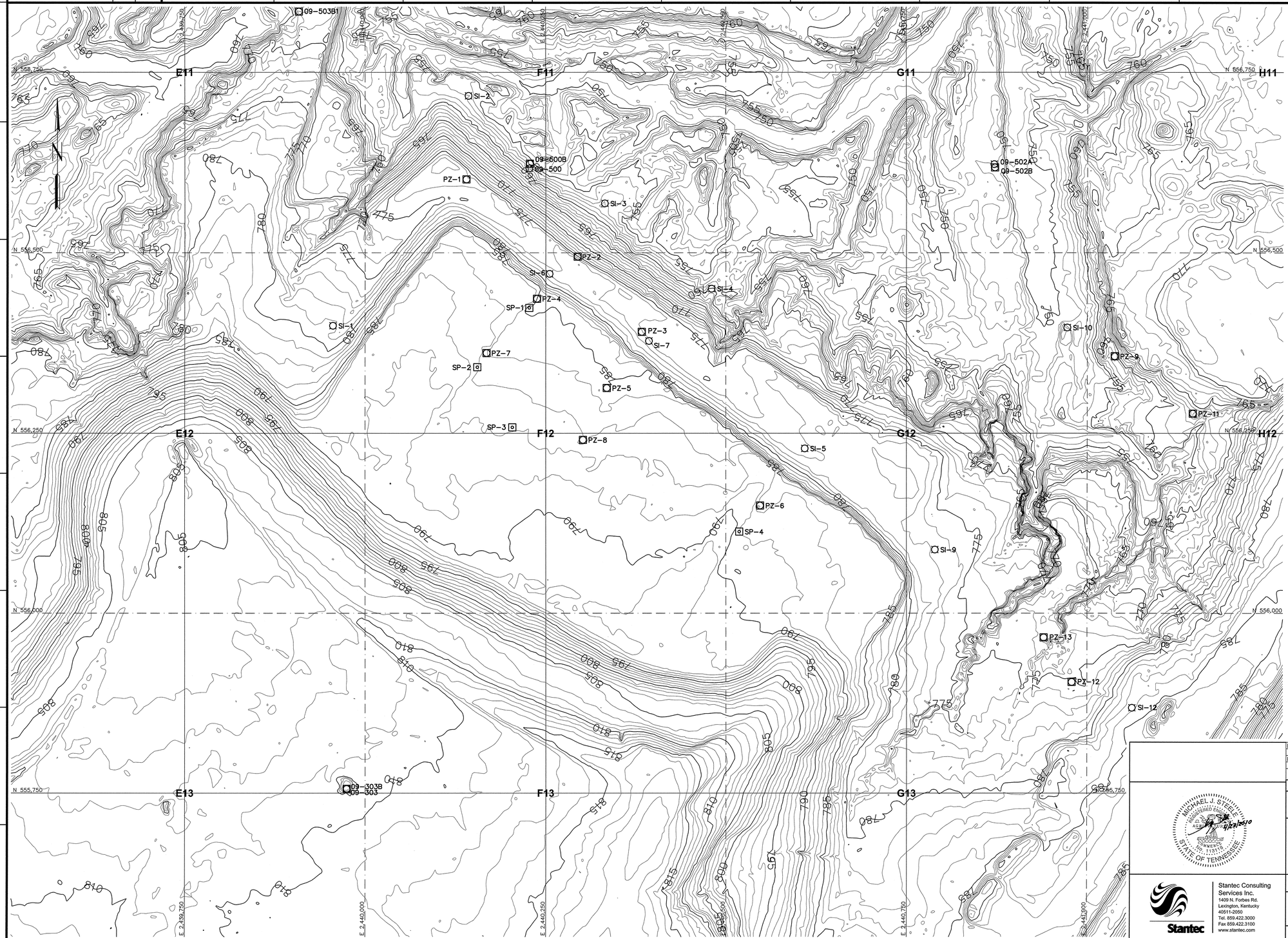
Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

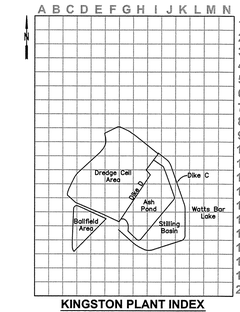
AUTOCAD R 2000	DATE 04/23/10	36	C	10W297-09	R 0

STANTEC	0
TASK COMPLETED BY:	REV NO.

PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY





KINGSTON PLANT INDEX
NOT TO SCALE

NOTE:
Topographic mapping was generated from a LIDAR survey performed on January 11, 2010 by Tuck Mapping Solutions, Inc.

LEGEND

SI-1	Slope Inclinometer (SI)
PZ-2	Piezometer (PZ)
SP-3	Settlement Platform (SP)
—700—	Index Contour (January 11, 2010)
———	Intermediate Contour (January 11, 2010)

RECORD DRAWING

25 0 50 100 FEET
GRAPHIC SCALE: 1" = 50'
CONTOUR INTERVAL = 1 FOOT

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	04/23/10	KDL	DMG	KDL	MJS	MJS	MJS	TJ	–	–	–

RECORD DRAWING

SCALE: 1"=50' EXCEPT AS NOTED

YARD
–

DREDGE CELL
TEST EMBANKMENT PROGRAM
INTERIM CONFIGURATION 6

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
K. LINDQUIST	D. GRAHAM	K. LINDQUIST	M. STEELE	M. STEELE	M. STEELE	T. JOHNSON

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2000 | DATE 04/23/10 | 36 | C | 10W297-10 | R 0

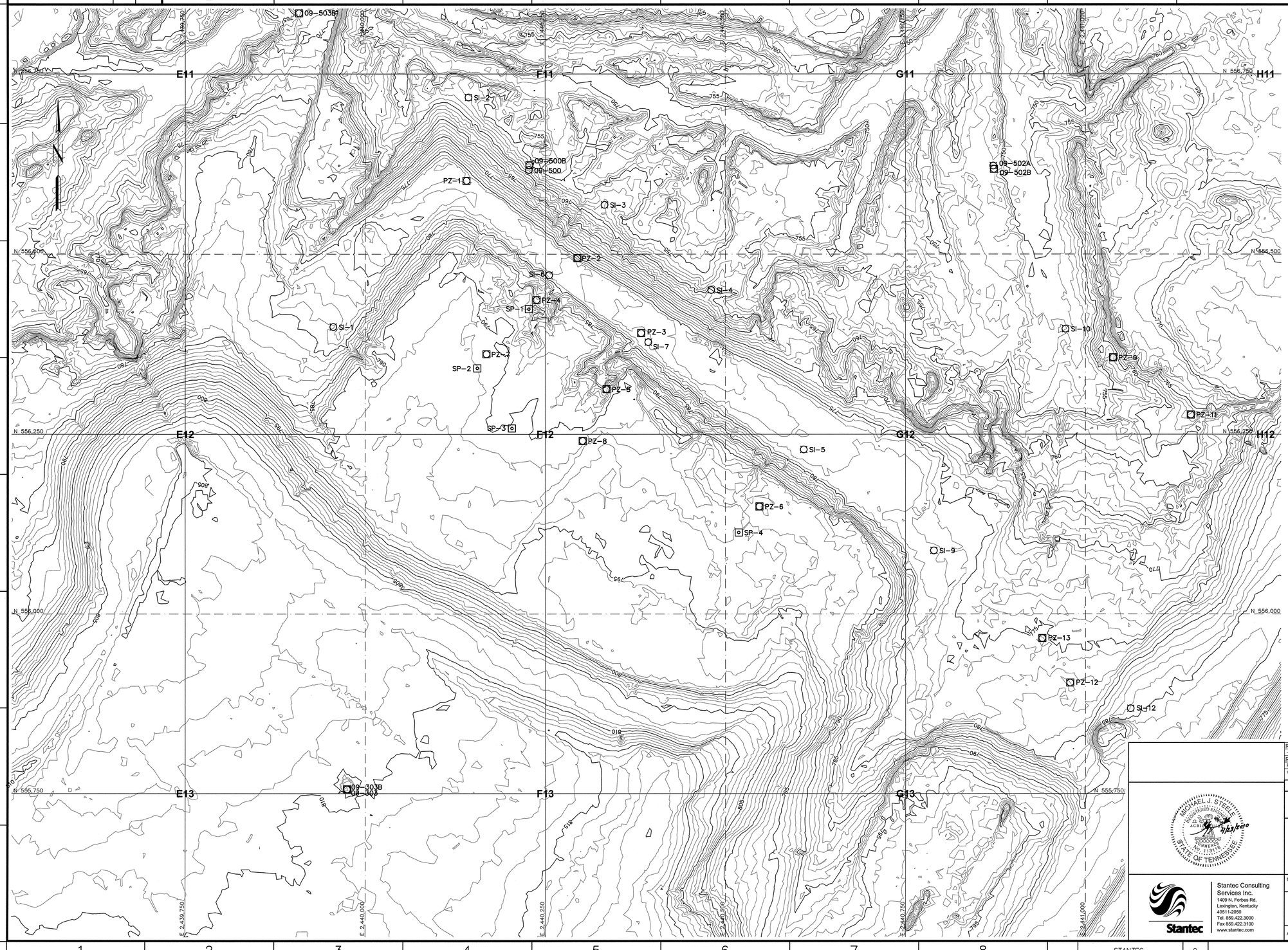
STANTEC	0
TASK COMPLETED BY:	REV NO.

