GE
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Pittsfield, MA 01201
USA

January 8, 2008

Ms. Susan Svirsky
U.S. Environmental Protection Agency
c/o Weston Solutions
10 Lyman Street
Pittsfield, MA 01201

Re: GE-Pittsfield/Housatonic River Site
Silver Lake Area (GECD600)
Revised Pilot Study Report for Silver Lake Sediments

Dear Ms. Svirsky:

Enclosed please find a revised version of the General Electric Company's (GE's) *Pilot Study Report for Silver Lake Sediments* which summarizes the performance and results of the pilot-scale study for Silver Lake sediments. The Pilot Study Report was initially submitted on September 28, 2007. EPA, in its conditional approval letter dated December 10, 2007, requested that certain modifications and clarifications be made to the report, and asked for a revised submittal. As requested, GE has made such changes to the Pilot Study Report as presented in this revised document. This revised Report is intended to supersede and replace the September 2007 version.

Please call me if you have any questions.

Sincerely,

Andrew T. Silfer /dmn

Andrew T. Silfer, P.E.
GE Project Coordinator

ATS/dmn
Enclosure
cc: Susan Steenstrup, MDEP
Jane Rothchild, MDEP (without attachments)
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General Electric Company
Pittsfield, Massachusetts

Pilot Study Report for Silver Lake Sediments

Originally Submitted September 2007

Revised January 2008

Pilot Study Report for Silver Lake Sediments

Prepared for:
General Electric Company
Pittsfield, Massachusetts

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1. Introduction

On October 27, 2000, a Consent Decree (CD) executed in 1999 by the General Electric Company (GE), the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (MDEP), and several other government agencies was entered by the United States District Court for the District of Massachusetts. The CD governs, among other things, the performance of response actions to address polychlorinated biphenyls (PCBs) and other constituents in soils, sediment, and groundwater in several Removal Action Areas (RAAs) located in or near Pittsfield, Massachusetts, that are included within the GE-Pittsfield/Housatonic River Site (the Site). The Silver Lake RAA includes both lake sediment and bank soils, which are currently being investigated and evaluated on separate tracks. This report is focused on the Silver Lake sediments.

Silver Lake is located immediately west of, and across Silver Lake Boulevard from, the former 30s Complex portion of the GE Plant Area in Pittsfield, Massachusetts (Figure 1). The lake is bordered to the north by Silver Lake Boulevard and to the west and south by several commercial and residential properties. Silver Lake has a surface area of approximately 26 acres and a maximum water depth of approximately 30 feet. The lake receives stormwater discharges from several municipal stormwater outfalls, including the Pittsfield Economic Development Authority (PEDA's) National Pollutant Discharge Elimination System (NPDES) permitted outfall that conveys stormwater from both PEDA property and GE property that is planned to be transferred to PEDA in the future, as well as several adjacent residential and commercial/industrial properties. Silver Lake discharges to the East Branch of the Housatonic River through a 48-inch-diameter concrete pipe located in the southwest portion of the lake. This pipe conveys surface water from Silver Lake as well as stormwater runoff from Fenn and East Streets to the Housatonic River.

The CD and accompanying *Statement of Work for Removal Actions Outside the River* (SOW) (Blasland, Bouck & Lee, Inc. [BBL], 1999) provide for the performance of numerous response actions at RAAs located outside the Housatonic River. For each response action, the CD and SOW establish performance standards that must be achieved, as well as specific work plans and other documents that must be prepared to support the response actions within each RAA. As set forth in the SOW, and pursuant to discussions with EPA and EPA's letter dated August 17, 2004 conditionally approving GE's *Pre-Design Investigation Report for Silver Lake Sediments* (Sediments PDI Report) (BBL, 2004), the Performance Standards for Silver Lake sediments are briefly summarized below:

- GE shall remove a maximum of 400 in-situ cubic yards (cy) of sediments from an area in the general vicinity of existing outfall 01A, replace the removed sediments, and restore and vegetate that portion of the affected area that is not underwater in coordination with the installation of the sediment cap and the performance of natural resource restoration/enhancement activities.

- GE shall install a cap over the entire bottom of the lake to achieve the design standards set forth in Attachment K to the SOW, including an isolation layer consisting of silty sand with a presumptive thickness[1] of 12 inches if geotextile is placed between the sediments and the cap (or 14 inches without a geotextile), a total organic carbon (TOC) content of 0.5%, and concentrations of PCBs at non-detectable levels and other constituents at background levels (with the appropriateness of these design parameters being subject to confirmation in the pre-design investigation).

- The capping system shall include an overlaying armor layer of stone incorporated along the shoreline as necessary to prevent potential erosion of the isolation layer due to wind-induced wave action.

- In connection with the installation of the Silver Lake capping system described in Attachment K to the SOW, GE shall construct a shallow-water shelf along the shorelines of the lake to provide an improved habitat for aquatic species. This shallow-water shelf shall consist of an armoring layer of stone to be placed around the shoreline as part of the capping system. GE shall place a three-inch layer of gravel and sand over the armoring stone to facilitate fish usage on the shelf.

The work plans and other documents prescribed by the CD and SOW included a pre-design investigation (PDI) report to be completed in advance of the implementation of response actions. GE's Sediments PDI Report was submitted to EPA in February 2004 to summarize data collection activities and results of the pre-design sediment investigation of Silver Lake sediments, and, as noted above, was conditionally approved by EPA by letter dated August 17, 2004.

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[1] This thickness was increased by 2 inches from the presumptive thicknesses (both, with or without a geotextile) specified in the SOW by EPA's letter dated August 17, 2004 conditionally approving GE's *Pre-Design Investigation Report for Silver Lake Sediments* (Sediments PDI Report) (BBL, 2004).

As documented in the Sediments PDI Report, GE and EPA agreed that, prior to design and construction of a cap for Silver Lake, bench- and pilot-scale studies were needed to further assess the behavior of Silver Lake sediments during and after cap placement, and to confirm key assumptions related to the initial cap design. Therefore, following submission of the Sediments PDI Report, GE submitted a *Proposal for Supplemental Pre-Design Investigations and Description of Objectives of Bench Scale Study* (Supplemental PDI Work Plan) (BBL, 2004) to EPA in a letter dated September 15, 2004. The results of this supplemental study were presented in *Supplemental Pre-Design Investigations Report* submitted to EPA in a letter dated May 19, 2005. In addition, the Supplemental PDI Work Plan outlined the objectives of the Bench-Scale Study for Silver Lake Sediments.

GE performed the Bench-Scale Study in 2005 to investigate the geophysical and chemical response of lake sediments to the placement of cap materials. The activities and results of that study were summarized in the *Bench-Scale Study Report for Silver Lake Sediments* (BBL, 2006), which GE submitted to EPA in March 2006, and which EPA conditionally approved by letter dated May 2, 2006. A revised *Bench-Scale Study Report for Silver Lake Sediments* (Bench-Scale Report) was submitted to EPA in May 2006, reflecting comments on the original Bench-Scale Report set forth in EPA's May 2, 2006 conditional approval letter.

In June 2006, following EPA approval of the Bench Scale Report, GE submitted to EPA a *Pilot Study Work Plan for Silver Lake Sediments*. EPA conditionally approved that work plan by letter dated July 18, 2006. In accordance with that conditional approval letter, on August 16, 2006, GE submitted a revised *Pilot Study Work Plan for Silver Lake Sediments* (ABBL, 2006b –Work Plan) to describe the pilot study activities proposed for the sediments within Silver Lake.

Following further discussions with the Agencies regarding implementation of the Pilot Study and selection of Sevenson Environmental Services, of Niagara Falls, New York as Remedial Contractor (Contractor) to implement the work, GE conducted the Pilot Study with EPA oversight. The Pilot Study ran from October 2006 to June 2007 including the completion of an extended monitoring program. This *Pilot Study Report for Silver Lake Sediments* (Pilot Study Report) has been prepared to summarize the activities, observations, monitoring data, and conclusions associated with the Pilot Study. The Pilot Study Report was initially submitted on September 28, 2007. In its conditional approval letter dated December 10, 2007, EPA requested that certain modifications and clarifications be made to the report, and asked for a revised submittal. As requested, GE has made such changes to the Pilot Study Report as presented in this revised document.

The results of this pilot study will be combined with information from prior investigations of Silver Lake (e.g., Sediments PDI, Supplemental PDI, and Bench-Scale Study) to support the subsequent evaluation and design of response actions necessary to achieve the sediment-related performance standards for this RAA. In order to perform a Pilot Study under conservative conditions so as to identify any constructability issues that might arise on the construction of the full-scale engineered capping system, GE proposed to perform the Pilot Study on the east shore of the lake, because that area included areas of relatively steep slopes, sediments that were relatively low in strength, and sediments containing elevated PCB concentrations.

1.1 Pilot Study Objectives

As described in the Pilot Study Work Plan, the primary objectives of the Pilot Study for were to:

- Evaluate constructability issues associated with placement of a cap comprised of multiple thin layer lifts in the lake environment.
- Assess the potential for the physical mixing of sediments with cap materials as a result of cap placement.
- Evaluate shear strength behavior and slope stability of in-situ sediments resulting from the additional stress induced by the cap to further investigate constructability, and sediment response to placement of cap materials, including an assessment of potential short-term behaviors (e.g., mud wave, resuspension, sediment bearing capacity) and longer-term stability issues (e.g., consolidation settlement, side-slope creep) of lake sediments.
- Evaluate the effectiveness of incorporating geotextile materials into the cap design to enhance the integrity and stability of the cap.
- Assess the potential for water quality impacts, if any, related to cap placement.
- Confirm results of the Bench-Scale Study related to the performance of potential cap configurations with regard to the physical and chemical isolation of PCBs present in existing lake sediments.

1.2 Report Organization

The activities performed, and the results and conclusions drawn from implementation of the Silver Lake Pilot Study are presented in the subsequent sections of this report as follows:

- Section 2 presents an overview of the Pilot Study approach, including a brief description of the construction process and of the associated monitoring programs.
- Section 3 presents a more detailed description of the construction activities conducted during implementation of the Pilot Study.
- Section 4 presents a detailed description of the monitoring program, including the associated results and general observations.
- Section 5 discusses the general conclusions drawn from the Pilot Study as they relate to the stated objectives.
- Section 6 discusses future activities and provides a schedule for completion of those activities.
- Section 7 provides a list of references.

2. Overview of the Pilot Study Approach

This section presents the general approach of the Pilot Study, including an overview of the construction process and the monitoring program conducted in conjunction with the field work.

2.1 Summary of the Pilot Study Process

As discussed in the Work Plan (ABBL 2006b), the results of previous investigations were used to select a location for the performance of the Pilot Study. As mentioned above, in keeping with the objectives established for the pilot study program, and to conservatively evaluate future constructability of a full-scale engineered capping system, the east shore of the lake was selected to represent/include areas of relatively steep slopes, sediments that were relatively low in strength, and sediments containing elevated PCB concentrations (Figure 2).

The Pilot Study was conducted over an approximate 1-acre test area, which for the purpose of testing was divided into three contiguous sub-areas. As further discussed in Section 3, in two of these sub-areas, a geosynthetic layer (i.e., either a non-woven geotextile or a composite geotextile) was installed before placement of the isolation layer, while in the third sub-area, the isolation layer was placed directly on the sediment.

To facilitate placement of the isolation layer from the water surface and through the water column in successive thin lifts, dry isolation layer materials were mixed on-shore with water from Silver Lake to create a slurry, which was then pumped to a custom-built barge-mounted spreader-box that made repeated slow passes over the entire study area. Figure 3 illustrates a conceptual representation of the Pilot Study process.

Finally, an armor system was installed along the shoreline to protect the isolation layer from erosion. The armor system consisted of a woven geotextile placed beneath rip rap located above and below the mean water surface elevation. A gravel layer was also placed over the armor stone below the water line to provide improved habitat for aquatic species as required by the Performance Standards. Material specifications, testing methods, and frequency of material testing, for all construction materials used in the pilot study cap (e.g. geosynthetics, sand, topsoil, rip rap, gravel) are discussed in Sections 3 and 4 of this report.

2.2 Summary of Monitoring Program

A monitoring program was conducted to assess the success of the Pilot Study, confirm cap design assumptions, assess constructability issues, and assist in the development of potential full-scale cap installation methods and monitoring programs.

The monitoring program involved sediment and isolation layer material sampling, measurement of cap thickness, water column sampling, and monitoring of settlement/consolidation before, during, and/or after construction. The monitoring program was set up to provide the ability for the near real-time assessment of sediment behaviors during cap placement and to provide a longer-term temporal comparison of the condition of the cap. Table 1 presents a summary of the overall monitoring program, including a general schedule of performance with respect to construction of the cap. The specific objectives and detailed descriptions of these monitoring activities, as well as related results and/or observations, are presented in Section 4.

3. Pilot Study Cap Construction

This section describes the activities GE undertook to construct the cap in the Pilot Study area, from the pre-construction activities (isolation layer material identification and sampling, staging area construction, on-shore slurry operation) to the construction itself (placement of the geotextile, isolation layer materials, and armor layer). Also provided below are details on the cap configurations and observations during cap construction.

3.1 Pre-Construction Activities

Certain activities were completed prior to cap placement, including the identification and sampling of candidate isolation layer materials, installation of erosion controls and turbidity barriers, establishment of materials and equipment staging areas, and construction of isolation layer slurry operations. This section describes the performance of these preparation activities, modifications to the processes that were implemented in the course of performing them, and the relationship of these activities to construction phases and/or monitoring programs.

3.1.1 Isolation Layer Material Identification, Characterization and Preparation

As documented in the CD and SOW, the isolation layer materials used in constructing a cap for Silver Lake sediments are required to be a silty sand with a minimum TOC of 0.5% (i.e., a minimum of 5,000 mg/kg). As a conservative measure, a target TOC of 1.0% for the dry mixed materials was selected for the Pilot Study. Several material sources were preliminarily identified and representative samples were collected and assessed for TOC and potential use as (or as a component of) the isolation layer mix. Based on this preliminary assessment, pond sand -- from Pittsfield Sand & Gravel (PS&G) and topsoil -- from Clarksburg Construction (Clarksburg) were selected for use in the isolation layer.

Samples of the pond sand from PS&G and topsoil from Clarksburg were collected from the respective suppliers and submitted to Northeast Analytical, Inc. (NEA) in Schenectady, NY for analysis of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), PCBs, inorganics, TOC and grain size. All of these samples were non-detect for PCBS, with one exception (Pittsfield-Pond-Sand-7 at 0.071 mg/kg). Detections of other constituents were generally at or below acceptable background levels. Therefore; with EPA concurrence, these candidate materials were approved for use in the dry isolation layer materials mix. Table 2 summarizes the analytical data associated with these samples. Grain size distribution data related to the pond sand are included in Appendix A.

The candidate isolation layer materials were delivered to the site and 2.5 parts pond sand (by volume) were mixed with 1 part topsoil using conventional earth moving equipment to achieve an approximate 1% TOC in the dry mixed isolation layer material. Following mixing, representative samples were collected from the mixed materials for TOC analysis, as well as PCB analysis in certain instances, using sampling methods and frequencies specified in the Work Plan. The results of these analyses are presented in Table 3. As indicated, the TOC of the dry mixed isolation layer materials averaged approximately 1%.

GE provided preliminary data related to the TOC of the dry mixed isolation layer materials to EPA, as it became available, to obtain EPA concurrence that the dry mixed materials were acceptable for use in the isolation layer. On several occasions, EPA collected split samples of the mixed isolation layer material for PCB and TOC analysis. As discussed with EPA during construction activities, EPA's analytical results were generally similar to GE's, and no modifications to the mixing process or the candidate materials were identified. EPA analytical results of one split sample did indicate a PCB concentration of approximately 1 mg/kg in a portion of the initial supply of dry mixed isolation layer materials. In response, GE requested additional analysis of the parent sample (i.e., SL-BF-TOC-1B collected on October 16, 2006) for PCBs. The results of the additional PCB analysis were non-detect for PCBs, as summarized on Table 3. Due to the discrepancy in the sample results, after discussion with EPA, GE segregated the stockpile from which the sample in question was taken, and did not use it as part of the capping process. Rather, with EPA approval, these materials were used as backfill in the excavated bank areas associated with the Pilot Study (discussed below).

3.1.2 Staging Areas

Prior to initiating construction activities, two staging areas adjacent to the north shore of the lake were established to facilitate the on-shore pilot study activities. One staging area (i.e., the South Staging Area) was located between the lake and Silver Lake Boulevard, while the other (i.e., the North Staging Area) was located across Silver Lake Boulevard on property owned by the Western Massachusetts Electric Company (WMECO). The staging area locations are depicted on Figure 3.

The South Staging Area was developed to support the on-shore slurry operation (described below) and provided a suitable launching area for barges and/or workboats. The North Staging Area was used to prepare, mix, and stage isolation layer materials prior to transport to the slurry operations in the South Staging Area, as well as to prepare and stage the various monitoring program equipment. The South Staging Area was lined with non-woven geotextile and an impermeable liner, and covered with a minimum of 6-inches of gravel,

while a portion of the North Staging Area (i.e., those areas where isolation layer materials were staged), was lined with a non-woven geotextile and covered with gravel. Hay bales were placed around the perimeter of the South Staging for erosion and storm-water runoff control.

Note that an additional isolation layer materials staging and mixing area was also utilized adjacent to Building 68 at the GE Plant. Prior to use the nearby drainage swales/inverts were blocked and the concrete area swept and lined with a non-woven geotextile and a polysynthetic liner.

3.1.3 On-shore Slurry Operation

A steel tank was placed at the South Staging Area (Figure 3) for mixing and delivery of the isolation layer material from the shore to the pilot study area. A dri-prime diesel pump was used to transfer water from the lake to the mix tank. The suction line of the pump was suspended on a float near the lake water surface so sediments in the lake were not suspended and entrained in the water used to mix/deliver the isolation layer material. The flow of the water to the mix tank was regulated to achieve the desired soil/water mixture in the mix tank.

An excavator placed dry mixed isolation layer materials into a feed hopper at the foot of a conveyor system used to supply the mix tank. Initial test runs established a dry isolation layer material feed rate of approximately 1 cy per minute to create a slurry of the target consistency (approximately 7 to 10% solids).

After isolation layer materials were mixed, the resultant slurry was gravity fed into a separate compartment within the mix tank where a modified dredge pump was used to pump the slurry through an 8-inch high-density poly-ethylene (HDPE) pipe to the spreader barge that traversed the Pilot Study area as

described in Section 3.4. The pipe was equipped with floats to maintain the piping at or near the water surface, and each joint was welded/sealed to prevent leakage.

Process Modifications

On several occasions, the mixing process had to be temporarily shut down due to clogging caused by rocks, stones, and other debris found in the dry isolation layer materials. Initially, a metal screen was added at the feed-hopper to pre-screen debris from the mixed materials, thereby limiting the potential for clogging within the mix tank. However, too much debris remained in the mixed materials, and clogging continued to be a problem. To help address the problem, the top-soil materials received from Clarksburg were transported to PS&G and screened using a 5/8-inch Trommel screen.

Although this additional screening step was initially successful, in an effort to reduce material handling and processing, the materials being used for the isolation layer were changed part way through the pilot study. A blended topsoil was identified at PS&G as an alternative isolation layer material that was relatively free of debris/stones and contained TOC levels of approximately 1%. Similar to the candidate material samples discussed above, samples of the blended topsoil were collected from PS&G and analyzed for PCBs and certain non-PCB constituents. Analytical results related to the blended topsoil samples did not indicate the presence of detectable PCB concentrations, and other constituents were generally at or below acceptable background levels. The analytical results for this material, referred to as blended topsoil, are presented in Table 2. With EPA concurrence the blended topsoil was used for the isolation layer material after placement of the first few lifts (on November 1). The original dry mixed isolation layer materials were used towards the completion of cap placement to deplete remaining stockpiles.

3.1.4 Preparations for Water-Based Construction Activities

Cap construction activities (e.g., geosynthetic installation, isolation layer placement) were performed from the water surface via work boats and barges. To facilitate the pilot study activities, the Contractor assembled a series of work barges using modular floats. Each of the barges was comprised of 40-ft wide by 10-ft long modular floating sections that could be combined to create activity-specific units (e.g., slurry barge, anchor barges).