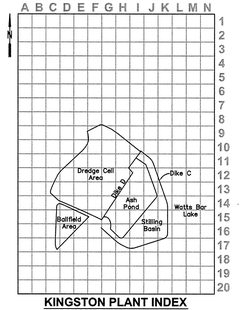
PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PLOT DATE: 04/22/2010 USER: JOHNSON, TRACY
V:\1756\ACTIVE\175669015\ENVIRONMENTAL\DRAWING\TEST_EMB\REV0_RECORD\10W297-10-R0.DWG

36 | C | 10W297-10





KINGSTON PLANT INDEX
NOT TO SCALE

NOTE:
Topographic mapping was generated from a LIDAR survey performed on February 27, 2010 by Tuck Mapping Solutions, Inc.

LEGEND

- SI-1 ⬡ Slope Inclinometer (SI)
- PZ-2 ⬡ Piezometer (PZ)
- SP-3 ⊡ Settlement Platform (SP)
- —700— Index Contour (February 27, 2010)
- ——— Intermediate Contour (February 27, 2010)

RECORD DRAWING

25 0 50 100 FEET
GRAPHIC SCALE: 1" = 50'
CONTOUR INTERVAL = 1 FOOT

TEXT DATE: 04/21/2010 USER: SHANNON TRACY
X:\YTSK\ACTIVE\172500\01\DRAWINGS\FINAL\DRAWING TEST_EMBY\REVS_RECORD\10W297-11-R0.DWG

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV NO.
R –	–	–	–	–	–	–	–	–	–	–	–
R 0	04/23/10	KDL	DMG	KDL	MJS	MJS	MJS	TJ	–	–	–
RECORD DRAWING											DISCIPLINE INTERFACE

SCALE: 1"=50' EXCEPT AS NOTED

YARD
–

DREDGE CELL
TEST EMBANKMENT PROGRAM
INTERIM CONFIGURATION 7

MICHAEL J. STEELE REGISTERED ENGINEER AGRICULTURAL & ENVIRONMENTAL ENGINEERING No. 113115 STATE OF TENNESSEE 4/23/2010

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
K. LINDQUIST	D. GRAHAM	K. LINDQUIST	M. STEELE	M. STEELE	M. STEELE	T. JOHNSON

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

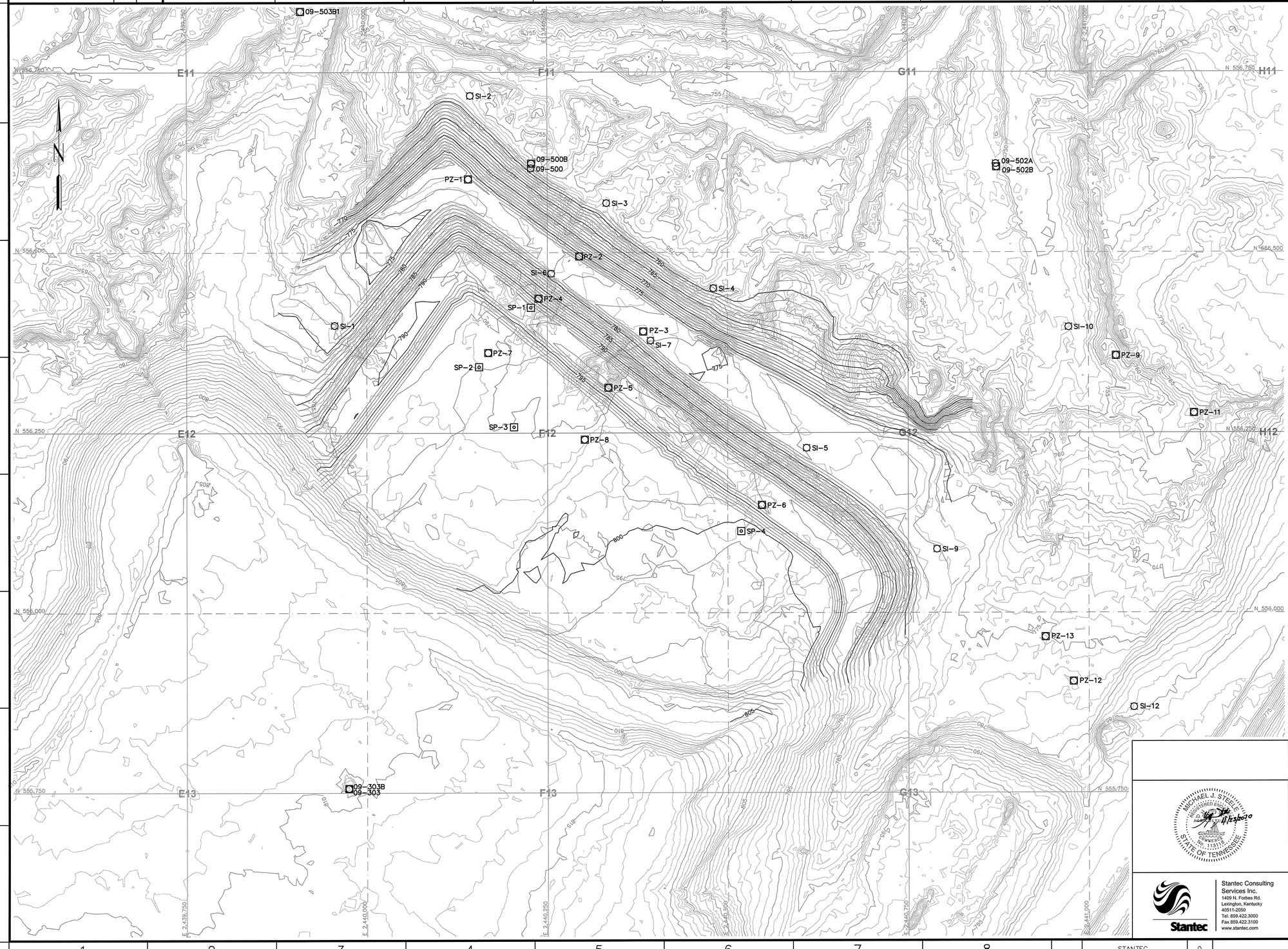
AUTOCAD R 2000	DATE 04/23/10	36	C	10W297-11	R 0

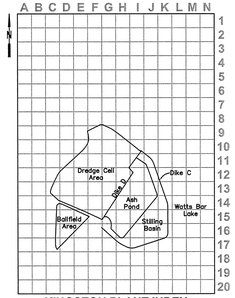
PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

STANTEC	0
TASK COMPLETED BY:	REV NO.

36 | C | 10W297-12





KINGSTON PLANT INDEX
NOT TO SCALE

NOTE:
Topographic mapping was generated from a LIDAR survey performed on February 27, 2010 by Tuck Mapping Solutions, Inc. and supplemented with a survey by the Tennessee Valley Authority Surveying and Project Services performed on April 5, 6 and 7, 2010.