The Contractor constructed three floating work platforms to stage equipment and construct the cap. As depicted on Figure 3, two anchor platforms were stationed to the north and south of the area to be capped and facilitated movement of the third barge, which was used in the active installation of the geotextile and isolation layer materials. In addition, a network of cables suspended above the water using steel piles was used to facilitate barge movement.

3.2 Installation of Geosynthetic Layers

As previously described, the Pilot Study area was divided into three sub-areas to allow for a comparative evaluation of constructability and performance of the cap with respect to the placement of isolation layer materials with or without the presence of underlying geosynthetic layers. Each proposed sub-area was approximately 45 feet wide by 300 feet long, and located immediately adjacent to one another creating one contiguous test area approximately one acre in size (Figure 3). Prior to the installation of respective geosynthetic layers, each of the sub-areas was inspected by divers for large debris or other obstructions that could impede the isolation layer installation. Each of the sub areas is described in greater detail below.

3.2.1 Non-Woven Geotextile Area

The non-woven geotextile sub-area is located on the southern edge of the Pilot Study area (see Figures 3 and 4). The cap design employed in this area consisted of a single non-woven geotextile layer covered by isolation layer material, as illustrated on Figure 5.

Installation of the non-woven geotextile began on October 11, 2006. Mirafi 180N non-woven geotextile fabric in three 15-foot wide by 300-foot long rolls that weighed approximately 300 pounds each was used. An on-shore crane in the South Staging Area was used to load the individual rolls onto roller stands that were mounted on the barge. The barge was then transported to the test area (see Figure 3).

With the barge in place near the shoreline, the tails of the three rolls were unwound and the adjacent edges sewn together into one contiguous piece (with approximate 2-ft material overlaps at each seam). The sewn ends were then further unrolled, pulled off the barge and anchored to the banks. This temporary anchoring was used only to facilitate placement as the geosynthetic materials were later permanently secured in anchor trenches during armor layer installation activities. Initially, the non-woven geotextile was weighted down with sandbags attached to the fabric in an approximate 20-ft grid, to sink the fabric to the lake bottom.

The barge was slowly pulled away from shore along the approximate centerline of the non-woven geosynthetic test-area, using the cable system described above. As the barge was moved progressively further from shore, additional materials were unrolled, the adjacent edges sewn together, and weighted with sandbags along its length. Material guides and rolling clamps on the barge were used to try to keep the geotextile extended to the full width of the material.

As the barge moved further away from shore, difficulties with placement of the non-woven geotextile were observed (e.g., puckering, necking) that appeared to be related to the buoyancy of the non-woven geotextile, and/or the tension in the fabric. GE discussed these concerns with EPA and agreed to perform an interim assessment of the geosynthetic placement prior to initiating isolation layer placement.

Process Modifications

GE retained divers to inspect the in-place geosynthetic fabric surface. Seaway Divers and Salvage of Waterford, New York (Seaway) performed the underwater inspection and noted several areas of bellows and wrinkles along the edges of the placed material. In an initial response, Seaway assisted the Contractor in placing additional sandbags on the installed non-woven geotextile to get it to lay flat on the sediment surface. Following a review of survey information provided by the contractor (included on Figure 4), and with assistance from Seaway, an additional 15-foot wide by 300-foot long roll of non-woven geotextile was installed on October 17, 2006 along the southern edge of the area using steel reinforcing bars (rebar) in a manner similar to the geocomposite installation presented below.

3.2.2 Geocomposite Area

The composite geotextile sub-area is located on the northern portion of the pilot test area and measures approximately 40 feet wide by 300 feet long (Figure 3 and 4). The cap design employed in this area consisted of a composite geotextile layer covered by isolation layer material (Figure 5). The composite geotextile layer was constructed of two layers of a non-woven geotextile sewn together and filled with a thin layer (i.e., less than 1 inch) of a sand/organo-clay mix supplied by the manufacturer. The sand/organo-clay mix has TOC

characteristics similar to the materials used in the isolation layer. This composite geotextile configuration was fabricated specifically for this Pilot Study, and was prepared in 9 rolls (approximately 15-ft wide by 100-ft long) that each weighed approximately 1,000 pounds.

Installation of the composite geotextile fabric commenced on October 13, 2006 using methods that were generally similar to those used in the installation of the non-woven geotextile. Roller stands, loaded with geocomposite rolls were placed on the barge, and the tails of the adjacent rolls sewn together and secured to shore. Although the weight of the geocomposite material was anticipated to sink the material to the lake bottom, puckering and folding were immediately noted in the composite geotextile during initial deployment. Additional tension was placed across the face of the fabric, and sandbags were installed along the edges to promote uniform sinking across the entire width. However, after continued difficulties, GE and EPA agreed to temporarily halt the installation of the geocomposite until alternatives could be considered.

Process Modifications

Following additional discussions with EPA, and consultation with the manufacturer and the Contractor, GE proposed the use of rebar to add structural support to the geocomposite fabric and to maintain the full width of the fabric. Upon resumption of the geocomposite installation activities, the Contractor fastened 10-foot sections of #4 steel rebar across the entire width of the materials approximately every 10 feet, and the geocomposite installation was completed on October 16, 2006. The addition of the rebar, along with a reduction in the tension in the fabric achieved by slowing the barge speed, aided in keeping the geocomposite material taut and maintaining the fabric near its full width. The surveyed extent of the composite geotextile is illustrated on Figure 4.

3.3 Isolation Layer Materials Placement

As discussed above and documented in the Work Plan, key objectives of the Pilot Study were the confirmation of the ability of the Silver Lake sediments to physically support the

weight of the cap (as preliminarily demonstrated in the Bench-Scale Study) and an assessment of the feasibility of broadcasting a granular isolation material in thin lifts (i.e. in 1 to 2 inch lifts), and minimizing the potential for disturbance of the sediment. This section presents a summary of the isolation layer placement activities.

3.3.1 Barge Mounted Spreader Box

As detailed in previous sections, the mixed dry isolation layer material was slurried with lake water and conveyed to the barge located at the Pilot Study area via a reverse dredge head and a flexible pipeline. Once at the barge, the slurry was broadcast to the water surface via a barge-mounted dissipater/spreader assembly (spreader box) fabricated specifically for the Pilot Study. Upon entering the spreader box assembly, the slurry filled a 20-foot long perforated diffuser pipe (aligned perpendicular to the slurry line) that extended across the top of the spreader box. The perforations, installed approximately every two feet, were directed at an angled steel plate that redirected the flow of the slurry, thus dissipating much of the energy associated with the pressurized flow. The redirected flow fell towards a large steel plate, which sloped away from the back of the barge and towards the water surface, and featured additional energy dissipation in the form of intermittent corrugated riffles, similar to those seen in sluices, further diminishing the speed/energy of the slurry and enhancing the distribution across the entire spreader box. Once the slurry reached the end of the steel plate it is passed through a diamond plate screen at the bottom of the spreader-box suspended just above the water surface, where it then dropped through the water column to the lake bottom.

3.3.2 Isolation Layer Placement

Isolation layer material placement activities began on October 25, 2006 and ended November 21, 2006. Placement of the isolation layer material began at the lowest elevations of the Pilot Study area (i.e., furthest from shore). As discussed above, a cable system was used to move the barge in a north and south direction over the Pilot Study (Figure 3). Using a barge-mounted capstan, the barge was pulled along a travel cable at

the desired speed (approximately 7 feet per minute) to maintain consistent distribution during each pass. Upon completion of a pass, the travel cable was moved approximately 20 feet towards shore, the barge turned around, and the process repeated (going in the opposite direction) in an immediately adjacent path. This cycle was repeated, with the barge moving back and forth progressively towards shore, until one complete lift had been placed over the Pilot Study area, at which time the barge was returned to the starting point to begin a subsequent pass.

To accommodate cap placement in the shallower near-shore areas, two alternative placement methods were used. For 2- to 4-foot water depths, while the barge was making its final passes for each lift, the flow of slurry to the spreader box was partially diverted and the slurry was side-discharged out the end of the diffuser pipe located on the shore side of the spreader box. In this fashion, slurry was directed towards the shore and broadcast to the water surface in shallower areas over which the barge could not travel.

While the side discharge was able to broadcast the slurry several feet away from the barge, it was not able to reach the shoreline. For those areas closer to shore (i.e., <2-foot water depth), dry isolation layer material was placed mechanically using an on-shore excavator. The excavator was located at the top of bank, and was supplied with isolation layer materials by conventional dump trucks. The excavator lowered each bucket to the approximate water surface and broadcast the dry materials to the water. Similar to the spreader box application, this method was intended to place isolation layer materials in thin lifts.

Process Modifications

As discussed in the Work Plan, and as detailed in Section 4 of this document, various monitoring programs were performed throughout the placement of isolation layer materials to assess the ability to place isolation layer in approximate 1-inch lifts, and to monitor potential changes in environmental conditions related to placement activities. Starting from initiation of the open water placement via the spreader box (and the associated side discharge), the first ten lifts were placed targeting an estimated 1-inch lift thickness. With

favorable results obtained during the monitoring of the first ten lifts, a request was made by GE to assess the ability to place the remaining isolation layer in approximate 2-inch lifts, and to monitor potential changes in environmental conditions related to thicker lift placement. With EPA consent, the barge speed was adjusted for the final two lifts to create a placement rate of approximately 2- inches per lift.

Initial isolation layer material application from shore (via excavator bucket) appeared to result in a large settlement event as detected by the vibrating wire settlement cells (further discussed in Section 4). Upon review of the methods being employed, it was noted that the Contractor was emptying the entire contents of each bucket in one location, rather than slowly opening and swinging the bucket along the path of the area to be capped to better control the placement rate. With modifications made by the Contractor, the from-shore capping activities were successfully completed with thinner lifts

3.4 Armor Layer

The cap design also included shoreline erosion protection measures designed to protect the pilot study cap from potential erosion caused by wind driven waves. A description of the site preparation and armor stone placement process is presented below.

3.4.1 Shoreline Preparation Activities

Construction of the shoreline protection began with preparation of the shoreline, including clearing, grubbing, and limited soil removal prior to armor stone placement. During pre-design investigations of the bank soils related to the Silver Lake RAA, it was noted that there was likely going to be soil removal required in the vicinity of the Pilot Study area. Since limited soil excavation activities were going to be conducted in this area as part of the Pilot Study, GE agreed to remove the additional bank soils at the same time. Therefore, in a letter dated August 22, 2006, GE submitted to EPA a proposal to remove certain bank soils in conjunction with bank soil removal in this area. EPA conditionally approved the proposed bank soil removal in a letter dated August 30, 2006. As part of the Pilot Study bank grading and anchor trench excavation activities, GE removed approximately 120 cy of bank soil, with approximately 70 cy removed specifically to meet the bank soil performance standards. A detailed description of these bank soil removal activities was presented in the *Summary of Bank Soil Removal Activities Associated with Pilot Study Implementation* (ARCADIS BBL, 2007), submitted to EPA on March 19, 2007.

As discussed in the March 19, 2007 letter, during the performance of bank soil removal activities, an area of stained materials was encountered in the northern portion of the bank

soil removal area, approximately one foot below the bank soil surface. EPA and GE agreed that GE would propose potential additional investigation activities related to the stained materials in this area. As such, in a May 10, 2007 letter, GE proposed additional sampling to further characterize the stained materials (approved by EPA in a letter dated June 12, 2007). Performance of the additional field investigations indicated that similarly stained materials were present along much of the eastern shore of the lake with analytical results generally consistent with those associated with previous investigations related to bank soils around the entire perimeter of the lake. After a review of the results and further discussions with EPA, GE proposed that no further investigations were necessary, but that contingencies related to encountering stained materials would be included in forthcoming design related documents. A discussion of these investigative activities and analytical results can be found in GE's December 3, 2007 letter to EPA.

3.4.2 Geotextile Placement and Anchoring

Following the removal activities discussed above, the geosynthetic layers associated with the sediment cap were secured in shoreline anchor trenches, as illustrated in Figure 6. After placement of approximately 14 inches of isolation layer materials over the exposed bank area from land using an excavator, a woven geotextile layer was installed on top of the cap to stabilize the area, and provide a suitable surface for armor stone installation. As was the case with the geosynthetics used in the construction of the cap itself, the woven geotextile on the bank soils was anchored into the bank via an anchor trench as detailed in Figure 6.

3.4.3 Armor Stone

Armor layer construction was initiated on November 13 and completed on November 17, 2006. The armor stone layer consisted of a 12-inch thick layer of graded rip rap, with a median diameter of 5 to 6-inches and a maximum diameter of 9 inches. Materials specification related to these materials is provided in Appendix B. The armor layer was constructed along the bank over the entire width of the Pilot Study area using an excavator located at the top of bank. Armor stone was placed to a water depth of 2.5 feet below and up the bank to an elevation 2.2 feet above the approximate mean water elevation (i.e., 975.9 feet AMSL).

3.4.4 Gravel Habitat Layer

Three inches of processed sand and gravel, with a material diameter of 3 inches or less, was placed over the underwater extent of the armor stone via excavator bucket on

November 21, 2006. Gravel was placed so that it reached up to the approximate water line. Materials specifications related to these materials are included in Appendix B.

3.5 Pilot Study Construction Summary

Implementation of the construction portion of the Pilot Study was initiated by the Contractor in early October 2006 and completed in late November 2006. In summary, implementation of the Pilot Study and construction of the sub-aqueous cap included:

- Placement of approximately 31,500 ft^2 of geosynthetic materials over the surface of existing sediments;
- Placement of approximately 3,250 cy of slurried isolation layer material through the water column;
- Removal of approximately 120 cy of bank soil, including 70 cy as part of the bank soil remediation program; and
- Installation of approximately 150 tons of armor stone and 15 cy of gravel for the habitat layer.

4. Monitoring Program and Results

The Pilot Study included a comprehensive monitoring program to provide information that could be used to modify Pilot Study cap construction activities, confirm cap design assumptions, and assist in the development of full-scale cap design and installation methods. In general, the Pilot Study monitoring program consisted of water column sampling; a number of cap thickness measurements, monitoring of sediment settlement/consolidation; and sediment and isolation layer material sampling. These program components were performed at up to four distinct time intervals: prior to initiation of cap placement activities (pre-construction); at the approximate half-way point of isolation layer placement (during-construction), within the first month of completion (immediate), and approximately six months following completion (6-month). Certain other activities were performed on a continuous basis. Collectively, these monitoring programs were designed to provide both a near real-time assessment of sediment behaviors during cap placement and a longer-term temporal assessment of the condition of the cap. Table 1 presents a summary of the overall monitoring program.

Throughout performance of the Pilot Study, GE routinely communicated available field data (e.g., settlement observations, turbidity) to EPA for its review and discussion. All sample collection, processing, and analyses described herein were performed in a manner consistent with the requirements of the Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP) (ARCADIS BBL 2007). Descriptions of the individual components of the overall program as well as related results and/or observations are presented in the remainder of this section.

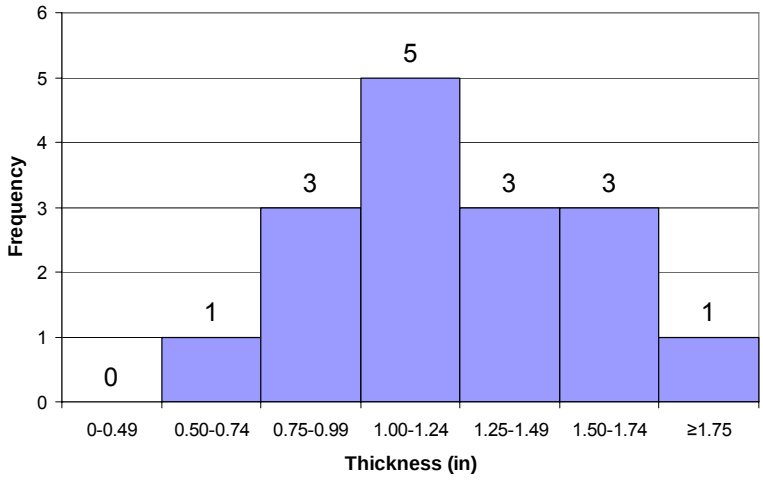
4.1 Cap Thickness Assessment

A variety of methods (e.g., sediment collection pans, sediment profile imaging, acoustic sub-bottom profiles, direct measurements via probing) were employed to evaluate individual lift thicknesses as well as quantify the total thickness of the in-place cap both during and after the completion of cap placement activities. This section presents an overview of the methods used and a weight-of-evidence discussion of the available data related to cap thickness.

4.1.1 Sediment Collection Pans

In addition to evaluating a number of techniques to measure cap thickness, one objective of the Pilot Study was to assess the Contractor's ability to place a granular cap in thin (approximately one-inch) lifts of relatively uniform thickness. Sediment collection pans were fabricated and deployed by the Contractor during the placement of isolation layer material. While not included as part of the Work Plan, the Contractor proposed this method as a means of providing a field check of individual lift thicknesses.

Sediment collection pans (approximately 2-ft square) were placed on the sediment surface directly in the path of the barge to collect isolation layer material as it deposited on the lake bottom. The thickness of the material collected in the pans was measured following a single pass of the spreader barge to provide a direct indication of lift thickness. When the goal was to place 1-inch lifts (that is, before EPA approved the use of thicker lifts), sediment collection pans were deployed seven times between October 25 and November 7, 2006. The resultant 16 lift thickness measurements ranged from 0.5- to 3.0-inches with an average of 1.2 inches. As presented in the accompanying graph, 12 of 16 pans suggested lift thicknesses of 1-inch or more. When the goal was to place 2-inch lifts (not plotted above), sediment collection pans were deployed four times between November 13 and November 20, 2006 resulting in measurements of 4- , 1- , 1.75-, and 2-inches inches per lift. Although these results have some variability, this method proved to be a useful means of



obtaining daily indications of approximate lift thicknesses, enabling the Contractor to make adjustments to the slurry feed rates and barge speed in an attempt to achieve the desired lift thickness. A complete summary of the isolation layer lift thickness data collected via the sediment collection pans is provided in Table 4.

4.1.2 Sediment Profile Imaging

Sediment Profile Imaging (SPI) was also used to provide an indication of cap thickness. SPI is a technology that generates subsurface photographic images of the sediment. The SPI technology consists of a submersible still-frame camera assembly that is pushed into the sediment to collect a series of still photographs that are later compiled into an image depicting a measurable sediment profile.

SPI images were collected twice by Ocean Surveys, Inc. (OSI): prior to cap placement as a baseline and half way through isolation layer placement (when seven lifts of isolation layer had been placed). These images were used to provide an assessment of the constructability of a cap in relatively thin uniform lifts, as discussed below.

On September 8, 2006, pre-construction SPI subsurface images were collected at eight locations within the non-geotextile test area. On November 8-9, 2006, during –construction SPI subsurface images were collected at 20 locations distributed across the entire pilot study area. A complete record of the pre-and during-construction SPI images, as well as a figure illustrating the respective locations, is included on a compact disk as Appendix C.

Cap thickness measurements obtained from 20 individual SPI images collected after seven passes of the spreader barge ranged from 5 inches to 7.8 inches, with an average thickness of 6.9 inches (Figure 7). The SPI results provided evidence that the thin layer placement technique was performing as designed. Additionally, the during-construction SPI images allowed for a visual inspection of the potential extent, if any, of mixing at the sediment/cap interface. As can be seen in the complete collection of SPI images included with this report as Appendix C, certain locations were observed to have indications of mixing. Note that scaled markings on the SPI camera housing, which represent approximate two inch increments, illustrate that mixing observed in the SPI images appears to be limited to the first two inches or less of the isolation layer.

4.1.3 Acoustic Sub-bottom Profiles

Acoustic sub-bottom profiling was performed to evaluate the topographic features of the completed cap surface as well as the sediment/cap interface to provide another means of estimating cap thickness. As detailed in the Work Plan, the acoustic profile survey technology is able to produce a cross-sectional representation of both the pre-construction sediment surface and the post-construction surface. Surveys were performed prior to construction (i.e., pre-construction), capturing baseline information, and immediately following and 6-months following completion of cap placement activities. This program was designed to provide information on the topography of the surface of the cap and the surrounding sediment areas. During each event, surveys were performed along several transects aligned perpendicular to the east shore of the lake, affording the ability to compare potential differences in surface conditions or responses to cap placement among the three test areas. Reports prepared by OSI documenting the post-construction surveys and interpreting the results are included in Appendix D. The immediate and 6-month post-construction surveys indicated two identifiable surfaces (i.e., the pre-existing sediment and the surface of the isolation layer), confirming the presence of cap materials across the entire Pilot Study area. The profiles indicate that the isolation layer is relatively uniform in thickness throughout the three test areas. As documented in reports submitted by OSI (Appendix D), both the immediate, and 6-month surveys generally indicate a total cap thickness of approximately 11- to 12-inches.