LEGEND

- SI-1 ⬡ Slope Inclinometer (SI)
- PZ-2 ⬡ Piezometer (PZ)
- SP-3 ⊙ Settlement Platform (SP)
- 700 Index Contour (February 27, 2010)
- Intermediate Contour (February 27, 2010)
- 700 Index Contour (April 5, 6, & 7, 2010)
- Intermediate Contour (April 5, 6, & 7, 2010)

RECORD DRAWING

25 0 50 100 FEET
GRAPHIC SCALE: 1" = 50'
CONTOUR INTERVAL = 1 FOOT

R.O.T. DATE: 04-23-2010 USER: JOHNSON, TRACY
V:\1750\ACTIVE\TVA1758900\13\ENVIRONMENTAL\DRAWING\TEST_EMB\DEVDL_RECORD\10W297-12-R0.DWG

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ENGR	AS CONST	REV. NO.
R-	–	–	–	–	–	–	–	–	–	–	R-
R 0	04/23/10	KDL	DMG	KDL	MJS	MJS	MJS	TJ	–	–	R 0
RECORD DRAWING											

DISCIPLINE INTERFACE
1 –
2 –
3 –
4 –

SCALE: 1"=50' EXCEPT AS NOTED

YARD
–

DREDGE CELL
TEST EMBANKMENT PROGRAM
FINAL GRADING PLAN

MICHAEL J. STEELE REGISTERED ENGINEER 119171 STATE OF TENNESSEE 4/23/2010

Stantec Consulting Services Inc.
1409 N. Forbes Rd.
Lexington, Kentucky
40511-2050
Tel. 859.422.3000
Fax 859.422.3100
www.stantec.com

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
K. LINDQUIST	D. GRAHAM	K. LINDQUIST	M. STEELE	M. STEELE	M. STEELE	T. JOHNSON

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2000	DATE: 04/23/10	36	C	10W297-12	R 0

PLOT FACTOR:XX
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

STANTEC	0
TASK COMPLETED BY:	REV NO.

Appendix M

Photographs

07/16/09: Test Embankment subgrade preparation prior to working platform construction.

08/12/09: Geogrid and aggregate being placed during construction of Test Embankment working platform.

08/13/09: Aggregate being bladed over the geogrid during construction of Test Embankment working platform. Coarse sand atop the aggregate is shown in the foreground.

08/13/09: Settlement plate installation.

08/14/09: Tractor equipped with harrow aerating ash fill within the Test Embankment.

08/14/09: Dozer blading a lift of ash fill within northwest portion of Test Embankment. Once placed, a smooth drum roller is used to seal the lift.

08/15/09: Stantec drill crew installing PZ-13.

08/19/09: Observed erosion on Test Embankment after a period of wet weather.

08/19/09: Tractor equipped with harrow aerating the surface of ash fill within the Test Embankment after a period of wet weather; photo taken from southeast access road.

08/20/09: Slope of Relic structure from Test Embankment area.

08/21/09: Toe of Test Embankment between PZ-2 and PZ-3 after a period of wet weather.

08/24/09: Ash placement via articulated dump truck within the Test Embankment; photo taken from southeast access road.

08/24/09: Overall Test Embankment construction; photo taken from East-West haul road.

08/26/09: Ash delivery via articulated dump truck while a dozer is grading and a roller is sealing the ash fill; photo taken from southeast access road.

08/27/09: Ash delivery via articulated dump truck.

08/28/09: Grading and sealing of ash fill to maintain positive drainage; photo taken from CP Connex trailer.

08/29/09: Grading of ash fill.

08/31/09: Ash delivery via articulated dump trucks, photo taken from southeast access road.

09/01/09: One of the Test Embankment fill sources; photo taken from east embankment.

09/01/09: Ash delivery via articulated dump truck while a dozer is grading; photo taken from southeast access road.