4.1.4 Cap Probing

Cap thickness was also measured by manually probing and measuring the isolation layer material thickness during construction and immediately following and 6-months following construction. On two occasions, probing was attempted at the nine physical survey plates, installed as part of the sediment settling monitoring program (discussed below), by pushing a metal rod into the isolation layer material until it contacted the plate (Figure 8). The cap thickness measurement was then recorded. On November 9, 2006, the during-construction isolation layer thicknesses averaged 5.2 inches and ranged from 4.2- to 6.6-inches. Similarly, on November 27, 2006, the immediate cap thickness was again measured at the physical survey plate locations. However, during the November 27, 2006 probing event, the plate at SP-B-1.5 could not be located and the apparent cap thickness was gauged by probing to the interface between the isolation layer and the underlying geotextile. The plate at SP-D-3.5 could not be located and no measurement was recorded as the interface between the isolation layer and underlying sediment was not identifiable using the thickness probe. Using the eight available records, estimated cap thicknesses averaged 14.3 inches, and ranged from 11.6- to 21.3 -inches. Note that, although cap probing was scheduled to

be performed during the 6-months following construction event, cap probing was inadvertently not performed at the physical survey plates during that event.

As part of the core collection program discussed in Section 4.3, the cap was probed at the 13 core collection locations during both the immediate and 6-month post-construction collection events. During these events, the cap thickness was probed to the depth of the geosynthetic layers, or in the non-geosynthetic areas to the apparent sediment/cap interface as estimated by the change in relative material resistance (Figure 9). On December 27, 2006, the cap thickness immediately following construction completion averaged 12.8 inches, and ranged from 10.0- to 19.2-inches. On June 12, 2007, the cap thickness 6-months following construction completion averaged 12.1 inches, and ranged from 7.0- to 16.7-inches.

Although some probing measurements are less or greater than the target thickness of 14 inches, when viewed collectively, the majority are within the 12- to 14-inch range as shown on Figures 8 and 9. Although the data obtained via the cap probing program was valuable in adding to a weight of evidence approach, the accuracy of this method may be limited. Cap probing was performed by divers relying on their judgment to determine the apparent thickness of the isolation layer material by pushing a metal rod into the isolation layer and attempting to determine the bottom of the isolation layer by a change in resistance or refusal at the pre-existing sediment. As such, the cap probing results should be considered as a general assessment of average cap thickness.

4.1.5 Summary

The following table summarizes the various total cap thickness estimates. Please note that the during-construction thickness was measured after 7 ~1-inch lifts were applied and the immediate and 6-month post construction measurements were after 10 ~1-inch lifts and 2 ~2-inch lifts were applied:

Estimate Method	During-Construction Thickness (in)	Immediate Post-Construction Thickness (in)	6-Month Post-Construction Thickness (in)
Sediment Profile Imaging	5.0 to 7.8 (6.9 average)	--	--
Acoustic Sub-bottom Profiles	--	10to 12	10 to 12
Cap Probing – Physical Survey Plate Locations	4.2 to 6.6 (5.2 average)	11.6 to 21.3 (14.3 average)	--
Cap Probing – Core Collection Locations	--	10.0 to 19.2 (12.8 average)	7.0 to 16.7 (12.1 average)

Employing a weight of evidence approach the various cap thickness estimates as summarized in the above table, indicate success in placing approximately the target total thickness of 14 inches. (In addition, given the number of lifts applied to the sediments, the resulting thickness measurements support the conclusion that the cap was successfully applied at the target thickness of 1 inch and, later, at 2 inches.) Although there is some variability amongst the respective estimates, the average thicknesses of the respective techniques appear to be within reasonable range of each other.

4.2 Sediment/Cap Settlement

Prior investigations of the Silver Lake sediments indicated that these materials are soft silts with low strength, high plasticity, and high compressibility. One of the primary objectives of the Pilot Study was to evaluate the behavior of the existing sediments in response to the weight of the cap. A monitoring program was implemented prior to, during, and following construction to assess potential changes in the elevation of the sediment surface related to cap placement. The program utilized three different monitoring tools: physical survey plates, in-situ vibrating wire (VW) settlement cells, and bathymetric surveys. This section presents a description of the methods used and results obtained from each three monitoring tools.

4.2.1 Physical Survey Plates

Direct measurements of sediment settlement were made using physical survey plates placed on top of the sediment or the geosynthetic material surface prior to isolation layer placement. From October 10-18, 2006, nine aluminum plates, approximately 2 x 2 feet in size, with a vertical two-foot stick-up, were installed by Seaway Divers. The nine plates were arranged in a grid as shown on Figure 10.

Elevation data were obtained for a majority[2] of the survey plates on three occasions: during-construction (November 8, 2006), after placement of seven lifts; immediately following cap completion (November 27, 2006); and 6-months (June 12, 2007) following cap completion. Approximate sediment surface elevations were estimated with divers first attempting to locate the plates via a GPS unit mounted on the dive boat, and then holding a survey rod on top of the plate stick-up, while the surveyors at the surface recorded the location specific water elevation, which was used to convert the reading to a sediment elevation. The physical survey plate elevations are presented in Table 5.

Settlement in the time period from the during-construction to the immediate post-construction survey averaged 9.3 inches, and ranged from 4.8- to 15.6-inches. When comparing the immediate to the 6-month post-construction data, less settlement (average of 2.2 inches – with two of the seven locations indicating an increase in elevation) was noted. This comparison indicates that the majority of the settlement occurred during cap placement. Evaluation of the data collected using the physical survey plates indicates that the extent of settlement was fairly consistent across the Pilot Study area, and that the rate or extent of settlement was not influenced by the presence of a geosynthetic layer.

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[2] The physical sediment plates were in general, difficult to locate and survey. Anomalous readings appeared to have been reported from a number of the plates during the October 2006 event and as such, the October 2006 data were not considered reliable for use in this analysis. In addition, two of the physical survey plates (locations B-1.5, and D-3.5) could not be located during the November 27, 2006 event and one of the plates (B-1.5) could not be located in the June 2007 event. Note that although SP-B-1.5 was not located during the November 27, 2006 event, it was possible to probe to the geosynthetic surface at this location and thus a cap thickness was recorded for this location for the November 27, 2006 event.

4.2.2 Vibrating Wire Settlement Cells

Direct measurements of sediment settlement were also made using VW settlement cells placed on top of either the sediment or geosynthetic material surface prior to isolation layer placement. The VW settlement cells provide a real-time measurement of potential changes in sediment surface elevation in response to cap placement. Each VW settlement cell is equipped with a vibrating-wire transducer connected to a liquid filled tube running to an on-shore ventilated reservoir and data logger. VW settlement cell data represent a difference in hydraulic head between the reservoir (at a fixed elevation) and the VW cells. In total, twenty eight (28) VW settlement cells were installed by Seaway Divers between October 10 and October 18, 2006. The locations and identification of the 28 VW cells are depicted on Figure 10.

To the extent practicable, data were recorded continuously beginning prior to isolation layer placement activities. During placement, five cells (i.e., A1, A4, B2, C3, and G4) experienced technical difficulties likely related to faulty connections, equipment error, or physical disturbance to the installed equipment by other monitoring/construction activities. For instance, signal cables associated with locations A1 and A4 were inadvertently hooked and dragged by the Contractor. As a result, the data records from these five locations were not used in the assessment of sediment settlement, and are not included in the following discussion of settlement observations.

In general, the VW settlement cells show a decreasing sediment surface elevation over time. Figure 11 depicts the data output from the 23 usable VW settlement cells obtained over the course of the study through the end of 2006. As depicted on Figure 11, the settlement data are relatively consistent; however, apparent abrupt settlement is noted in a few locations which can be associated with other activities that were occurring on-site. that may have resulted in physical disruptions of the VW equipment. Review of the raw data indicated that certain events occurred that can account for these changes.

Specifically, on October 25th, 2006, the trailer housing the VW settlement cell reservoirs and data logger was moved slightly up the slope of the bank by the Contractor. The change in elevation of the data logger resulted in an increase in hydraulic head that was detected by the VW settlement cells, and represented as artificial rapid settlement over a one hour period. During this event, between 5 and 6 PM on October 25, 2006, 13 of the 23 usable cells indicated a change of 5 to 6 inches, with an additional five cells indicating a change between 6 and 7.3 inches. An adjustment was performed to each cell record based on the total change noted between 5 and 6 PM of October 25 to correct for the relocation.

Additional adjustments were made to the data for three near-shore cells (i.e., D4, E4 and F4) related to inconsistent large shifts in the data record (up to 41 inches in a single hour). These shifts were apparently caused by the bulk placement of isolation layer materials from shore, at rates above those dictated in the Work Plan. Specifically, the VW settlement cells recorded a 41-inch settlement at location F4 and a 26-inch settlement at E4 over a one hour period on November 14. On November 15, cell D4 indicated a 31-inch settlement in 2 hours, with smaller amounts of settlement noted at E4 and F4 (12-inch and 5-inch, respectively). While this abrupt shift is believed to be related to the initial placement of isolation layer materials from the shore, uncertainty exists over what caused this response; nonetheless it was deemed unlikely that the response was an accurate representation of the physical behavior in the lake bed. As illustrated in Figure 11, the data record indicates step functions at locations D4, E4, and F4 with little or no tail at either end, indicative of an abrupt shift in the elevation of the cells at these locations with little or no preceding or following motion. The records at these three locations have been adjusted to remove a total of 31.1-, 38.1-, and 51.5-inches of settlement during these two days at VW settlement cells D4, E4 and F4 respectively.

A revised plot of the settlement data, which includes adjustments to account for these physical disruptions, is presented on Figure 12. As depicted, the average area wide settlement noted through the end of 2006 ranged from 9.1 inches at location B4 to 17.5 inches at cell B1, with a mean of 12.9 inches. Between the end of 2006 and June of 2007, the average change in elevation of the VW wire settlement cells was approximately 0.9 inches, and data from only three locations suggest net settlement of more than 2 inches during this period**.**

Sediment settlement appeared to be greatest during the isolation layer placement activities. As depicted in Figure 12, the majority of the total recorded settlement occurred during cap placement, which is consistent with the physical survey plate data. Review of Figure 12 also shows increased settlement in response to the increase in cap application rates from 1- to 2-inches per lift. Settlement appeared to be complete within 2 to 6 months following placement of the cap (Figure 12)**.** Following the completion of placement, in the spring of 2007, the data indicate that there was a slight expansion of sediment as illustrated by the VW settlement cell data (Figure 12). The cause of the apparent expansion of the sediment recorded by the VW settlement is not known, but could be the result of changing climate conditions and the sensitivity of the settlement cells to temperature as evidenced by the diurnal effects observable in the raw data.

Based on a general review of the data, it appears that the extent of settlement was fairly consistent across the Pilot Study area and that the rate or extent of settlement was not

influenced by the use of either type of geosynthetic layer. The average settlement of the three VW settlement cell transects in the non-geosynthetic test area (i.e., C, D, and E) ranged from 12.2 to 12.9 inches, which is generally equivalent to the overall average for all VW settlement cells. Likewise, water depth does not appear to have a significant influence on the settlement reported by the VW settlement cells, with the settlement noted for the deepest and shallowest rows of VW settlement cells (i.e., rows 1 and 4) averaging 12.7 and 12.5 inches, respectively.

Daily VW settlement cell data were also reviewed to understand short-term (24-hour) rates of settlement during isolation layer placement. As discussed in the Work Plan, this review was performed so that modifications to the placement rates could be implemented if the settlement data indicated unusually large settlement rates or that substantial differential settling was occurring. A target maximum settlement rate of 1 inch per day was adopted as a conservative limit on settlement. (It should be noted that the 1 inch per day target was based, in part, on the results of the Bench-Scale Study without any specific geotechnical basis.)

During the course of construction, the available data, as reported by the VW settlement cells, did not indicate any settlement that exceeded 1-inch per day. However, following completion of capping activities and continued discussions with the VW settlement cell equipment supplier, it was discovered that the reported data had been incorrectly calculated. The equipment supplier acknowledged that it had applied and pre-loaded incorrect conversion factors to the data logger, resulting in erroneous settlement estimates. GE re-assessed the data following this conclusion and noted that during cap placement there were instances in which more than 1-inch per day of settlement was observed. Regardless, although settlement of greater than 1-inch per day may have been observed on certain occasions, the increased settlement does not appear to have resulted in sediment instability or other deleterious effects on cap performance.

4.2.3 Bathymetry

Bathymetric surveys utilizing multi-beam sonar coupled with a global positioning system were performed by OSI on several occasions during the pilot study, providing information on the topography of the lake bottom in the capped area as well as in the surrounding areas. The multi-beam bathymetric surveys were used to provide high-resolution images of the sediment and cap surfaces, and provide insights as to post-construction stability of sediment slopes and capping components. The full report from OSI, including each of the topographic maps, is presented in Appendix D.

The pre-construction bathymetric survey was performed on September 8-10, 2006. The topographic map produced from this survey indicated relatively steep slopes in the near-shore area, and a gradual slope moving away from the near shore area which then transitioned into a relatively flat lake-bottom (Appendix D). Within the study area, the total elevation change is approximately 25 feet from the approximate water edge to the lowest recorded elevation. Two additional bathymetric surveys were conducted following completion of cap placement activities. The immediate and 6-month post-construction surveys were performed on December 6, 2006 and May 30-31, 2007, respectively.

Data collected during the three surveys were utilized to develop three comparative topographic maps to assess the change in surface elevation in response to cap placement. The first comparative topographic map was developed by subtracting the pre-construction survey data from the immediate post-construction survey data (Figure 13), and illustrates the changes in lake bottom surface elevation immediately after completion of the cap. Positive elevation differences (i.e., elevation gain) of at least 0.25 feet are observed across most of the Pilot Study area, indicative of cap placement coupled with approximately 0.75 feet of cap consolidation and/or settlement of the underlying sediment (based on the average cap thickness of approximately 12- to 14-inches as discussed above in Section 4.1). Note that the greatest increases in elevation (as much as 2 feet) were observed close to shore, in the vicinity of areas for which cap placement activities were performed using an excavator bucket. It is believed that these elevation increases are in part related to the placement of more than 14 inches of isolation material in this area of the site. This comparison provided no indication of instability or significant movement in the underlying sediments related to the placement of the cap materials. Additionally, there are no indications that the presence of underlying geosynthetics or relative water depth influenced the sediment behavior over this time period.

The second comparative topographic map was developed by subtracting the immediate post-construction survey data from the 6-month post-construction survey data (Figure 14). This image illustrates the comparison of surface elevations immediately- and 6 months-after the completion of cap placement. These data indicate a slight relatively uniform decrease in the surface elevations (approximately 0.25-feet) across most of the Pilot Study area, with one very small area of decrease greater than 0.5-feet, and no indications of areas of significantly increasing elevation during this period. This decrease in surface elevation is likely an indication of continued relatively gradual settlement of the sediments in response to placement of the cap material (as previously noted), as well as the potential consolidation of cap material itself. There are no indications that the presence of underlying geosynthetics or relative water depth influenced the sediment behavior over this time

period. Additionally, there was no indication of instability or significant movement in the underlying sediments.

The final comparison image was developed by subtracting the pre-construction from the 6-month post-construction survey data. This image illustrates the total change in surface elevation over the entire study period (Figure 15). This image generally indicates variations in the sediment surface elevation of less than +/- 0.25-foot across the majority of the Pilot Study area. Note that there is a band of decreased elevation (approximately 0.25- to 0.5-ft) located in the deep water portion of the study area, and an area of overall increased elevation of approximately 1- to 2-feet in portions of the near-shore area, similar to those discussed above. These data suggest that the total net settlement in the majority of the Pilot Study area was similar to the total thickness of the in-place cap. As in the prior comparisons, there was no indication of differences in the geotextile areas or instability or significant movement in the underlying sediments.

4.2.4 Summary

The following summarizes available data, based on all of the methods employed, to provide estimates of total settlement as well as estimates made at interim points during and immediately after construction. In general, the data from the multiple monitoring programs generally corroborate one another throughout the study period, and indicate a relatively uniform, slow rate of settlement, with no indication of sediment instability when cap materials were placed in thin lifts. Based on a collective review of the data from the physical survey plates, VW settlement cells, and bathymetric surveys, average settlement estimates of approximately 1-foot were observed and the presence of geosynthetics does not appear to create any variations in the extent of settlement. Increased sediment settlement rates were noted when lift thicknesses were increased from 1- to 2-inches. Further, the majority of this settlement occurred during cap placement, and appeared to be complete within a six-month time period following the completion of cap placement.

Settlement Estimate Method	During-Construction (in)	Immediate Post-Construction (in)	6-Month Post-Construction (in)
Physical Survey Plates[1]	--	4.8 to 15.6 (9.3 average)	7.2 to 18.0 (11.5 average)
VW Settlement Cells	1.1 to 9.1 (5.5 average)	9.1 to 17.5 (12.9 average)	3.5 to 14.3 (9.1 average)
Bathymetry[2]	--	1.4 to 15.6 (8.7average)	4.2 to 14.2 (10.0 average)

Notes:

1. Pre-construction elevation data related to the physical survey plates were not usable. Settlement estimates presented in this table have been calculated using the Immediate Post-Construction data as a reference.

2. Values listed for bathymetry represent a comparison of lake bottom surface elevations and isolation layer thicknesses as recorded at physical survey plate, VW settlement cell, and core collection locations.

4.3 Isolation Layer Materials Chemical and Physical Analysis

Isolation layer core samples were collected during-construction and at the immediate and 6-month points following completion of isolation layer placement activities. These samples were collected to provide information related to changes in the physical and chemical characteristics of the isolation layer materials. One additional component of the core collection program was the visual observation of mixing with the underlying sediments due to cap placement activities. The remainder of this section describes the implementation and performance of the core collection and isolation layer materials sampling program and discusses the associated observations and analytical results.

4.3.1 During-Construction Cap Coring Program

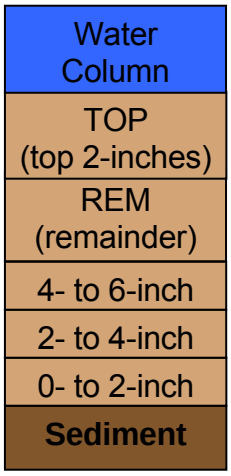
On November 9, 2007, with assistance from Seaway Divers, during–construction cores of the isolation layer material were collected at six locations as shown on Figure 10. In order to avoid the potential for mixing of the underlying sediments with the isolation layer materials at this point in the study, all six samples were obtained from areas of the site where geosynthetic material was present. The cores were collected using 3-inch Lexan tubes which were manually pushed until refusal was encountered at the geosynthetic layer.

The collected cores were then transported in the upright position to shore for processing. The primary objective of this sampling program was to determine the TOC of the in-place cap material. Recovered materials within each core were homogenized, and a sample collected and shipped to NEA for analysis of TOC. In summary, the TOC concentrations ranged from 0.24% to 0.58% with an average of 0.42%. Complete TOC results related to these during-construction cores are summarized in Table 6

4.3.2 Post-Construction Cap Coring Program

To provide a comparison and assessment of any potential changes in the physical and chemical characteristics of the isolation layer materials, a post-construction cap coring program was performed. The immediate and 6-month core collection events were performed on December 27, 2006 and June 12, 2007, respectively. During both events, isolation layer cores were collected by Seaway Divers at the thirteen locations illustrated on Figures 16 and 17. At the core collection locations where geosynthetic materials were present, the sampling was performed in a manner similar to that described for the during-construction sampling event. The 3-inch Lexan tubing was also used to collect cores from the area of the site where no geosynthetic material was present, with the tubing advanced approximately 6-inches beyond the apparent sediment/cap interface in order to collect a sample of the underlying sediment for comparison purposes. Recovered materials were measured for approximate recovery lengths and visually assessed for indications of mixing near the bottom of each core.