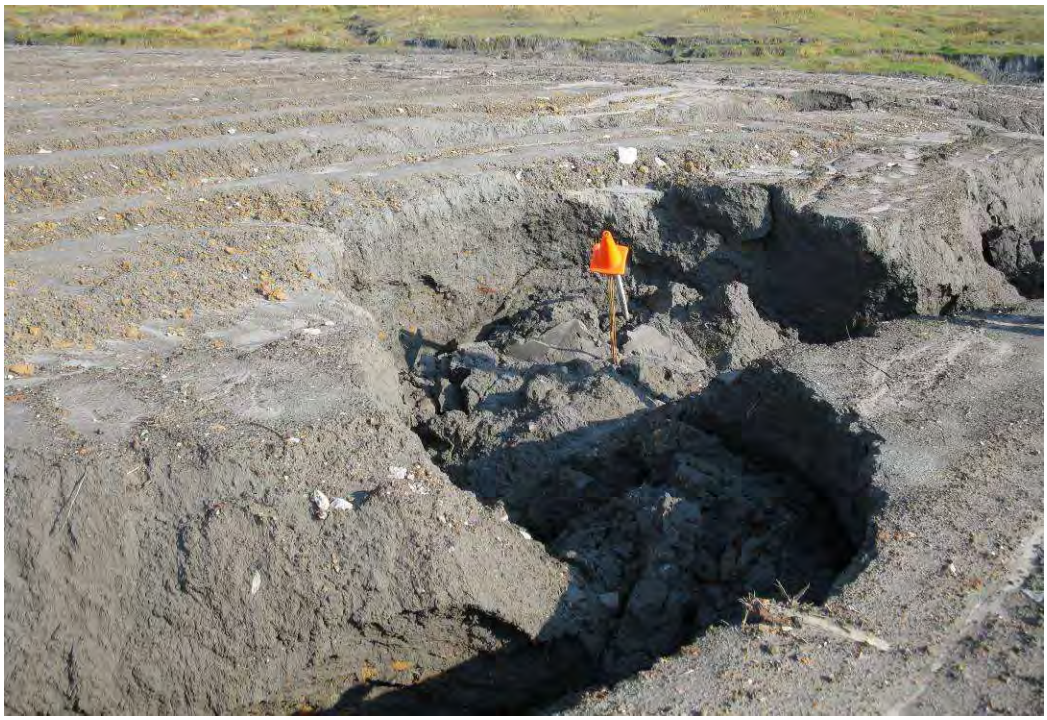
09/04/09: Aeration of ash fill within Test Embankment; photo taken from southeast access road.

09/08/09: Grading and sealing of ash fill within the embankment; photo taken from East-West haul road.

09/09/09: Grading of ash fill; photo taken from southeast access road.

09/14/09: Grading of ash fill along the toe of the Relic structure.

09/15/09: Northeast toe of the Test Embankment being dressed by a long reach excavator.



09/28/09: PZ-3 located within a washout after a period of wet weather.

09/30/09: Dozer configuring (dressing) northeast slope of the Test Embankment.

09/30/09: Delivery and grading of ash fill; photo taken from CP Connex trailer.

09/30/09: Stockpiles of saturated ash placed to the east of the Test Embankment; photo taken from the Relic structure.

10/01/09: Ash placement for embankment construction; photo taken from northwest access road.

10/07/09: Overall Test Embankment configuration; photo taken from East-West haul road.

10/07/09: Dozer dressing the embankment slope; photo taken from Stantec Connex trailer.

10/08/09: Placement of filter fabric for temporary surface runoff flume.

10/19/09: Excavator dressing the Test Embankment west slopes.

10/26/09: Wet ash stockpiles to the east of the Test Embankment; photo taken from southeast access road.

11/04/09: Creating windrows of previously placed ash fill to aid drying via aeration.

11/06/09: Dozer grading ash fill within Test Embankment.

11/10/09: Smooth drum roller sealing surface of the ash fill; photo taken from CP Connex trailer.

11/10/09: Overall Test Embankment progress; photo taken from northwest access road.

11/12/09: Excavator re-setting SP-3 after being struck by equipment.

11/19/09: Excavator and dozer configuring embankment slopes; photo taken from CP Connex trailer.

11/20/09: Overall embankment construction and ash delivery; photo taken from southeast access road.

11/20/09: Western slopes of the first and second tiers of the embankment; photo taken from CP Connex trailer.

11/24/09: Dozers blading in material on second tier of Test Embankment; photo taken from CP Connex trailer.

12/01/09: Overall construction of Test Embankment; photo taken from southeast access road.

12/04/09: Dozer grading ash fill; photo taken from CP Connex trailer.

12/08/09: Surface of the Test Embankment too soft to place fill due to wet weather; photo taken from southeast access road.

12/22/09: Ash fill being bladed in along the toe of the Relic Structure; photo taken from southeast access road.

12/29/09: Dozer grading ash fill within the Test Embankment; photo taken from southeast access road.

12/30/09: Ash fill being tracked with dozers; photo taken from southeast access road.

01/11/10: Delivery and grading of ash fill within the embankment; photo taken from southeast access road.