During processing, recovered materials were generally described as fine sands or sand with silts, and were noted to be largely homogeneous throughout the recovered lengths. Of the 26 cores collected during these two events, mixing was visually observed in only eight cores, five of which were collected from within the non-geosynthetic test area (Figures 16 and 17) Mixing was observed in immediate post-construction cores from locations SED-H, -I, -J and -L (Figure 16). Mixing was observed in the 6-month post-construction cores from locations SED-F, -G, -H and -K (Figure 17). Where mixing was observed, it appeared to be limited to the first two inches or less of the isolation layer materials. Note that these conclusions related to mixing were also observed using the SPI camera (Section 4.1). A review of the during-construction images (Appendix A) indicates no visual observations of sediment/isolation layer mixing in the SPI images from the geotextile areas, and mixing limited to the first one or two inches of isolation layer materials in several images from the non-geotextile area.



Cores were processed by sectioning each core into 0- to 2-inch, 2- to 4-inch, and 4- to 6-inch layers (as measured relative to the apparent interface between the isolation layer and the underlying sediment or geosynthetic layer). The remaining isolation layer materials from each core were divided into two samples: the top two inches [TOP; nominally the 12- to 14-inch increment (as measured up from the bottom of the isolation layer)], and the remaining materials (REM; nominally the 6- to 12-inch increment, as available). A summary of the core sectioning intervals is provided in the accompanying illustration. All samples were submitted to NEA for PCB and TOC analysis. For those cores collected from within the non-geosynthetic test area, a sediment sample was also collected from within the first six inches below the sediment/cap interface and analyzed for PCBs. Additionally, for cores collected as part of the immediate post-construction event, samples were shipped to Geotechnics for grain size distribution analysis. Analytical results from the post-construction sampling events are presented in Tables 7 and 8 and are shown on Figures 16 and 17. Grain size results are presented in Appendix E.

PCBs were not detected in 49 of the 59 isolation layer material samples collected during the immediate post-construction sampling event, with no PCBs detected in any of the segments at 8 of the 13 core locations (Figure 16). Similar results were obtained for the 6-month post-construction samples, with no PCBs detected in 43 of the 55 isolation layer material segments (Figure 17). Overall, PCB concentrations ranged from non-detect (ND) to 14.6 mg/kg, with 15 of the 22 detections less than 1 mg/kg, and 12 less than 0.5 mg/kg. Of the 26 0- to 2-inch samples collected during the combined post-construction sampling program, 8 samples (from seven locations; four in the non-geosynthetic test area and three in the non-woven geotextile test area) had detectable PCB concentrations. Each of the PCB detections in this interval is likely associated with the mixing taking place either during cap placement or core collection of the underlying sediments with the isolation layer observed at these locations. Regardless, the PCB detections were low compared to the PCB concentrations of the underlying sediment which ranged from 25.2 to 178 mg/kg in the post-construction samples.

PCBs were detected at low levels (i.e., less than 0.5 mg/kg) in the top 2-inches of the isolation layer segments at two locations during the immediate post-construction sampling and at 7 locations (i.e., 6 results less than 0.5 mg/kg and one less than 3.0 mg/kg) during the 6-month post-construction sampling. A potential source of these detections could be the re-distribution of surface sediments from other areas of the lake and/or deposition. One

location sampled during the immediate post-construction sampling indicated some mixing throughout the core (Location SED-I), as PCBs were detected in all core segments (and included the highest concentration detected); however, the distribution of PCB concentrations in this core is likely a result of the disturbance noted during near-shore cap placement activities. Note that this same location was non-detect for all intervals during the 6-month post-construction sampling. Collectively, a review of the PCB distribution/concentrations in the post-construction cores suggests that isolation layer materials, when placed in thin lifts, causes only limited disturbance to or mixing with the underlying sediments. No indication of upward transport of PCBs through the cap material was noted.

TOC concentrations in the immediate post-construction samples ranged from 0.22% to 1.2% with an average of 0.52% (Table 7). Similar results were obtained for the 6-month post-construction samples, with TOC concentrations ranging from 0.21% to 1.1% with an average of 0.49%. TOC concentrations were generally observed to be higher in those core segments located closer to the top of the isolation layer. This trend is likely a result of differential (i.e., slower) settling rates of the finer fractions of the isolation layer materials, to which the higher TOC materials are typically bound. A review of the grain size data from the immediate post-construction samples confirms that the isolation layer material in the upper core segments had a slightly greater proportion of finer materials.

Comparing the TOC results for the isolation layer material before and after placement indicates a lower TOC in the in-place isolation layer material (approximately 0.5%) versus the before placement dry mixed material (approximately 1%). It is believed that the reduction in TOC may have been a result of the suspension of finer fraction of the isolation layer materials that remained in the water column following the completion of capping activities (as indicated by the increased turbidity and TSS readings – See Section 4.4 below). To evaluate whether this may be the case, sediment traps were deployed to allow collection and analysis of the suspended solids as they settled out of the water column. The sediment collection pans were deployed during the pilot study at MON-1, and MON-2 (Figure 18) following completion of the cap placement activities and were removed on December 20, 2006, when turbidity levels began to decrease. The average TOC of the sediment collected in the pans was approximately 4.0%, as summarized on Table 9. These results further suggest that the suspended solids observed and measured in Silver Lake during placement activities were composed of the finer fractions of the isolation layer materials that had a relatively high amount of TOC bound to them. The transport of these materials away from and subsequent deposition outside of the Pilot Study area is the most likely explanation for the reduced TOC levels noted in the placed isolation layer materials.

4.3.3 Summary

In general, the isolation layer core samples that were collected during and after the completion of isolation layer placement confirmed the conclusions of the Bench-Scale Study related to the potential for constituent transport, and provide information related to changes in the physical and chemical characteristics of the isolation layer materials. Overall, the PCB results related to samples collected following the completion of construction do not indicate the presence of active PCB transport in the isolation layer. Only a few cores were observed to have indications of mixing, and these suggest any such mixing is limited to the first two inches or less of the isolation layer, confirming similar observations made using the SPI images discussed in Section 4.1. Further, the PCBs detected in the potential mixing zone were low relative to the underlying sediments. A reduction in overall TOC concentration of the isolation layer materials before and after placement was observed; however, the average TOC concentration was at or approaching the post-construction target level (approximately 0.5%) and results of sediment collection pan data suggest that the TOC was distributed elsewhere within the lake.

4.4 Water Column Monitoring

Sampling and monitoring programs were implemented to assess TSS, turbidity, and PCBs in the water column prior to, during, and following completion of the study. Measurements were collected at three locations; at two locations in the lake (MON-1, and MON-2), with the third location near the Silver Lake outfall (MON-3). The water column sampling locations are depicted on Figure 18**.** A summary of the water column monitoring program, followed by a discussion of the results is presented below.

4.4.1 Turbidity Monitoring Program

During capping activities, real-time measurements of lake water turbidity were evaluated to assess any changes related to cap placement. Continuous turbidity measurements were recorded using a turbidity probe and submersible battery-powered data loggers, which were suspended at the approximate mid-depth water column elevation. To the extent practicable, during the course of cap placement activities, turbidity readings were evaluated twice per day.

Turbidity levels at all three monitoring locations in Silver Lake prior to initiation of construction activities were generally less than 5 NTU (Figure 19). An approximate 8- to 10-fold increase in turbidity levels occurred immediately following application of the first lift of cap materials (October 25, 2006; Figure 19). Average turbidity during construction at

MON-1 and MON-2 was 45.4 and 38.0 NTU, respectively; average turbidity during construction at MON- 3 was 17.5 NTU. Several days after the completion of isolation material placement activities, water column turbidity began a gradual decline, returning to the pre-construction level (i.e., ~5 NTU) approximately one month after placement activities were complete.

Changes in turbidity levels generally corresponded with cap placement activities, with the highest levels noted during the week, and decreases noted during the weekends when cap placement activities were discontinued (Figure 19). The highest turbidity levels were recorded following the change in the slurry placement rate from 1-inch per day to 2-inches per day (November 17, 2006).

4.4.2 PCB/TSS Monitoring Program

Prior to, during, and following cap placement, samples were collected from the three water column monitoring locations for analysis of PCBs and TSS to assess any changes in these parameters related to cap placement. At MON-3, grab samples were collected from within the outfall channel at the approximate mid-depth elevation. In accordance with the FSP/QAPP, at MON-1 and MON-2, water samples of equal volume were collected from depths approximately equal to 0.2-, 0.5-, and 0.8-times the total water depth at each such location, with all three depth samples combined into one composite sample for the given location.

Beginning September 8, 2006, seven rounds of water column samples were collected to establish relative baseline conditions. In addition, weekly water column samples were collected throughout the duration of cap placement activities. Water column samples were also collected at each of the 3 monitoring stations for PCB and TSS analysis when continuous water column turbidity levels (averaged over 15 minute intervals) exceeded 50 NTUs at either of the two far-field monitoring locations (i.e., MON-2 or MON-3). During capping activities, a total of 14 rounds of water column samples were collected for PCB and TSS analysis. Baseline surface water PCB concentrations associated with samples collected prior to the initiation of cap placement averaged approximately 0.4 micrograms per liter (μg/l) at each monitoring station, while surface water PCB concentrations associated with samples collected during construction averaged approximately 0.16 μg/l, less than half of that observed in the baseline samples. Figure 20 depicts an example of this trend as observed at MON-3. Total suspended solids (TSS) were generally less than 10 ppm at all three water monitoring locations prior to initiation of cap placement activities. TSS increased at all water monitoring locations during the course of Pilot Study

construction activities (Table 10), generally tracking turbidity. A summary of the water column PCB and TSS monitoring program are provided in Table 10.

4.4.3 Summary

The results of the Pilot Study water monitoring quality program indicate increases in turbidity and TSS at all water monitoring locations in response to the implementation of the Pilot Study. The collective water column data indicate the elevated turbidity levels observed were directly related to the isolation layer materials placed in the water column and that a reduction in turbidity began within a few days of the cessation of material placement. PCB concentrations detected in the Silver Lake water column were lower during implementation of the Pilot Study than those prior to the study, and decreased over the course of the Pilot Study, a strong indication that there was little or no re-suspension of existing sediments as a result of cap placement. Some portion of the decrease observed in the water column PCB concentrations may be attributable to the cap material suspended in the water column preferentially sorbing/removing PCBs from the surface waters of Silver Lake.

5. General Observations and Conclusions

As discussed in Section 1, the Pilot Study was designed and performed with specific objectives related to the final design and implementation of a sub-aqueous cap for Silver Lake sediments. Overall, the results of this Pilot Study led to the following general conclusions:

- A silty sand cap can be installed in thin lifts over the sediments of Silver Lake with minimal disturbance to the underlying sediments.

- Cap construction does not benefit significantly from the use of geosynthetic materials as a capping component.

- Based on the available data, it appears that the cap constructed during the Pilot Study provides an effective barrier to the PCBs present in the underlying sediments.

- No observations made or analytical results obtained suggest that modifications to the conceptual cap design are warranted.

To further illustrate the above general conclusions, an effective summary of the results of the Pilot Study can be obtained by reviewing the previously stated objectives paired with related conclusions drawn from observations made and data obtained through performance of the Pilot Study and the associated monitoring programs. To this end, each of the Pilot Study objectives are restated below in italics, followed by the relevant observations/conclusions from the pilot study:

***Objective 1**: Evaluate constructability issues associated with placement of a cap comprised of multiple thin layer lifts in the lake environment.*

Data collected during the PDI indicated that the Silver Lake surface sediments had relatively low strength characteristics and high compressibility indices. The Pilot Study Work Plan proposed the placement of the isolation layer materials in 1- to 2-inch lifts to minimize the potential for movement or mixing of the underlying sediments. A barge-mounted spreader box was designed and constructed to broadcast the slurried isolation layer material over the lake sediments in thin lifts. Sediment collection pans, in conjunction with SPI, sediment probing and core collection were used to monitor the effectiveness of the isolation layer mixing/distribution system at placing multiple thin layer lifts over the test area.

In summary, measurements obtained from the sediment collection pans indicated that isolation layer material could be placed in either 1- or 2-inch lifts. Collectively, the various monitoring techniques used to measure lift thickness indicate that the barge and spreader box assembly constructed for the Pilot Study have the capability of placing lifts in open water areas sufficiently thin (1- or 2-inches) to minimize mixing and avoid deleterious settlement and/or slope failure.

In the shallow water areas where the barge could not access, isolation layer material was side-discharged out of the end of the spreader box diffuser pipe towards shore to cover some of the test area near the barge, and placed dry in the shallower near-shore areas using an onshore excavator. Some difficulties were initially encountered with the onshore placement technique which were later remedied by modifying the method and rate at which the isolation layer material was emptied from the excavator bucket into the test area. Thin lifts were more difficult to place using the excavator than the spreader box assembly. As part of the final cap design, GE will consider any appropriate modifications to the spreader and/or other actions that will facilitate the placement of the isolation layer near-shore.

On several occasions, spreader barge operations had to be temporarily shut down due to clogging caused by rocks, stones, and other debris found in the dry isolation layer materials. As an initial effort to address the problem, the process was modified by adding additional pre-screening of certain top-soil using a 5/8-inch Trommel screen in order to remove large debris. Although this additional screening step was successful, in an effort to reduce material handling and processing, a blended topsoil was identified at as an alternative isolation layer material that was relatively free of debris/stones and contained TOC levels of approximately 1%. With EPA concurrence, the alternative material was used for the isolation layer material after placement of the first few lifts. The potential for clogging by rocks, stones, and other debris will be taken into account in the final cap design.

Objective 2: *Assess the potential for the physical mixing of sediments with cap materials as a result of cap placement.*

A number of monitoring activities were performed both during and following completion of cap placement to assess the extent of mixing that occurred at the cap/sediment interface. Visual observation of the sediment/isolation layer interface was performed at a number of locations throughout the Pilot Study areas by collecting cores and using SPI. The extent of mixing was also examined through the collection and analysis of isolation layer material cores for PCBs.

In summary, observations of mixing of the sediment and isolation layer materials were minimal, and, where observed, were limited to the first 0- to 2-inch layer of isolation layer material. No visual signs of mixing were observed in south or north test areas, where geosynthetic material was placed over the sediment surface prior to isolation layer material placement. Where detected in the 0- to 2-inch segment of the isolation layer material, PCB concentrations were 1 to 2 orders of magnitude below that of the underlying sediment.

Objective 3: *Evaluate shear strength behavior and slope stability of in-situ sediments resulting from the additional stress induced by the cap to further investigate constructability, and sediment response to placement of cap materials, including an assessment of potential short-term behaviors (e.g., mud wave, resuspension, sediment bearing capacity) and longer-term stability issues (e.g., consolidation settlement, side-slope creep) of lake sediments.*

Certain monitoring activities were selected for performance both during and following completion of cap placement to evaluate the behavior of the lake sediments in response to the placement of the isolation layer material. Real-time changes in the sediment surface elevation during and after cap placement were recorded through the use of VW settlement cells, installed throughout the test area prior to cap placement. Data collected from the VW settlement cells was augmented with conventional surveying performed during and after cap placement at a number of physical settlement plates, also installed in the test area prior to cap placement. To provide more thorough spatial coverage of the sediment and cap surface elevations both prior to and following cap placement, pre- and post-construction bathymetric and acoustic profile surveys were also performed.

In summary, there do not appear to be any indications of significant movement of the underlying sediments, or failure (e.g., shear, rotational) in those sediments receiving cap materials in thin lifts via the spreader box. Data compiled from various data groups related to changes in sediment surface elevation indicate that in general:

- Net sediment settlement appears to be within the 1- to 2-ft range.
- The majority of settling occurred within the first two weeks following initiation of cap placement.
- There is no apparent difference in the sediment response to placement of cap materials with or without the presence of geosynthetic materials.

- Placement of large volumes of cap material without regard for lift thickness (as was initially done using the on-shore excavator) can increase consolidation rates and may create slope instability.

Objective 4: *Evaluate the effectiveness of incorporating geotextile materials into the cap design to enhance the integrity and stability of the cap.*

Geosynthetic materials were placed over the sediments in two of the three pilot study sub-areas to evaluate the constructability and utility of using such material to improve the integrity and stability of the cap during and following placement. A non-woven geotextile was placed over the sediments in the southern third of the test area, and a composite geotextile was placed over the northern third of the test area prior to placement of the isolation layer material. Monitoring activities conducted to evaluate geosynthetic material use included diver inspections, lake bottom imagery (i.e., pre- and post-construction bathymetric and acoustic profile surveying and SPI), geophysical monitoring equipment (i.e., VW settlement cells and physical settlement plates) and the collection/analysis of isolation layer cores.

The relative buoyancy of both the non-woven geotextile and the composite geotextile, as well as the effects of wind and wave action on the barge complicated the timely and accurate placement of the geosynthetic layers on the lake bottom. Sand bags were first used to help weigh down the geosynthetic materials, but were later replaced with rebar to help alleviate wrinkles and puckering noted during a subsequent diver inspection. It is possible that the detection of low level PCB concentrations in the lower core segments obtained from the non-woven geotextile area are the result of bottom disturbance during geotextile placement (i.e., of the eight recorded observations of mixing, only two were located in areas lined with geosynthetic – both of which were located over the non-woven geotextile material). As noted previously, based on a collective review of the visual, geotechnical and analytical data collected both during and following cap placement, there is little apparent difference in the integrity or stability of the cap either with or without the presence of geosynthetic materials.

Objective 5: *Assess the potential for water quality impacts, if any, related to cap placement.*

Surface water monitoring for turbidity and related sampling and analysis for TSS and PCBs was performed prior to, during, and after cap placement to determine whether cap placement activities resulted in any notable short- or long-term water quality impacts. Real-time turbidity measurements were recorded continuously, while samples from three

locations within the lake were analyzed for PCBs and TSS on a weekly basis, with more frequent analysis when elevated turbidity readings (i.e., >50 ntu, averaged over 15 minute intervals) were noted at one or more of the two far-field sample locations.

In summary, increased turbidity was recorded at all monitoring locations during the time period when isolation layer material was being broadcast to the water column, with the highest readings noted, as anticipated, at the sampling locations nearest the placement operations, during the time periods of most active placement, and following the increase in cap application rates near the end of the study. Increased turbidity related to placement appeared to be short-term only, with decreases noted during the weekends when capping activities were suspended, and turbidity levels approaching pre-construction (baseline) levels were observed within approximately one month following completion of the study.

Despite elevated turbidity, and an associated increased TSS, a decrease in surface water PCB concentration was observed. This decrease appears to correspond with increased turbidity, suggesting that the cap material suspended in the water column may in part be sorbing/removing PCBs from the surface waters of Silver Lake.

***Objective 6*:** *Confirm results of the Bench-Scale Study related to the performance of potential cap configurations with regard to the physical and chemical isolation of PCBs present in existing lake sediments.*

In general, the Bench-Scale Study concluded that the cap materials and configurations used in the study provided an effective physical and chemical barrier in isolating sediment PCBs from the overlying cap materials. Based on a review of the data obtained from the various cap placement monitoring programs implemented prior to, during and following completion of the pilot study, the Pilot Study appears to confirm these results. Specifically, only very minor mixing was observed, and that appears limited to the first two inches of the cap, there do not appear to be any indication of a discernible gradient or pattern in PCB concentrations within the cores that might suggest PCB transport, and there do not appear to be significant performance benefits associated with the presence of a geosynthetic layer in the cap configuration.

6. Future Activities and Schedule

The next step in the design of the Silver Lake cap is the preparation and submittal of the *Conceptual Removal Design/Removal Action Work Plan for Silver Lake Sediments* (Conceptual RD/RA Work Plan). As fully detailed in the SOW, the Conceptual RD/RA Work Plan will include:

- A brief summary of pre-design investigations/studies
- A summary of the proposed response action and key design assumptions and parameters
- Preliminary plans and specifications to support the proposed response actions, including discussion related to the integration of the conceptual remedial plans for the bank soil and sediment projects
- A description of the activities necessary for natural restoration/enhancement activities

GE proposes to submit the Conceptual RD/RA Work Plan within 3 months of EPA approval of the Pilot Study Report.

7. References

ARCADIS BBL. 2007. Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP). Prepared for General Electric Company, Pittsfield, MA.

BBL. 2006a. Bench-Scale Study Report for Silver Lake Sediments (Bench-Scale Report). Prepared for General Electric Company, Pittsfield, MA.

BBL. 2006b. Pilot Study Work Plan for the Silver Lake Area Removal Action (Work Plan). Prepared for General Electric Company, Pittsfield, MA.

BBL. 1999a. Statement of Work for Removal Actions Outside the River (SOW) (Appendix E to the Consent Decree). Prepared for General Electric Company, Pittsfield, MA.

BBL. 1999b. Technical Attachment K to the Silver Lake Sediment Response Action Conceptual Design

Tables

TABLE 1
MONITORING PROGRAM SUMMARY

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Monitoring Event	Description	Time Relative to Pilot Study Construction Activities			
		Before	During	Immediately After	6-Months After
Lake Bottom Imagery					
Bathymetric Survey	Multi-beam bathymetric survey of pilot study test area	X	--	X	X
Sub-Bottom Profiling	Acoustic profile survey of sediment/cap interface	X	--	X	X
Sediment Profile Imaging	Imaging of surface sediments, and imaging of cross-section of first 7 lifts of isolation layer material for cap thickness and observation of physical mixing.	X	X	--	--
Geophysical/Consolidation Monitoring					
Vibrating Wire Settlement Cells	Continuous recording of sediment consolidation	--	X	X	X
Physical Survey Plates	Conventional survey of sediment elevation and cap thickness	--	X	X	X
Surface Water Quality Monitoring					
Weekly Water Sampling	Weekly sample collection from three locations with analysis for PCB and TSS	X	X	X	X
Continuous Turbidity	Continuous turbidity monitoring at three locations; readings greater than 50 NTU at either of the two locations nearest outfall triggers surface water sample collection and analysis for PCB and TSS	--	X	--	--
Sediment/Cap Material Collection					
Chemical/Physical Coring	Collection of sediment/cap material samples for assessment of total cap thickness, observations of physical mixing, and analysis for PCB and TOC	--	X	X	X

TABLE 2
ISOLATION LAYER MATERIALS PRE-CONSTRUCTION ANALYTICAL DATA

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Unless otherwise noted, results are presented in dry weight parts per million, ppm)

Parameter / Sample ID: / Date Collected:	CLARK-TOP-SOIL-1 08/25/06	CLARK-TOP-SOIL-2 08/25/06	CLARK-TOP-SOIL-3 08/25/06	CLARK-TOP-SOIL-4 10/04/06
Volatile Organics				
Acetone	NA	NA	NA	0.019 J
PCBs				
Aroclor-1254	NA	NA	NA	NA
Total PCBs	NA	NA	NA	NA
Semivolatile Organics				
Chrysene	NA	NA	NA	0.080 J
Fluoranthene	NA	NA	NA	0.11 J
Phenanthrene	NA	NA	NA	0.076 J
Pyrene	NA	NA	NA	0.10 J
Organochlorine Pesticides				
4,4'-DDT	NA	NA	NA	NA
Methoxychlor	NA	NA	NA	NA
Herbicides				
None Detected	NA	NA	NA	NA
Inorganics				
Antimony	NA	NA	NA	0.173 J
Arsenic	NA	NA	NA	2.50 J
Barium	NA	NA	NA	NA
Beryllium	NA	NA	NA	ND(1.24)
Cadmium	NA	NA	NA	0.0235 J
Chromium	NA	NA	NA	6.60
Cobalt	NA	NA	NA	3.99 J
Copper	NA	NA	NA	8.93 B
Lead	NA	NA	NA	32.2
Mercury	NA	NA	NA	0.0625
Nickel	NA	NA	NA	5.98 B
Selenium	NA	NA	NA	ND(2.65) J
Silver	NA	NA	NA	ND(1.24) J
Thallium	NA	NA	NA	ND(1.24)
Vanadium	NA	NA	NA	11.4
Zinc	NA	NA	NA	59.2 J
Total Organic Carbon (%)				
TOC - Replicate 1	1.90	2.40	5.90	NA
TOC - Replicate 2	1.50	2.00	2.20	NA
TOC - Replicate 3	1.60	3.00	2.60	NA
TOC - Replicate 4	NA[1]	NA[1]	2.30	NA
TOC - Average	1.70	2.50	3.20 J	NA
TOC - % RSD	14	19	55	NA

TABLE 2
ISOLATION LAYER MATERIALS PRE-CONSTRUCTION ANALYTICAL DATA

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Unless otherwise noted, results are presented in dry weight parts per million, ppm)

Parameter / Sample ID: / Date Collected:	CLARK-TOP-SOIL-5 10/04/06	CLARK-TOP-SOIL-6 10/04/06	POND-1 08/22/06	POND-2 08/22/06	POND-3 08/22/06
Volatile Organics					
Acetone	NA	NA	NA	NA	NA
PCBs					
Aroclor-1254	ND(0.059)	ND(0.057)	NA	NA	NA
Total PCBs	ND(0.059)	ND(0.057)	NA	NA	NA
Semivolatile Organics					
Chrysene	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA
Organochlorine Pesticides					
4,4'-DDT	NA	NA	NA	NA	NA
Methoxychlor	NA	NA	NA	NA	NA
Herbicides					
None Detected	NA	NA	NA	NA	NA
Inorganics					
Antimony	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA
Total Organic Carbon (%)					
TOC - Replicate 1	NA	NA	0.29	0.24	0.39
TOC - Replicate 2	NA	NA	0.91	0.22	0.44
TOC - Replicate 3	NA	NA	0.35	0.30	0.38
TOC - Replicate 4	NA	NA	0.40	NA[1]	NA[1]
TOC - Average	NA	NA	0.49	0.25	0.40
TOC - % RSD	NA	NA	59	16	7.6

TABLE 2
ISOLATION LAYER MATERIALS PRE-CONSTRUCTION ANALYTICAL DATA

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Unless otherwise noted, results are presented in dry weight parts per million, ppm)

Parameter / Sample ID: / Date Collected:	PITTSFIELD-POND-SAND-4 10/04/06	PITTSFIELD-POND-SAND-5 10/04/06	PITTSFIELD-POND-SAND-6 10/04/06
Volatile Organics			
Acetone	0.015 J	NA	NA
PCBs			
Aroclor-1254	NA	ND(0.058)	ND(0.060)
Total PCBs	NA	ND(0.058)	ND(0.060)
Semivolatile Organics			
Chrysene	ND(0.37)	NA	NA
Fluoranthene	ND(0.37)	NA	NA
Phenanthrene	ND(0.37)	NA	NA
Pyrene	ND(0.37)	NA	NA
Organochlorine Pesticides			
4,4'-DDT	NA	NA	NA
Methoxychlor	NA	NA	NA
Herbicides			
None Detected	NA	NA	NA
Inorganics			
Antimony	0.0744 J	NA	NA
Arsenic	6.95	NA	NA
Barium	NA	NA	NA
Beryllium	0.623 B	NA	NA
Cadmium	ND(0.555) J	NA	NA
Chromium	16.4	NA	NA
Cobalt	13.9	NA	NA
Copper	29.3	NA	NA
Lead	14.7	NA	NA
Mercury	0.0163 B	NA	NA
Nickel	21.7	NA	NA
Selenium	ND(2.22) J	NA	NA
Silver	ND(1.11) J	NA	NA
Thallium	ND(1.11)	NA	NA
Vanadium	15.8	NA	NA
Zinc	57.3 J	NA	NA
Total Organic Carbon (%)			
TOC - Replicate 1	NA	NA	NA
TOC - Replicate 2	NA	NA	NA
TOC - Replicate 3	NA	NA	NA
TOC - Replicate 4	NA	NA	NA
TOC - Average	NA	NA	NA
TOC - % RSD	NA	NA	NA

TABLE 2
ISOLATION LAYER MATERIALS PRE-CONSTRUCTION ANALYTICAL DATA

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Unless otherwise noted, results are presented in dry weight parts per million, ppm)

Parameter / Sample ID: / Date Collected:	PITTSFIELD-POND-SAND-7 10/04/06	PITTSFIELD-POND-SAND-8 10/04/06	SL-BF-102606-1 10/26/06
Volatile Organics			
Acetone	NA	NA	NA
PCBs			
Aroclor-1254	0.071	ND(0.054)	ND(0.059)
Total PCBs	0.071	ND(0.054)	ND(0.059)
Semivolatile Organics			
Chrysene	NA	NA	NA
Fluoranthene	NA	NA	NA
Phenanthrene	NA	NA	NA
Pyrene	NA	NA	NA
Organochlorine Pesticides			
4,4'-DDT	NA	NA	NA
Methoxychlor	NA	NA	NA
Herbicides			
None Detected	NA	NA	NA
Inorganics			
Antimony	NA	NA	NA
Arsenic	NA	NA	NA
Barium	NA	NA	NA
Beryllium	NA	NA	NA
Cadmium	NA	NA	NA
Chromium	NA	NA	NA
Cobalt	NA	NA	NA
Copper	NA	NA	NA
Lead	NA	NA	NA
Mercury	NA	NA	NA
Nickel	NA	NA	NA
Selenium	NA	NA	NA
Silver	NA	NA	NA
Thallium	NA	NA	NA
Vanadium	NA	NA	NA
Zinc	NA	NA	NA
Total Organic Carbon (%)			
TOC - Replicate 1	NA	NA	1.2
TOC - Replicate 2	NA	NA	1.2
TOC - Replicate 3	NA	NA	1.3
TOC - Replicate 4	NA	NA	NA[1]
TOC - Average	NA	NA	1.2
TOC - % RSD	NA	NA	6.7

TABLE 2
ISOLATION LAYER MATERIALS PRE-CONSTRUCTION ANALYTICAL DATA

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Unless otherwise noted, results are presented in dry weight parts per million, ppm)

Parameter / Sample ID: / Date Collected:	SL-BF-102606-2 10/26/06	SL-BF-102606-3 10/26/06	SL-BF-102606-4 10/26/06
Volatile Organics			
Acetone	NA	NA	0.014
PCBs			
Aroclor-1254	ND(0.056)	ND(0.057)	NA
Total PCBs	ND(0.056)	ND(0.057)	NA
Semivolatile Organics			
Chrysene	NA	NA	ND(0.36)
Fluoranthene	NA	NA	ND(0.36)
Phenanthrene	NA	NA	ND(0.36)
Pyrene	NA	NA	ND(0.36)
Organochlorine Pesticides			
4,4'-DDT	NA	NA	0.0054 J
Methoxychlor	NA	NA	0.021 J
Herbicides			
None Detected	NA	NA	--
Inorganics			
Antimony	NA	NA	ND(4.02) J
Arsenic	NA	NA	3.42
Barium	NA	NA	40.1 J
Beryllium	NA	NA	ND(1.00)
Cadmium	NA	NA	ND(0.910)
Chromium	NA	NA	11.6
Cobalt	NA	NA	7.84
Copper	NA	NA	14.4 B
Lead	NA	NA	13.6
Mercury	NA	NA	0.0542
Nickel	NA	NA	13.5 J
Selenium	NA	NA	4.52 J
Silver	NA	NA	ND(1.00)
Thallium	NA	NA	0.513 J
Vanadium	NA	NA	12.8 J
Zinc	NA	NA	51.7 J
Total Organic Carbon (%)			
TOC - Replicate 1	1.90	1.50	NA
TOC - Replicate 2	1.30	1.10	NA
TOC - Replicate 3	1.80	1.40	NA
TOC - Replicate 4	NA[1]	NA[1]	NA
TOC - Average	1.70	1.30	NA
TOC - % RSD	17	16	NA

Notes:

1. Samples were collected by ARCADIS BBL, and submitted to Northeast Analytical, Inc. and SGS Environmental Services, Inc for analysis of PCBs, volatiles, semivolatiles, pesticides, herbicides and metals.
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (approved March 15, 2007 and re-submitted March 30, 2007).
3. NA - Not Analyzed
4. NA[1-] Not Analyzed - TOC Replicate 4 is only analyzed and reported by laboratory when the percent relative standard deviation (% RSD) of Replicate 1 thru Replicate 3 is greater than 25%.
5. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
6. Only those constituents detected in one or more samples are summarized.
7. -- Indicates that all constituents for the parameter group were not detected.

Data Qualifiers:

Organics (PCBs, volatiles, semivolatiles,pesticides, herbicides)

J - Indicates that the associated numerical value is an estimated concentration.
R - Data was rejected due to a deficiency in the data generation process.

Inorganics

B - Indicates an estimated value between the instrument detection limit (IDL) and (PQL).
J - Indicates that the associated numerical value is an estimated concentration.

TABLE 3
SUMMARY OF ANALYTICAL RESULTS RELATED TO DRY MIXED ISOLATION LAYER MATERIALS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight percent, %)

Parameter / Sample ID: / Date Collected:	SL-BF-101906-1A 10/19/06	SL-BF-101906-1B 10/19/06	SL-BF-101906-2A 10/19/06	SL-BF-101906-2B 10/19/06	SL-BF-101906-3A 10/19/06	SL-BF-101906-3B 10/19/06
PCBs						
None Detected	ND(0.057)	ND(0.055)	ND(0.059)	ND(0.056)	ND(0.057)	ND(0.056)
Total Organic Carbon						
TOC - Replicate 1	NA	NA	NA	NA	NA	NA
TOC - Replicate 2	NA	NA	NA	NA	NA	NA
TOC - Replicate 3	NA	NA	NA	NA	NA	NA
TOC - Replicate 4	NA	NA	NA	NA	NA	NA
TOC - Average	NA	NA	NA	NA	NA	NA
TOC - % RSD	NA	NA	NA	NA	NA	NA

TABLE 3
SUMMARY OF ANALYTICAL RESULTS RELATED TO DRY MIXED ISOLATION LAYER MATERIALS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight percent, %)

Parameter / Sample ID: / Date Collected:	SL-BF-102706-1 10/27/06	SL-BF-102706-2 10/27/06	SL-BF-102706-3 10/27/06	SL-BF-103106-1 10/31/06	SL-BF-103106-2 10/31/06	SL-BF-103106-3 10/31/06
PCBs						
None Detected	NA	NA	NA	NA	NA	NA
Total Organic Carbon						
TOC - Replicate 1	0.65	0.87	1.10	0.84	0.81	1.00
TOC - Replicate 2	0.92	0.97	0.88	0.95	0.85	1.80
TOC - Replicate 3	0.78	1.00	1.20	1.30	0.81	0.92
TOC - Replicate 4	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	0.84
TOC - Average	0.85	0.95	1.10	1.00	0.82	1.10
TOC - % RSD	17	7.6	16	25	2.5	38

TABLE 3
SUMMARY OF ANALYTICAL RESULTS RELATED TO DRY MIXED ISOLATION LAYER MATERIALS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight percent, %)

Parameter / Sample ID: / Date Collected:	SL-BF-103106-4 10/31/06	SL-BF-110306-1 11/03/06	SL-BF-110306-2 11/03/06	SL-BF-110306-3 11/03/06	SL-BF-110306-4 11/03/06	SL-BF-110306-12 11/03/06
PCBs						
None Detected	NA	NA	NA	NA	NA	NA
Total Organic Carbon						
TOC - Replicate 1	1.10	0.95	0.99	0.81	1.10	1.60
TOC - Replicate 2	1.00	0.72	1.30	0.87	1.00	1.00
TOC - Replicate 3	1.10	0.78	1.00	0.79	0.94	0.93
TOC - Replicate 4	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	1.00
TOC - Average	1.10	0.81	1.10	0.83	1.00	1.10
TOC - % RSD	5.9	15	14	5.0	9.4	26

TABLE 3
SUMMARY OF ANALYTICAL RESULTS RELATED TO DRY MIXED ISOLATION LAYER MATERIALS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight percent, %)

Parameter / Sample ID: / Date Collected:	SL-BF-110306-13 11/03/06	SL-BF-110306-14 11/03/06	SL-BF-110306-15 11/03/06	SL-BF-111606-1 11/16/06	SL-BF-111606-2 11/16/06	SL-BF-111606-3 11/16/06
PCBs						
None Detected	NA	NA	NA	NA	NA	NA
Total Organic Carbon						
TOC - Replicate 1	1.00	1.10	1.20	0.93	0.99	1.00
TOC - Replicate 2	0.71	1.00	1.10	0.79	0.97	1.00
TOC - Replicate 3	1.20	1.10	1.00	1.00	1.10	1.20
TOC - Replicate 4	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
TOC - Average	0.96	1.10	1.10	0.91	1.00	1.10
TOC - % RSD	24	4.2	8.1	12	6.6	8.8

TABLE 3
SUMMARY OF ANALYTICAL RESULTS RELATED TO DRY MIXED ISOLATION LAYER MATERIALS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight percent, %)

Parameter / Sample ID: / Date Collected:	SL-BF-TOC-1A 10/16/06	SL-BF-TOC-1B 10/16/06	SL-BF-TOC-2A 10/16/06	SL-BF-TOC-2B 10/16/06	SL-BF-TOC-3A 10/16/06	SL-BF-TOC-3B 10/16/06
PCBs						
None Detected	NA	ND(0.058)	NA	NA	NA	NA
Total Organic Carbon						
TOC - Replicate 1	0.70	1.30	1.30	0.84	1.00	0.90
TOC - Replicate 2	0.80	1.10	1.00	0.88	1.20	0.94
TOC - Replicate 3	0.82	1.40	1.30	0.91	1.00	0.89
TOC - Replicate 4	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
TOC - Average	0.77	1.30	1.20	0.88	1.10	0.91
TOC - % RSD	8.6	9.5	11	3.8	7.0	2.9

Notes:

1. Samples were collected by ARCADIS BBL, and submitted to Northeast Analytical, Inc. for analysis of PCBs and total organic carbon (TOC).
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (approved March 15, 2007 and re-submitted March 30, 2007).
3. NA - Not Analyzed - Laboratory did not report results for this analyte.
4. NA[1-] Not Analyzed - TOC Replicate 4 is only analyzed and reported by laboratory when the percent relative standard deviation (% RSD) of Replicate 1 thru Replicate 3 is greater than 25%.
5. -- Indicates that all constituents for the parameter group were not detected.
6. Only those constituents detected in one or more samples are summarized.

Data Qualifiers:

J - Indicates that the associated numerical value is an estimated concentration.

TABLE 4
SUMMARY OF SEDIMENT COLLECTION PAN RESULTS

PILOT STUDY ISOLATION MATERIAL PLACEMENT
SILVER LAKE AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Date of Retrieval	Pan	Approximate Duration of Deployment (days)	Number of Lifts	Cell	Longitudinal Location	Thickness (inch)
10/25/06	1	0.23	1	A	Un-lined Area	0.50
	2	0.23	1	A	Geocomposite Fabric	1.50
10/30/06	1	4.09	2	G	Geocomposite Fabric	1.50
	2	3.09	1	G	Non-Woven Fabric	NA
	3	3.09	1	K	Non-Woven Fabric	0.75
	4	3.09	1	D	Geocomposite Fabric	0.75
11/1/06	1	1.90	1	E	Geocomposite Fabric	NA
	2	1.90	1	E	Non-Woven Fabric	1.50
	3	1.90	1	L	Non-Woven Fabric	0.75
	4	1.90	1	L	Geocomposite Fabric	1.25
11/2/06	1	1.04	1	D	Geocomposite Fabric	1.00
	2	1.04	1	E	Non-Woven Fabric	1.25
	4	1.04	1	J	Geocomposite Fabric	1.00
11/3/06	1	0.94	1	D	Geocomposite Fabric	1.25
	2	1.15	1	E	Non-Woven Fabric	1.00
11/6/06	1	2.86	1	D	Geocomposite Fabric	1.00
	3	5.01	3	K	Non-Woven Fabric	3.00
11/7/06	4	4.99	1	J	Geocomposite Fabric	1.00
11/13/06	5	10.00	4	G	Geocomposite Fabric	4.00
11/16/06	5	1.00	1	F	Geocomposite Fabric	0.88
11/17/06	5	1.02	1	I	Geocomposite Fabric	1.75
11/20/06	5	3.04	1	J	Non-Woven Fabric	2.00

Notes:
1. NA - Not able to determine.
2. Pans 1, 2 and 3 were removed (11/7/06 for 1 and 3, 11/13/06 for 2) to prevent interference with cap placement activities.