01/13/10: Delivery and grading of ash fill within the embankment; photo taken from southeast access road.

01/16/10: Overall Test Embankment construction; photo taken from Stantec Connex trailer.

01/29/10: Coarse aggregate placed during construction of a flume ditch in the northwest portion of the Test Embankment.

01/29/10: Installation of drainage pipes for the flume ditch in the northwest portion of the Test Embankment.

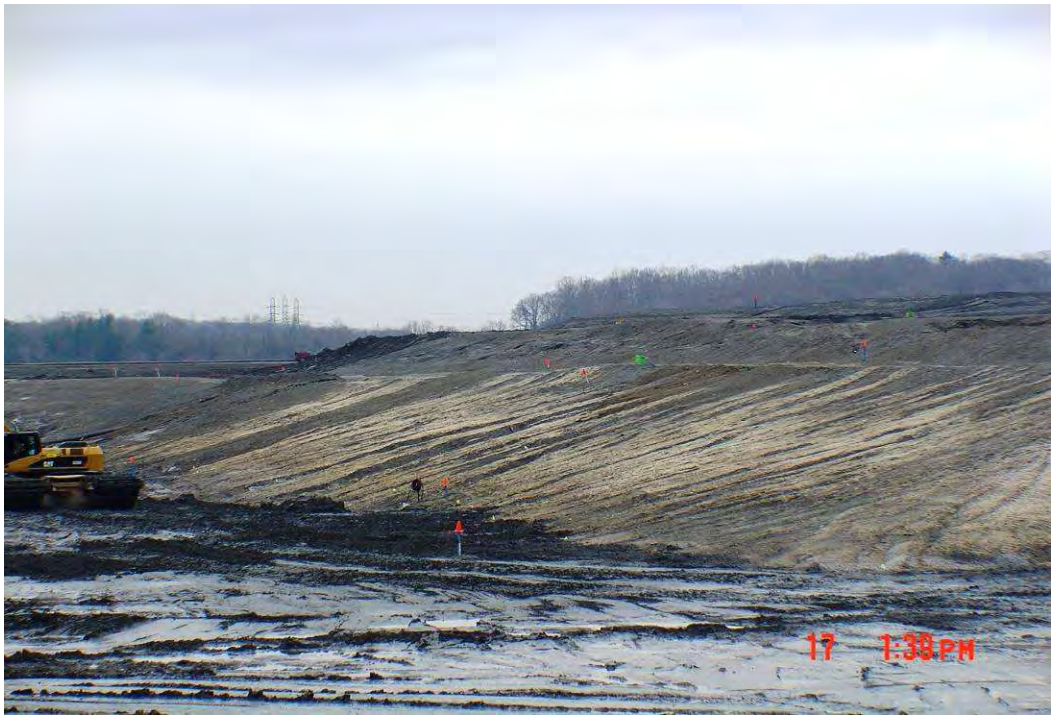
02/01/10: Dozer tracking saturated surface of the Test Embankment; photo taken from the southeast access road.

02/01/10: Water draining via the flume ditch on the first embankment tier within the northwest area.

02/22/10: Dozer cutting drainage ditches to allow runoff of surface water from the Test Embankment.

02/23/10: Dozer tracking over previously placed ash fill that had become saturated in order to bring the water to the surface; photo taken from southeast access road.

02/26/10: Overall construction of the Test Embankment.



03/17/10: North face of Test Embankment; photo taken from west edge of stabilization berm.

03/17/10: East face of Test Embankment; photo taken from Dike D.

03/18/10: Stabilization berm along west perimeter of the Test Embankment; photo taken from the southwest corner of the Test Embankment looking north.

03/18/10: Construction of the stabilization berm along the north perimeter of the Test Embankment; photo taken from the northwest corner of the Test Embankment looking east.

03/31/10: Grading and sealing ash fill on the third tier of the Test Embankment.

03/31/10: Sealing ash fill within the Test Embankment.

04/05/10: Completed Test Embankment; photo taken from northwest access road.

04/05/10: Completed Test Embankment; photo taken from Dike D.

04/05/10: Density testing of ash fill on final lift of embankment; photo taken from southeast access road.

04/05/10: Benches within overall Test Embankment slope; photo taken from top of Relics area.