TABLE 5
SUMMARY OF PHYSICAL SURVEY PLATE ELEVATIONS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are in feet, based on NGVD 29)

Location ID	10/18/2006	11/8/2006	11/27/2006	6/12/2007
SP-B-1.5	948.8	949.3	NA	NA
SP-B-2.5	953.7	958.9	958.4	957.9
SP-B-3.5	969.4	968.6	968.1	967.7
SP-D-1.5	NA	951.4	950.4	950.8
SP-D-2.5	NA	956.3	955.0	955.3
SP-D-3.5	NA	965.0	NA	963.3
SP-F-1.5	951.2	951.0	950.6	950.1
SP-F-2.5	NA	955.7	955.1	954.9
SP-F-3.5	967.6	967.3	966.2	965.8

Notes:

1. NA - Elevation data not available.
2. Survey elevations reported refer to top of rod attached to settlement plate.
3. SP-B- survey plates are located over the geocomposite.
4. SP-D- survey plates are located in the isolation layer only area.
5. SP-F- survey plates are located over the geotextile.

TABLE 6
DURING-CONSTRUCTION ISOLATION LAYER MATERIAL CORES TOC ANALYTICAL DATA - NOVEMBER 2006

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight percent, %)

Parameter	Sample ID: / Sample Depth(Inches): / Date Collected:	SL-CAP-B-1.5 0-4 11/09/06	SL-CAP-B-2.5 0-5.5 11/09/06	SL-CAP-B-3.5 0-7 11/09/06	SL-CAP-F-1.5 0-5 11/09/06	SL-CAP-F-2.5 0-5 11/09/06	SL-CAP-F-3.5 0-4.5 11/09/06
Total Organic Carbon							
TOC - Replicate 1		0.32	0.53	0.19	0.28	0.24	0.31
TOC - Replicate 2		0.45	0.70	0.23	0.18	0.40	1.00
TOC - Replicate 3		0.40	0.44	0.68	0.25	0.40	0.41
TOC - Replicate 4		NA	NA	0.30	NA	0.44	0.60
TOC - Average		0.39	0.56	0.35	0.24	0.37	0.58
TOC - % RSD		16	24	64	21	24	54

Notes:
1. Samples were collected by ARCADIS BBL, and submitted to Northeast Analytical, Inc. for analysis of total organic carbon (TOC).
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (approved March 15, 2007 and re-submitted March 30, 2007).
3. NA - Not Analyzed - TOC Replicate 4 is only analyzed and reported by laboratory when the % RSD of Replicate 1 thru Replicate 3 is greater than 25%.
4. % RSD - Percent relative standard deviation.

Data Qualifiers:

J - Indicates that the associated numerical value is an estimated concentration.

TABLE 7
IMMEDIATE POST-CONSTRUCTION ISOLATION LAYER MATERIAL CORES PCB AND TOC ANALYTICAL DATA - DECEMBER 2006

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight parts per million, ppm)
(TOC results are presented in dry weight percent, %)

Sample Depth	Date	A		B		C		D	
(Inches)	Collected	Total PCBs	TOC - Average	Total PCBs	TOC - Average	Total PCBs	TOC - Average	Total PCBs	TOC - Average
TOP	12/27/06	ND(0.069)	0.86	ND(0.067)	0.82	ND(0.067)	0.89	ND(0.059)	0.35
REM	12/27/06	NA	NA	NA	NA	ND(0.057)	0.34	NA	NA
4-6	12/27/06	ND(0.060)	0.30	ND(0.061)	0.31	ND(0.058)	0.31	ND(0.058)	0.28
2-4	12/27/06	ND(0.054)	0.22	ND(0.057)	0.69	ND(0.058) [ND(0.058)]	0.64 J [0.26 J]	ND(0.060)	1.20 J
0-2	12/27/06	ND(0.056)	0.35	ND(0.057)	0.43	ND(0.060)	0.27	ND(0.059)	0.39
SED	12/27/06	NA	NA	NA	NA	NA	NA	NA	NA

Sample Depth	Date	E		F		G		H	
(Inches)	Collected	Total PCBs	TOC - Average	Total PCBs	TOC - Average	Total PCBs	TOC - Average	Total PCBs	TOC - Average
TOP	12/27/06	ND(0.055)	0.82	ND(0.058)	0.78 J	0.302 J	0.58	0.477 J	0.89
REM	12/27/06	ND(0.055) [ND(0.057)]	0.68 [0.56]	ND(0.054)	0.36	ND(0.075)	0.45	0.77 J	0.52 J
4-6	12/27/06	ND(0.057)	0.98	ND(0.057)	0.45	ND(0.070) [ND(0.060)]	0.71 J [0.18 J]	ND(0.056)	0.44
2-4	12/27/06	ND(0.055)	0.67	ND(0.060)	0.51	ND(0.057)	0.29	ND(0.058)	0.54 J
0-2	12/27/06	ND(0.056)	0.90	ND(0.057)	0.47	ND(0.059)	0.28	1.21 J	0.54
SED	12/27/06	NA	NA	144 J	12	115 J	12	34.1 J	2

Sample Depth	Date	I		J		K		L	
(Inches)	Collected	Total PCBs	TOC - Average	Total PCBs	TOC - Average	Total PCBs	TOC - Average	Total PCBs	TOC - Average
TOP	12/27/06	ND(0.054)	0.83	ND(0.062)	0.38	ND(0.063)	0.30	ND(0.056)	0.91
REM	12/27/06	0.74 J [0.37 J]	0.91 [0.70]	NA	NA	ND(0.062)	0.54	ND(0.059)	0.35
4-6	12/27/06	2.32 J	1.20	ND(0.057)	0.30	ND(0.059)	0.46	ND(0.058)	0.28
2-4	12/27/06	1.86 J	1.00	ND(0.057)	0.46	ND(0.062)	0.34	ND(0.056)	0.28
0-2	12/27/06	14.6 J	0.81	0.185 J	0.30	ND(0.061)	0.22	0.237	0.42
SED	12/27/06	25.2 J	1.30	NA	NA	NA	NA	NA	NA

Sample Depth	Date	M	
(Inches)	Collected	Total PCBs	TOC - Average
TOP	12/27/06	NA	NA
REM	12/27/06	NA	NA
4-6	12/27/06	ND(0.060)	0.41
2-4	12/27/06	ND(0.058)	0.23
0-2	12/27/06	ND(0.055)	0.29 J
SED	12/27/06	NA	NA

Notes:

1. Samples were collected by ARCADIS BBL, and submitted to Northeast Analytical, Inc. for analysis of PCBs and total organic carbon (TOC).
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (approved March 15, 2007 and re-submitted March 30, 2007).
3. NA - Not Analyzed.
4. Field duplicate sample results are presented in brackets.
5. Diver collected.
6. Isolation layer material cores collected were processed for analysis in the 0- to 2-inch, 2- to 4-inch, and 4- to 6-inch layers from the sediment/cap or geotextile layer interface. The remaining materials were divided into two samples: the top two inches [nominally the 12- to 14-inch increment from the sediment surface] and the remaining materials [nominally 6- to 12-inch increment from the sediment surface].

Data Qualifiers:

J - Indicates that the associated numerical value is an estimated concentration.

TABLE 8
6-MONTH POST-CONSTRUCTION ISOLATION LAYER MATERIAL CORES PCB AND TOC ANALYTICAL DATA - JUNE 2007

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(PCB results are presented in dry weight parts per million, ppm)
(TOC results are presented in dry weight percent, %)

Sample Depth (Inches)	Date Collected	A		B		C		D	
		Total PCBs	TOC - Average	Total PCBs	TOC - Average	Total PCBs	TOC - Average	Total PCBs	TOC - Average
TOP	06/12/07	0.142 J	0.95	0.15 J	0.37	2.91 J	0.79 J	0.148 J	0.60 J
REM	06/12/07	NA	NA	NA	NA	ND(0.057)	0.39	ND(0.058)	0.28 J
4-6	06/12/07	ND(0.057)	0.44	ND(0.062)	0.55 J	ND(0.058)	0.24	NA	NA
2-4	06/12/07	ND(0.056)	0.31	ND(0.060)	0.37	ND(0.061)	0.49 J	NA	NA
0-2	06/12/07	ND(0.057)	0.38	ND(0.053)	0.35	ND(0.057)	0.33	NA	NA
SED	06/12/07	NA	NA	NA	NA	NA	NA	NA	NA

Sample Depth (Inches)	Date Collected	E		F		G		H	
		Total PCBs	TOC - Average	Total PCBs	TOC - Average	Total PCBs	TOC - Average	Total PCBs	TOC - Average
TOP	06/12/07	ND(0.059) [ND(0.057)]	0.87 [0.80]	ND(0.059)	0.54	ND(0.064)	0.42	0.33 J	0.30
REM	06/12/07	ND(0.059)	1.10	NA	NA	ND(0.061)	0.35	0.66 J	0.40
4-6	06/12/07	ND(0.058)	0.76	ND(0.058)	0.41	ND(0.060)	0.43	ND(0.059) [ND(0.060)]	0.30 [0.30]
2-4	06/12/07	ND(0.059)	0.73	ND(0.055)	0.22	ND(0.059)	0.40	ND(0.060)	0.27
0-2	06/12/07	ND(0.055)	0.88	0.157 J	0.35	0.151 J	0.21	2.49 J	0.62
SED	06/12/07	NA	NA	88.8 J	7.90	178 J	9.50	148 J	12.00

Sample Depth (Inches)	Date Collected	I		J		K		L	
		Total PCBs	TOC - Average	Total PCBs	TOC - Average	Total PCBs	TOC - Average	Total PCBs	TOC - Average
TOP	06/12/07	ND(0.059)	0.62 J	ND(0.056)	0.41	ND(0.060)	0.75	0.068	0.24
REM	06/12/07	ND(0.058)	0.84	NA	NA	ND(0.060)	0.38	ND(0.056)	0.32 J
4-6	06/12/07	ND(0.057)	0.89	NA	NA	ND(0.060)	0.38	ND(0.058)	0.58 J
2-4	06/12/07	ND(0.058)	0.95	NA	NA	ND(0.057)	0.37	ND(0.056)	0.32
0-2	06/12/07	ND(0.054)	0.65	ND(0.057)	0.44	0.43 J	0.42 J	ND(0.056) [ND(0.061)]	0.34 [0.41 J]
SED	06/12/07	NA	NA	NA	NA	NA	NA	NA	NA

Sample Depth (Inches)	Date Collected	M	
		Total PCBs	TOC - Average
TOP	06/12/07	0.265 J	0.76 J
REM	06/12/07	NA	NA
4-6	06/12/07	ND(0.058)	0.22
2-4	06/12/07	ND(0.058)	0.44
0-2	06/12/07	ND(0.055)	0.25
SED	06/12/07	NA	NA

Notes:

1. Samples were collected by ARCADIS BBL, and submitted to Northeast Analytical, Inc. for analysis of PCBs and total organic carbon (TOC).
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (approved March 15, 2007 and re submitted March 30, 2007).
3. NA - Not Analyzed.
4. Field duplicate sample results are presented in brackets.
5. Diver collected.
6. Isolation layer material cores collected were processed for analysis in the 0- to 2-inch, 2- to 4-inch, and 4- to 6-inch layers from the sediment/cap or geotextile layer interface. The remaining materials were divided into two samples: the top two inches [nominally the 12- to 14-inch increment from the sediment surface] and the remaining materials [nominally 6- to 12-inch increment from the sediment surface].

Data Qualifiers:

J - Indicates that the associated numerical value is an estimated concentration.

TABLE 9
POST-CONSTRUCTION SEDIMENT TRAP MATERIALS ANALYTICAL DATA - TOC

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight percent, %)

Parameter / Sample ID: / Date Collected:	SL-ST-MON-1 12/20/06	SL-ST-MON-2 12/20/06
Total Organic Carbon		
TOC - Replicate 1	3.2	4.6
TOC - Replicate 2	3.2	4.8
TOC - Replicate 3	3.2	4.6
TOC - Average	3.2	4.7
TOC - % RSD	1.2	2.9

Notes:
1. Samples were collected by ARCADIS BBL, and submitted to Northeast Analytical, Inc. for analysis of total organic carbon (TOC).
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (approved March 15, 2007 and re-submitted March 30, 2007).
3. % RSD - Percent relative standard deviation.

TABLE 10
WATER QUALITY MONITORING ANALYTICAL DATA - PCB AND TSS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Sample ID	Date Collected	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Total PCBs	TSS
SL-WATER-MON-1	9/8/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000047	0.000030	0.000077	12.9
SL-WATER-MON-2	9/8/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000055	0.000031	0.000086	4.64
SL-WATER-MON-3	9/8/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000056	0.000042	0.000098	3.39
SL-WATER-MON-1	9/13/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000042	0.000030	0.000072	11.0
SL-WATER-MON-2	9/13/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000051	0.000029	0.00008	4.15
SL-WATER-MON-3	9/13/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000041	0.000033	0.000074	ND(2.00)
SL-WATER-MON-1	9/20/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000049	0.000028	0.000077	7.40
SL-WATER-MON-2	9/20/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000051	0.000030	0.000081	5.81
SL-WATER-MON-3	9/20/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000052	0.000034	0.000086	2.79
SL-WATER-MON-1	9/27/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000039	0.000024	0.000063	4.67
SL-WATER-MON-2	9/27/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000053	0.000033	0.000086	7.00
SL-WATER-MON-3	9/27/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000051	0.000033	0.000084	7.80
SL-WATER-MON-1	10/5/2006 10/5/2006	ND(0.000022) [ND(0.000022)]	ND(0.000022) [ND(0.000022)]	ND(0.000022) [ND(0.000022)]	ND(0.000022) [ND(0.000022)]	ND(0.000022) [ND(0.000022)]	0.000035 [0.000030]	ND(0.000022) [ND(0.000022)]	0.000035 [0.00003]	10.0 [11.3]
SL-WATER-MON-2	10/5/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000035	ND(0.000022)	0.000035	2.93
SL-WATER-MON-3	10/5/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000037	ND(0.000022)	0.000037	3.00
SL-WATER-MON-1	10/12/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000055	0.000032	0.000087	11.0
SL-WATER-MON-2	10/12/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000055	0.000032	0.000087	4.95
SL-WATER-MON-3	10/12/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000070	0.000050	0.00012	5.61
SL-WATER-MON-1	10/19/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000028	ND(0.000022)	0.000028	11.3
SL-WATER-MON-2	10/19/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000033	ND(0.000022)	0.000033	6.60
SL-WATER-MON-3	10/19/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000038	ND(0.000022)	0.000038	6.20
SL-WATER-MON-1	10/25/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000029	ND(0.000022)	0.000029	22.2
SL-WATER-MON-2	10/25/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000022	ND(0.000022)	0.000022	23.3
SL-WATER-MON-3	10/25/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000034	ND(0.000022)	0.000034	5.00
SL-WATER-MON-1	10/30/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000025	ND(0.000022)	0.000025	80.6
SL-WATER-MON-2	10/30/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000030	ND(0.000022)	0.00003	14.0
SL-WATER-MON-3	10/30/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000040	ND(0.000022)	0.00004	10.8
SL-WATER-MON-1	11/1/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	44.0
SL-WATER-MON-2	11/1/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000026	ND(0.000022)	0.000026	18.9
SL-WATER-MON-3	11/1/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	7.80
SL-WATER-MON-1	11/2/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	47.2
SL-WATER-MON-2	11/2/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000024	ND(0.000022)	0.000024	42.5
SL-WATER-MON-3	11/2/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	0.000035	ND(0.000022)	0.000035	11.4
SL-WATER-MON-1	11/3/2006	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	52.2
SL-WATER-MON-2	11/3/2006	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	25.2
SL-WATER-MON-3	11/3/2006	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	23.0
SL-WATER-MON-1	11/4/2006	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	43.9
SL-WATER-MON-2	11/4/2006	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	ND(0.000022) J	44.2
SL-WATER-MON-3	11/4/2006	ND(0.000023) J	ND(0.000023) J	ND(0.000023) J	ND(0.000023) J	ND(0.000023) J	ND(0.000023) J	ND(0.000023) J	ND(0.000023) J	29.7
SL-WATER-MON-1	11/7/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	29.3
SL-WATER-MON-2	11/7/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	26.9
SL-WATER-MON-3	11/7/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	8.11
SL-WATER-MON-1	11/10/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	44.3
SL-WATER-MON-2	11/10/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	23.6

TABLE 10
WATER QUALITY MONITORING ANALYTICAL DATA - PCB AND TSS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Sample ID	Date Collected	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Total PCBs	TSS
SL-WATER-MON-3	11/10/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	16.8
SL-WATER-MON-1	11/13/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	58.7
SL-WATER-MON-2	11/13/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	36.0
	11/13/2006	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[36.8]
SL-WATER-MON-3	11/13/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	15.0
SL-WATER-EPA-1	11/14/2006	ND(0.000066)	ND(0.000066)	ND(0.000066)	ND(0.000066)	0.00067	0.00076	0.00055	0.00131	109
SL-WATER-MON-2	11/14/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	29.4
SL-WATER-MON-3	11/14/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	16.6
SL-WATER-MON-1	11/15/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	70.0
SL-WATER-MON-2	11/15/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	30.0
SL-WATER-MON-3	11/15/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	11.0
SL-WATER-MON-1	11/16/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	100
	11/16/2006	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[108]
SL-WATER-MON-2	11/16/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	57.1
SL-WATER-MON-3	11/16/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	7.87
SL-WATER-MON-1	11/17/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	83.0
SL-WATER-MON-2	11/17/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	33.1
SL-WATER-MON-3	11/17/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	17.8
SL-WATER-MON-1	11/18/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	38.9
SL-WATER-MON-2	11/18/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	39.6
SL-WATER-MON-3	11/18/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	24.4
SL-WATER-MON-1	11/21/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	57.5
SL-WATER-MON-2	11/21/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	58.6
	11/21/2006	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[ND(0.000022)]	[61.3]
SL-WATER-MON-3	11/21/2006	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	ND(0.000022)	38.9

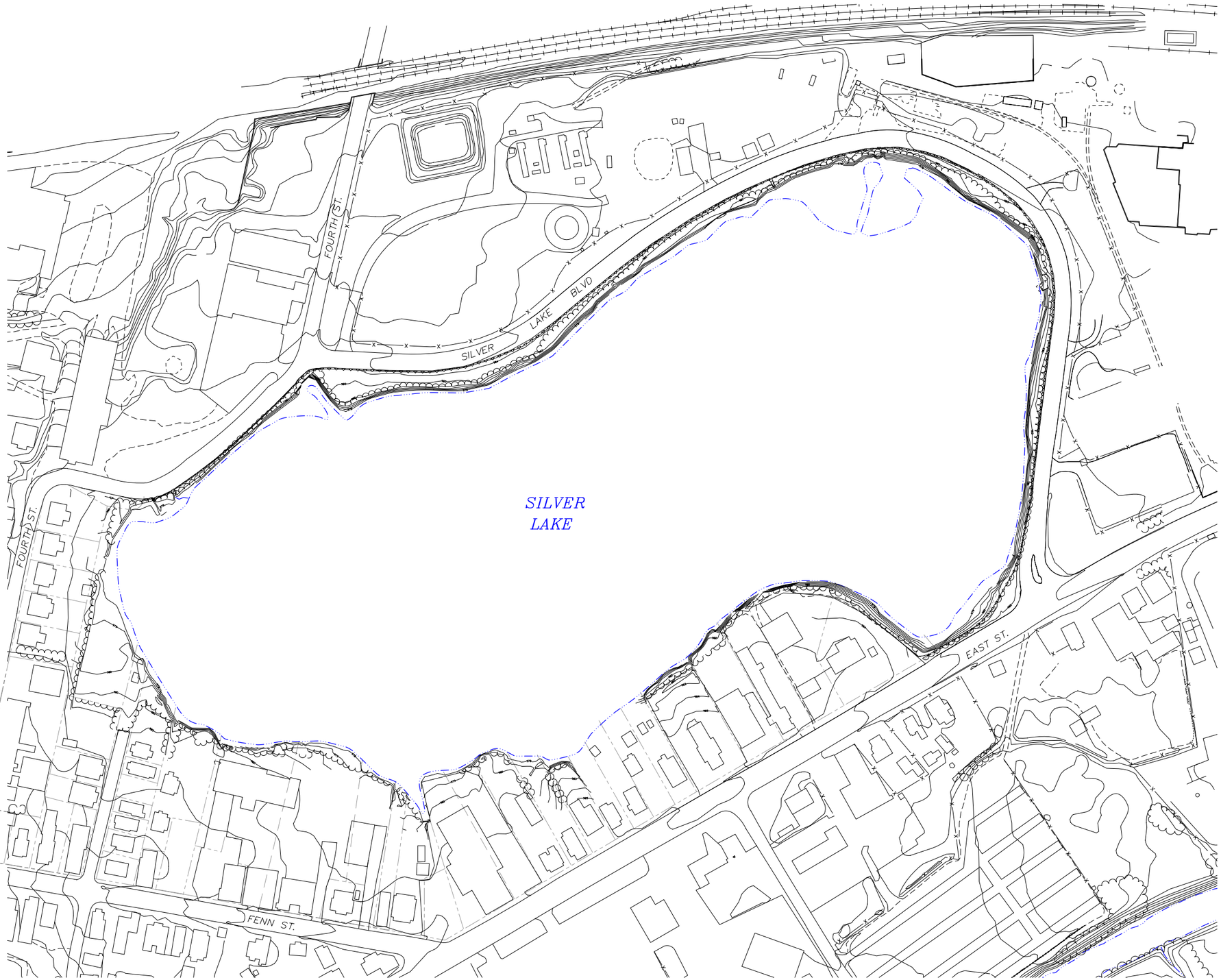
Notes:

1. Samples were collected by ARCADIS BBL, and submitted to Northeast Analytical, Inc. for analysis of PCBs and total suspended solids (TSS).
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (approved March 15, 2007 and re-submitted March 30, 2007).
3. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
4. Field duplicate sample results have been presented in brackets.

Data Qualifiers:

J - Indicates that the associated numerical value is an estimated concentration.

Figures



LEGEND:

- MEAN WATER ELEVATION (975.9) (APPROX.)
- RAILROAD
- VEGETATION
- PAVED ROADWAY
- FENCELINE
- ELEVATION CONTOUR
- PROPERTY BOUNDARY

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. – FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY, AND BLASLAND AND BOUCK ENGINEERS, P.C. CONSTRUCTION PLANS.
2. NOT ALL PHYSICAL FEATURES SHOWN.
3. ALL LOCATIONS ARE APPROXIMATE.

0 100' 200'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

SILVER LAKE SITE PLAN

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
1

SYR-85-LJP LAF GMS LAYER: ON=*, OFF=REF, [BOUNDARY*, [PROPERTY*, [ROAD_NAME
G:\CAD\GE-CAD\GE_ACTIVE\N\40152023\PSRS\S\40152G14.DWG SAVED:9/28/2007 9:36 AM LAYOUT:1 PAGESETUP:DL2B-PDF PENTABLE:PLTFULL.CTB PRINTED:9/28/2007 9:36 AM BY:GSTOWELL
PROJECTNAME:----
XREFS: IMAGES:
40152X03
40152X00

LEGEND:

- MEAN WATER ELEVATION (975.9) (APPROX.)
- RAILROAD
- VEGETATION
- PAVED ROADWAY
- FENCELINE
- PROPOSED SILT CURTAIN
- ELEVATION CONTOUR
- 950 SILVER LAKE ELEVATION CONTOUR
- PROPERTY BOUNDARY

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. – FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY, AND BLASLAND AND BOUCK ENGINEERS, P.C. CONSTRUCTION PLANS.
2. NOT ALL PHYSICAL FEATURES SHOWN.
3. SITE BOUNDARY IS APPROXIMATE.
4. ALL LOCATIONS ARE APPROXIMATE.
5. THE SILVER LAKE BATHYMETRIC CONTOUR INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY OCEAN SURVEYS, INC. ON 10–13 JUNE 2003 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME.

0 100' 200'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

GENERAL PILOT STUDY AREA

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
2

SYR-85-LAP LAF GMS LAYER: ON=*, OFF=REF, |BOUNDARY*, |PROPERTY*, |ROAD_NAME
G:\CAD\GE-CAD\GE_ACTIVE\VN_40152021\PILOT2\40152G10.DWG SAVED:9/28/2007 9:50 AM LAYOUT:Layout1 PAGESETUP:DL2B-PDF PENTABLE:PLTFULL.CTB PRINTED:9/28/2007 9:51 AM BY:GSTOWELL
PROJECTNAME:-----
XREFS:
40152X04
40152X03
IMAGES:
40152X02

FOURTH ST

LAKE

SILVER

BLVD

SILVER LAKE

ANCHOR PLATFORM (TYP.)

SPUD (TYP.)

ANCHOR CABLE (TYP.)

COMPOSITE GEOTEXTILE/ISOLATION LAYER TEST AREA

SHORELINE EROSION CONTROL

SLURRY BARGE

ISOLATION LAYER ONLY TEST AREA

NON-WOVEN GEOTEXTILE/ISOLATION LAYER TEST AREA

TRAVEL CABLE

FLEXIBLE FLOATING SLURRY PIPELINE

OUTLET TO EAST BRANCH OF THE HOUSATONIC RIVER

EAST STREET

ESTHER STREET

LEGEND:

- MEAN WATER ELEVATION (975.9) (APPROX.)
- VEGETATION
- PAVED ROADWAY
- FENCELINE
- SILT CURTAIN
- ELEVATION CONTOUR
- 950 SILVER LAKE ELEVATION CONTOUR
- PROPOSED GEOTEXTILE AREA OUTLINE
- NORTH STAGING AREA
- SOUTH STAGING AREA

NOTES:

1. BASE MAP AND BANK CONTOURS MODIFIED FROM ELECTRONIC FILE OF SURVEY PERFORMED BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, DRAWING NO. CX101, REV A, DATED 15 MARCH 2006. DUE TO SNOW COVER AT TIME OF SURVEY, ALL PHYSICAL FEATURES MAY NOT BE SHOWN.
2. THE SILVER LAKE BATHYMETRIC CONTOUR INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY OCEAN SURVEYS, INC. ON 10-13 JUNE 2003 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME.
3. NOT ALL PHYSICAL FEATURES SHOWN.
4. ALL LOCATIONS ARE APPROXIMATE.
5. PILOT STUDY IMPLEMENTATION FACILITIES AND FEATURES NOT DRAWN TO SCALE.

0 80' 160'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

ILLUSTRATION OF PILOT STUDY AND STUDY LOCATIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
3

SYR-85-JHR LAF GMS LAYER: ON=*; OFF=REF, |BOUNDARY
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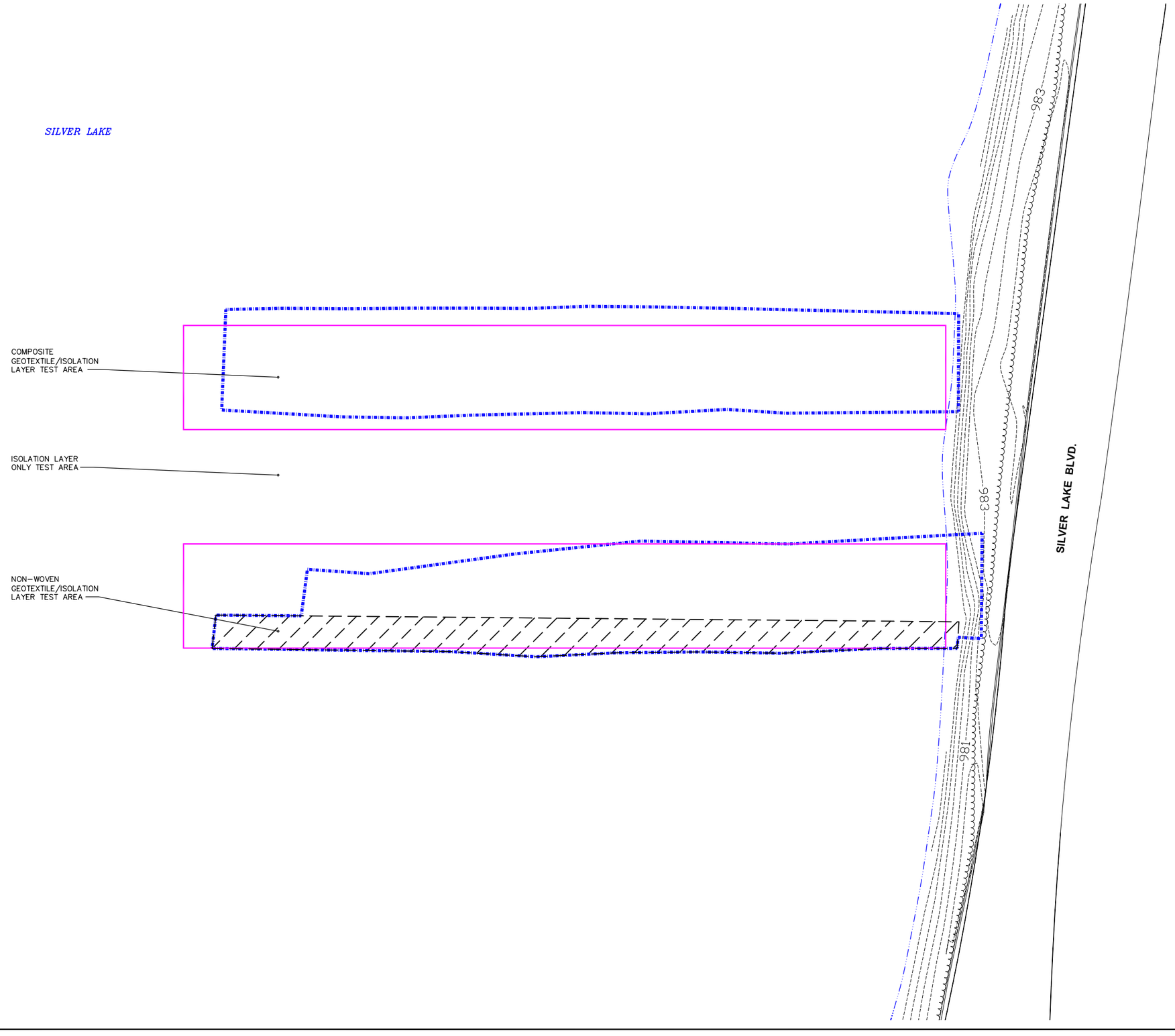

NOTES:

1. BASE MAP AND BANK CONTOURS MODIFIED FROM ELECTRONIC FILE OF SURVEY PERFORMED BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, DRAWING NO. CX101, REV A, DATED 15 MARCH 2006. DUE TO SNOW COVER AT TIME OF SURVEY, ALL PHYSICAL FEATURES MAY NOT BE SHOWN.
2. PROPOSED PILOT STUDY TEST AREA SHOWN AS ILLUSTRATED IN PILOT STUDY WORK PLAN (REVISED 16 AUGUST 2006).
3. ACTUAL GEOTEXTILE LOCATIONS PRESENTED ON THIS FIGURE ARE BASED ON SURVEYS CONDUCTED FROM 11-17 OCTOBER 2006 BY HILL ENGINEERS, ARCHITECTS AND PLANNERS.
4. NOT ALL PHYSICAL FEATURES SHOWN.
5. ALL LOCATIONS ARE APPROXIMATE.

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

GEOSYNTHETIC LAYER LOCATIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
4

SYR-85-LLP BGP GMS LAYER: ON=*; OFF=*REF
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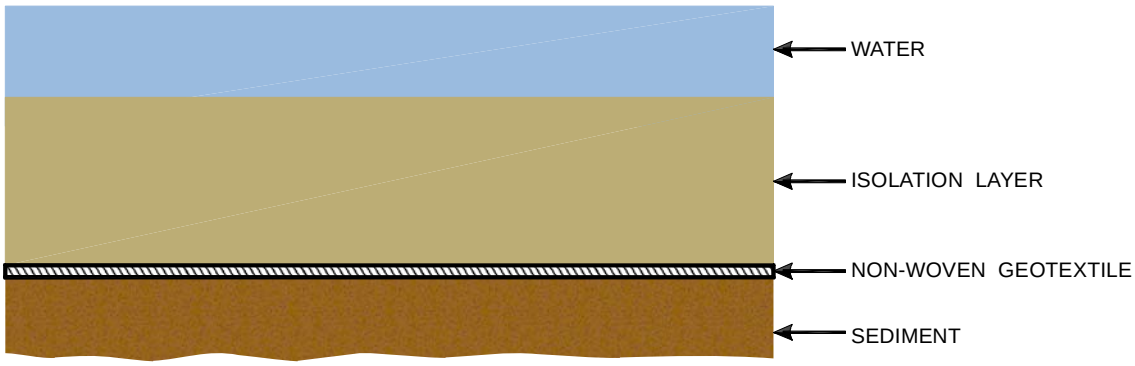
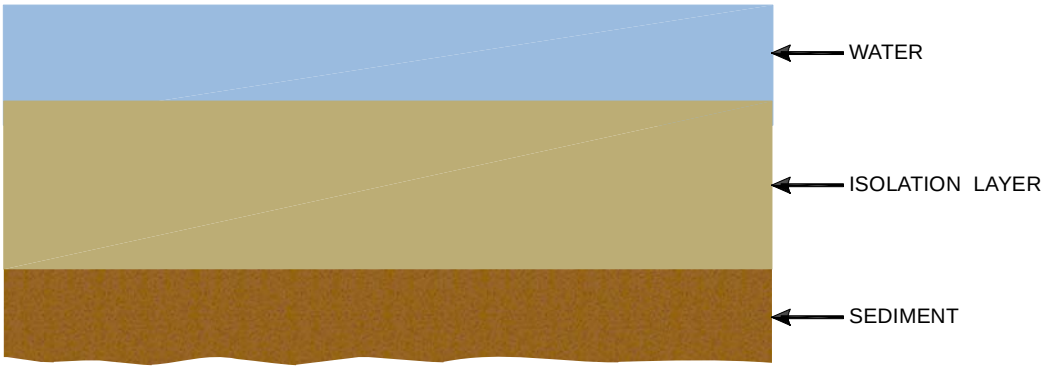
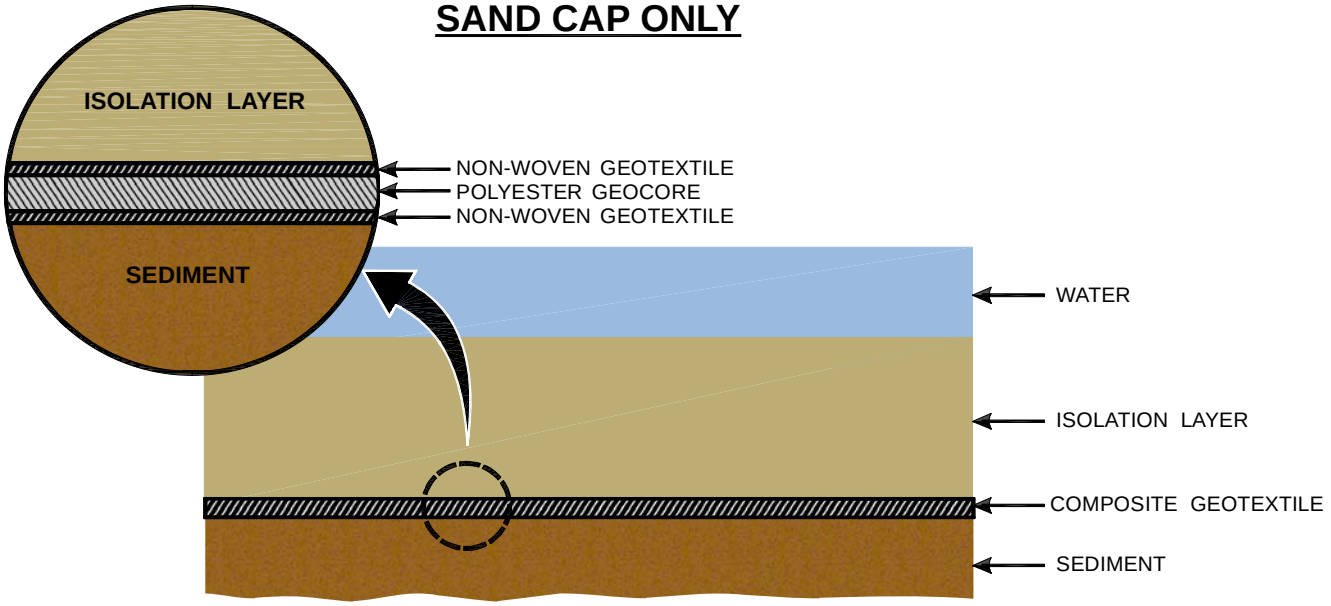


GEOTEXTILE AND SAND CAP



SAND CAP ONLY



GEOCOMPOSITE AND SAND CAP

NOT-TO-SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PILOT STUDY REPORT -
SILVER LAKE SEDIMENTS

TYPICAL CAP CROSS-SECTIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 5

09/28/07 SYR-D85-DJH, KLS
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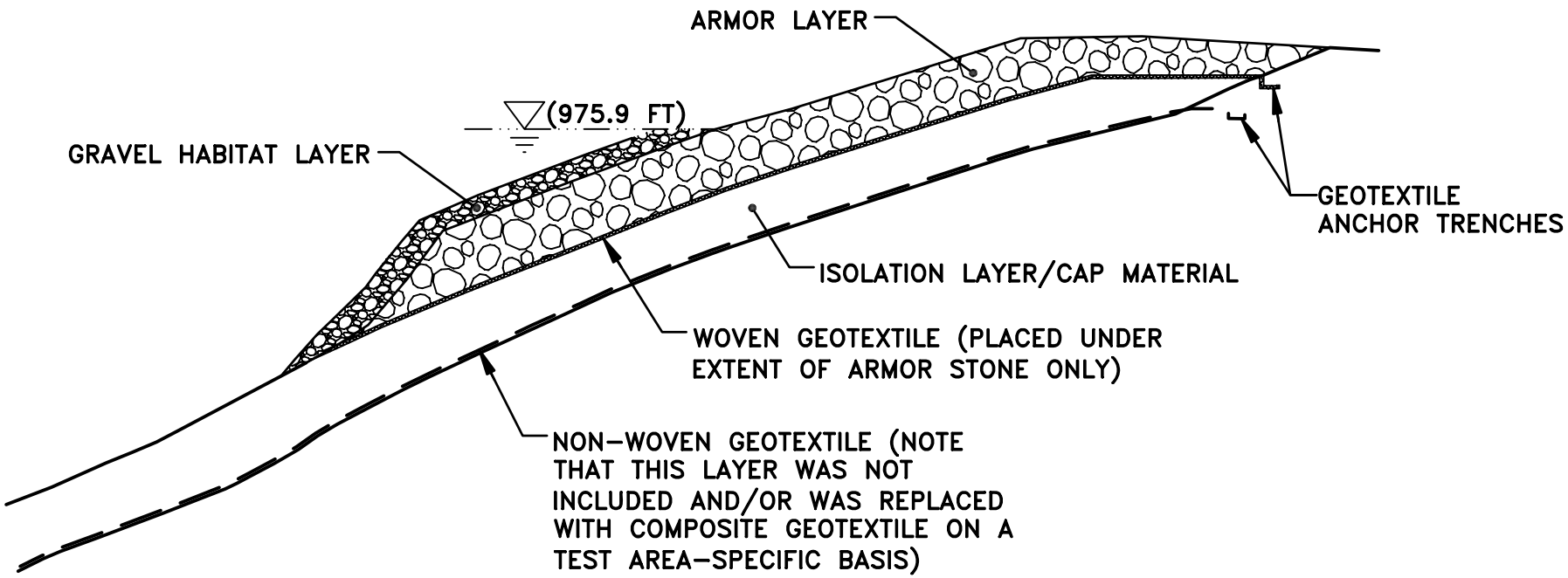


TYPICAL ARMOR LAYER CONFIGURATION

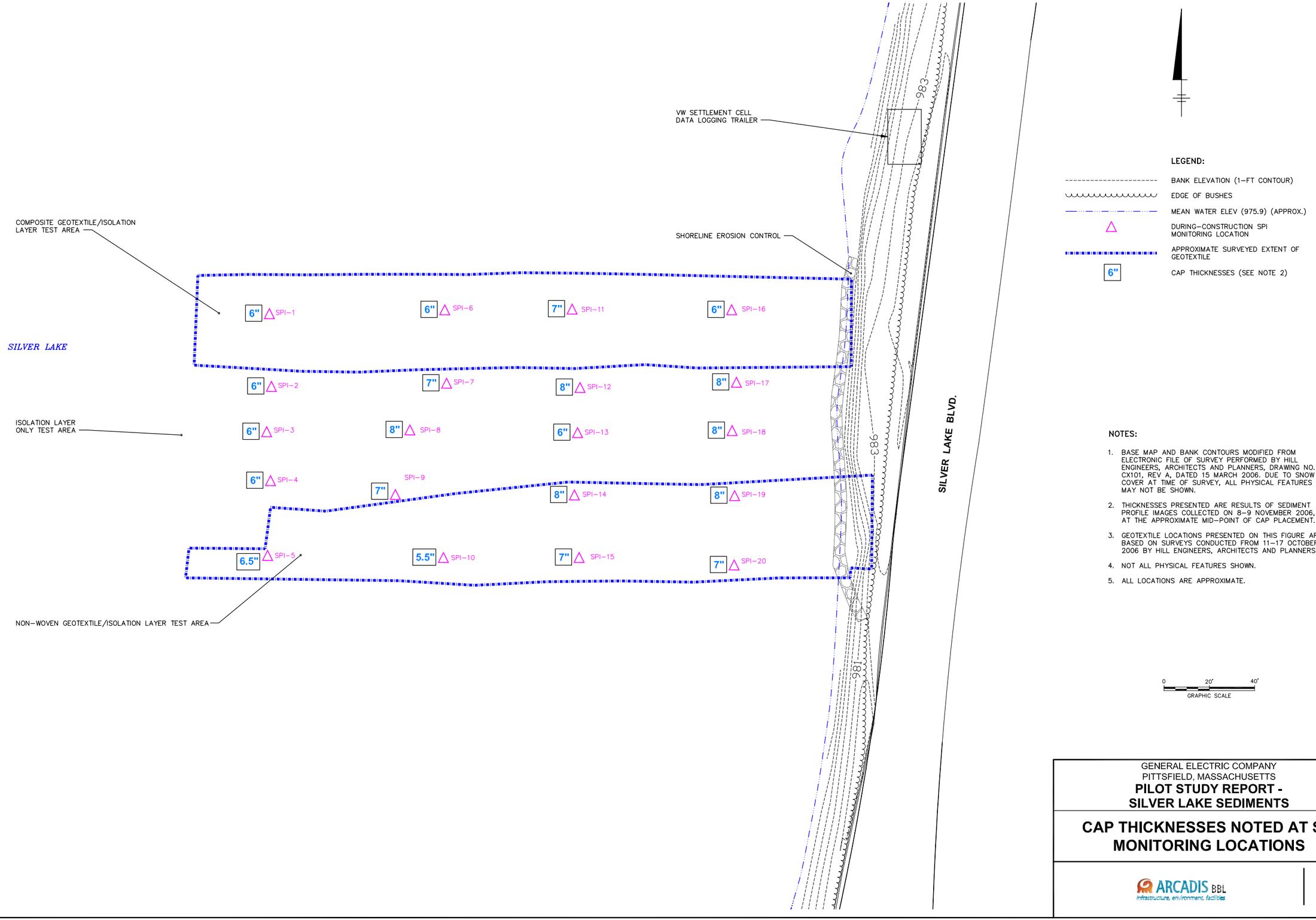
NOT TO SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

TYPICAL ARMOR LAYER CONFIGURATION

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
6



GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

CAP THICKNESSES NOTED AT SPI MONITORING LOCATIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
7

SYR-85-BGP LAF GMS LAYER: ON=*; OFF=*REF
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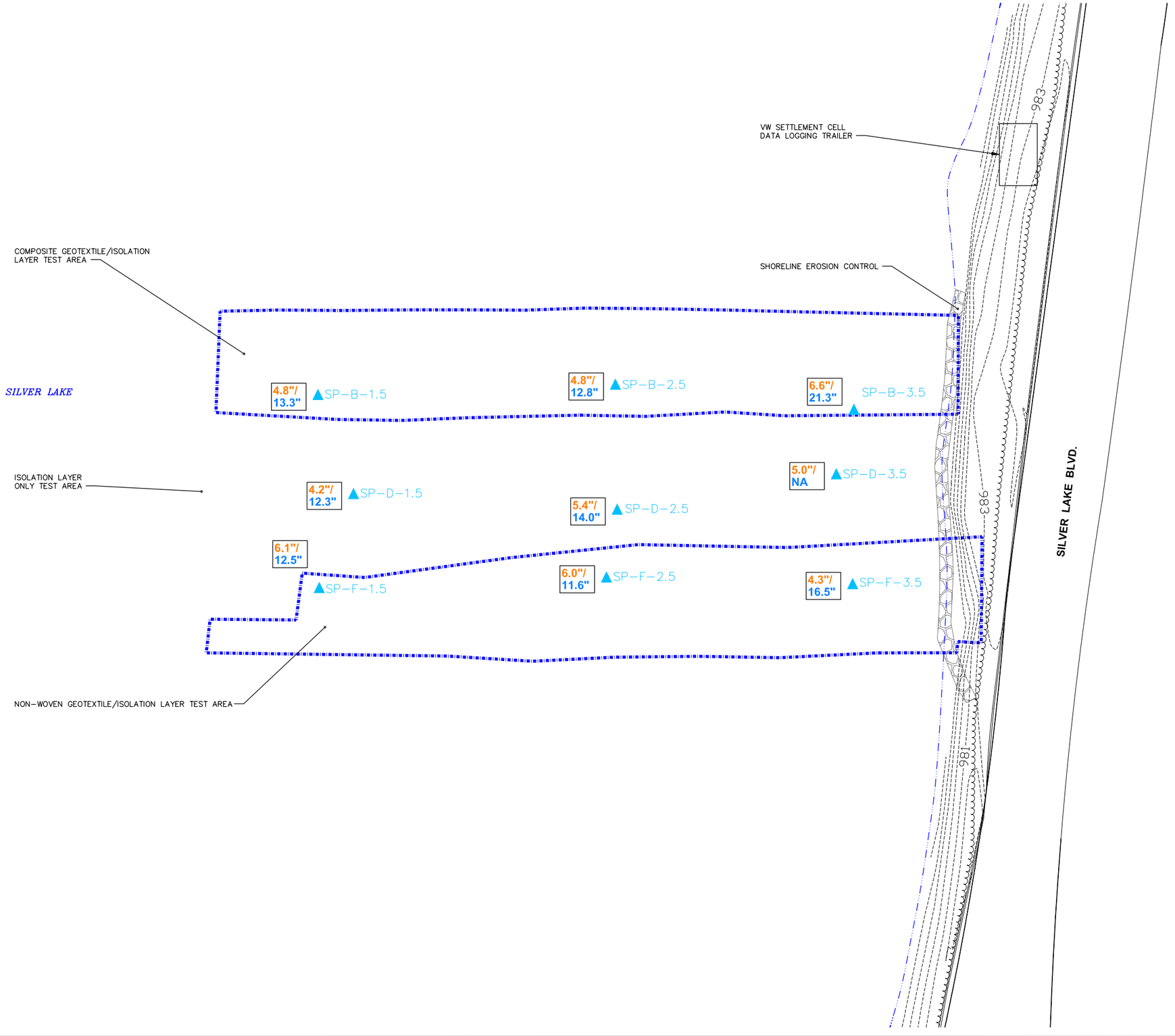

LEGEND:

- BANK ELEVATION (1-FT CONTOUR)
- EDGE OF BUSHES
- MEAN WATER ELEV (975.9) (APPROX.)
- APPROXIMATE PHYSICAL SURVEY PLATE LOCATION
- APPROXIMATE SURVEYED EXTENT OF GEOTEXTILE
- 6.6"/ 21.3" — CAP THICKNESSES (SEE NOTE 3)

NOTES:

1. BASE MAP AND BANK CONTOURS MODIFIED FROM ELECTRONIC FILE OF SURVEY PERFORMED BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, DRAWING NO. CX101, REV A, DATED 15 MARCH 2006. DUE TO SNOW COVER AT TIME OF SURVEY, ALL PHYSICAL FEATURES MAY NOT BE SHOWN.
2. PHYSICAL SURVEY PLATE LOCATIONS BASED ON SURVEY PERFORMED BY ARCADIS BBL IN THE NORTH AMERICAN DATUM OF 1927, MASSACHUSETTS MAINLAND ZONE. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
3. THICKNESSES PRESENTED ARE FROM PROBING RESULTS DURING SURVEY ACTIVITIES ON 8 NOVEMBER 2006 AT THE APPROXIMATE MID-POINT OF CAP PLACEMENT (ORANGE) AND 27 NOVEMBER 2006 FOLLOWING COMPLETION OF CAP PLACEMENT (BLUE).
4. GEOTEXTILE LOCATIONS PRESENTED ON THIS FIGURE ARE BASED ON SURVEYS CONDUCTED FROM 11-17 OCTOBER 2006 BY HILL ENGINEERS, ARCHITECTS AND PLANNERS.
5. NOT ALL PHYSICAL FEATURES SHOWN.
6. ALL LOCATIONS ARE APPROXIMATE.

0 20' 40'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
**PILOT STUDY REPORT -
SILVER LAKE SEDIMENTS**

CAP THICKNESSES NOTED AT PHYSICAL SURVEY PLATE LOCATIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
8

SYR-85-BGP LAF GMS LAYER: ON=*, OFF=*REF
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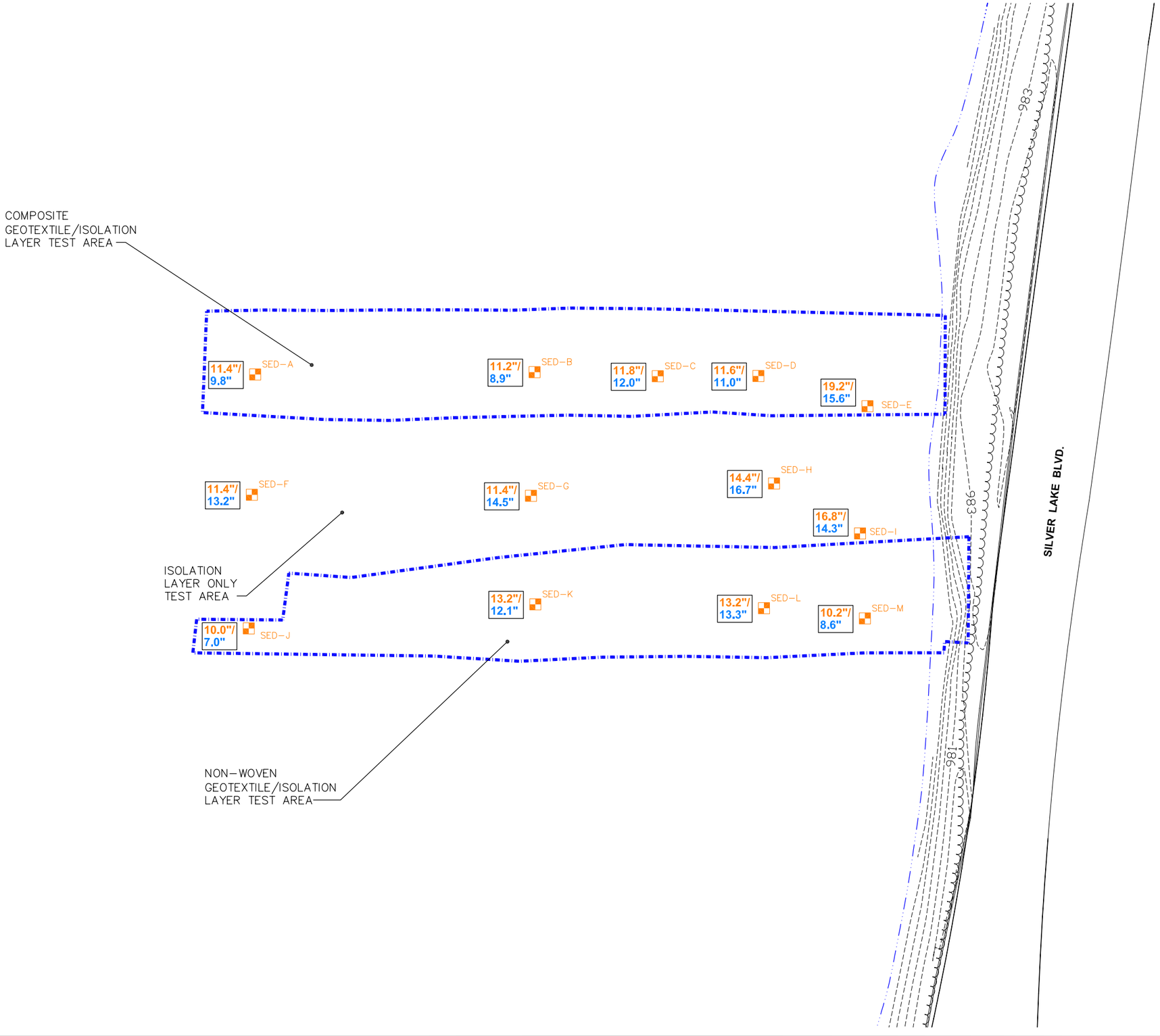

LEGEND:

- BANK ELEVATION (1-FT CONTOUR)
- EDGE OF BUSHES
- MEAN WATER ELEV (975.9) (APPROX.)
- APPROXIMATE SURVEYED EXTENT OF GEOTEXTILE
- SED-A — ISOLATION LAYER MATERIAL COLLECTION LOCATION
- 19.2"/ 15.6" — CAP THICKNESSES (SEE NOTE 2)

NOTES:

1. BASE MAP AND BANK CONTOURS MODIFIED FROM ELECTRONIC FILE OF SURVEY PERFORMED BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, DRAWING NO. CX101, REV A, DATED 15 MARCH 2006. DUE TO SNOW COVER AT TIME OF SURVEY, ALL PHYSICAL FEATURES MAY NOT BE SHOWN.
2. THICKNESSES PRESENTED ARE FROM PROBING RESULTS DURING CORE COLLECTION ACTIVITIES PERFORMED FOLLOWING COMPLETION OF CAP PLACEMENT ON 27 DECEMBER 2006 (ORANGE) AND 12 JUNE 2007 (BLUE).
3. GEOTEXTILE LOCATIONS PRESENTED ON THIS FIGURE ARE BASED ON SURVEYS CONDUCTED FROM 11-17 OCTOBER 2006 BY HILL ENGINEERS, ARCHITECTS AND PLANNERS.
4. NOT ALL PHYSICAL FEATURES SHOWN.
5. ALL LOCATIONS ARE APPROXIMATE.

0 20' 40'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

CAP THICKNESSES NOTED AT ISOLATION LAYER MATERIAL COLLECTION LOCATIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
9

SYR-85-LJP GMS LAF LAYER: ON=*; OFF=*REF
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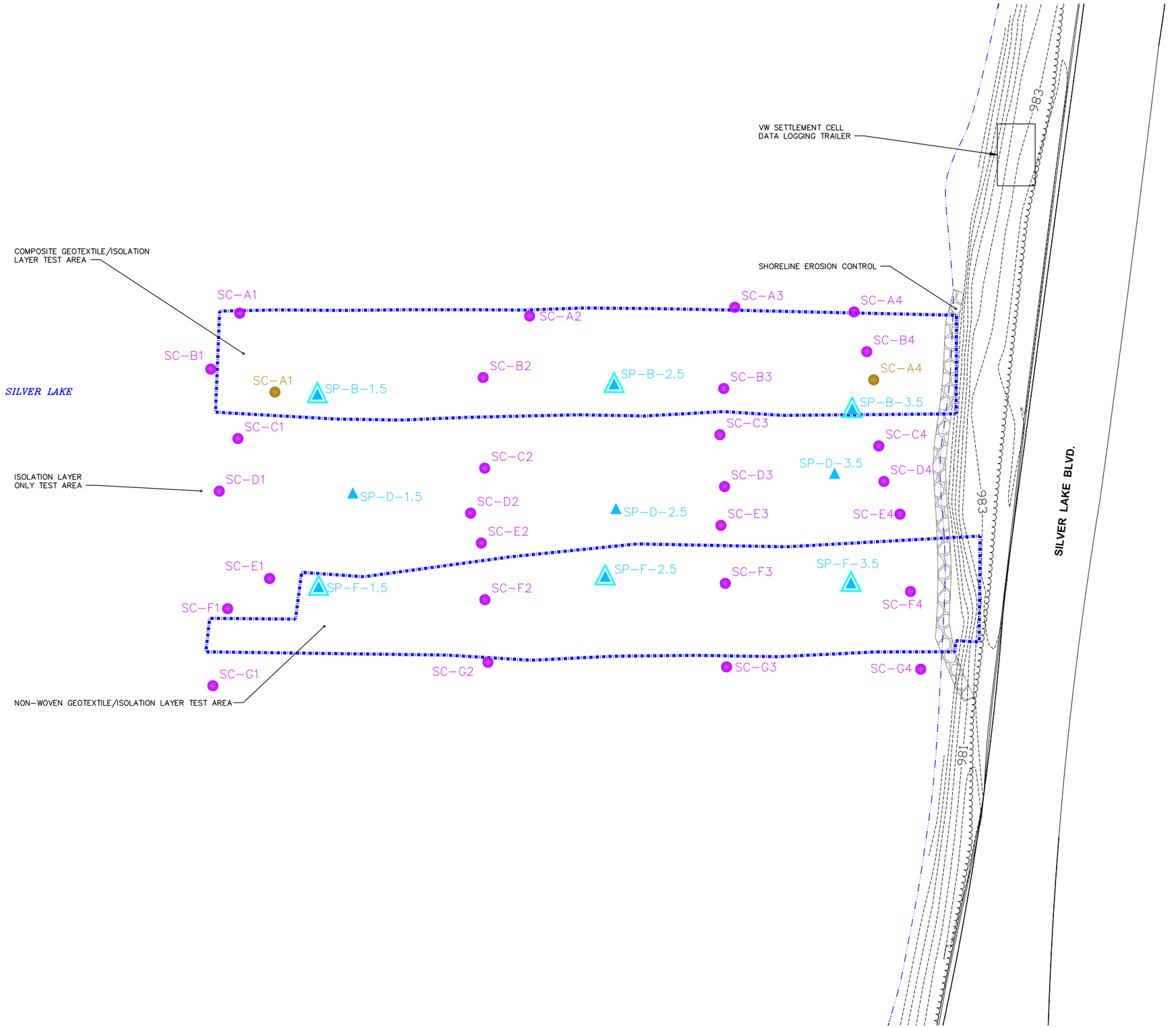

LEGEND:

- BANK ELEVATION (1-FT CONTOUR)
- EDGE OF BUSHES
- MEAN WATER ELEV (975.9) (APPROX.)
- APPROXIMATE VW SETTLEMENT CELL LOCATION
- 7 DECEMBER 2006 SETTLEMENT CELL LOCATION
- APPROXIMATE PHYSICAL SURVEY PLATE LOCATION
- APPROXIMATE SURVEYED EXTENT OF GEOTEXTILE
- LOCATION OF DURING-CONSTRUCTION ISOLATION LAYER CORE COLLECTION

NOTES:

1. BASE MAP AND BANK CONTOURS MODIFIED FROM ELECTRONIC FILE OF SURVEY PERFORMED BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, DRAWING NO. CX101, REV A, DATED 15 MARCH 2006. DUE TO SNOW COVER AT TIME OF SURVEY, ALL PHYSICAL FEATURES MAY NOT BE SHOWN.
2. VIBRATING WIRE SETTLEMENT CELL AND PHYSICAL SURVEY PLATE LOCATIONS BASED ON SURVEY PERFORMED BY ARCADIS BBL IN THE NORTH AMERICAN DATUM OF 1927, MASSACHUSETTS MAINLAND ZONE. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
3. GEOTEXTILE LOCATIONS PRESENTED ON THIS FIGURE ARE BASED ON SURVEYS CONDUCTED FROM 11-17 OCTOBER 2006 BY HILL ENGINEERS, ARCHITECTS AND PLANNERS.
4. NOT ALL PHYSICAL FEATURES SHOWN.
5. ALL LOCATIONS ARE APPROXIMATE.

0 20' 40'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

**PILOT STUDY REPORT -
SILVER LAKE SEDIMENTS**

PHYSICAL SURVEY PLATE AND VW SETTLEMENT CELL LOCATIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
10

SYR-85-SDL BGP GMS LAYER: ON=*; OFF=*REF
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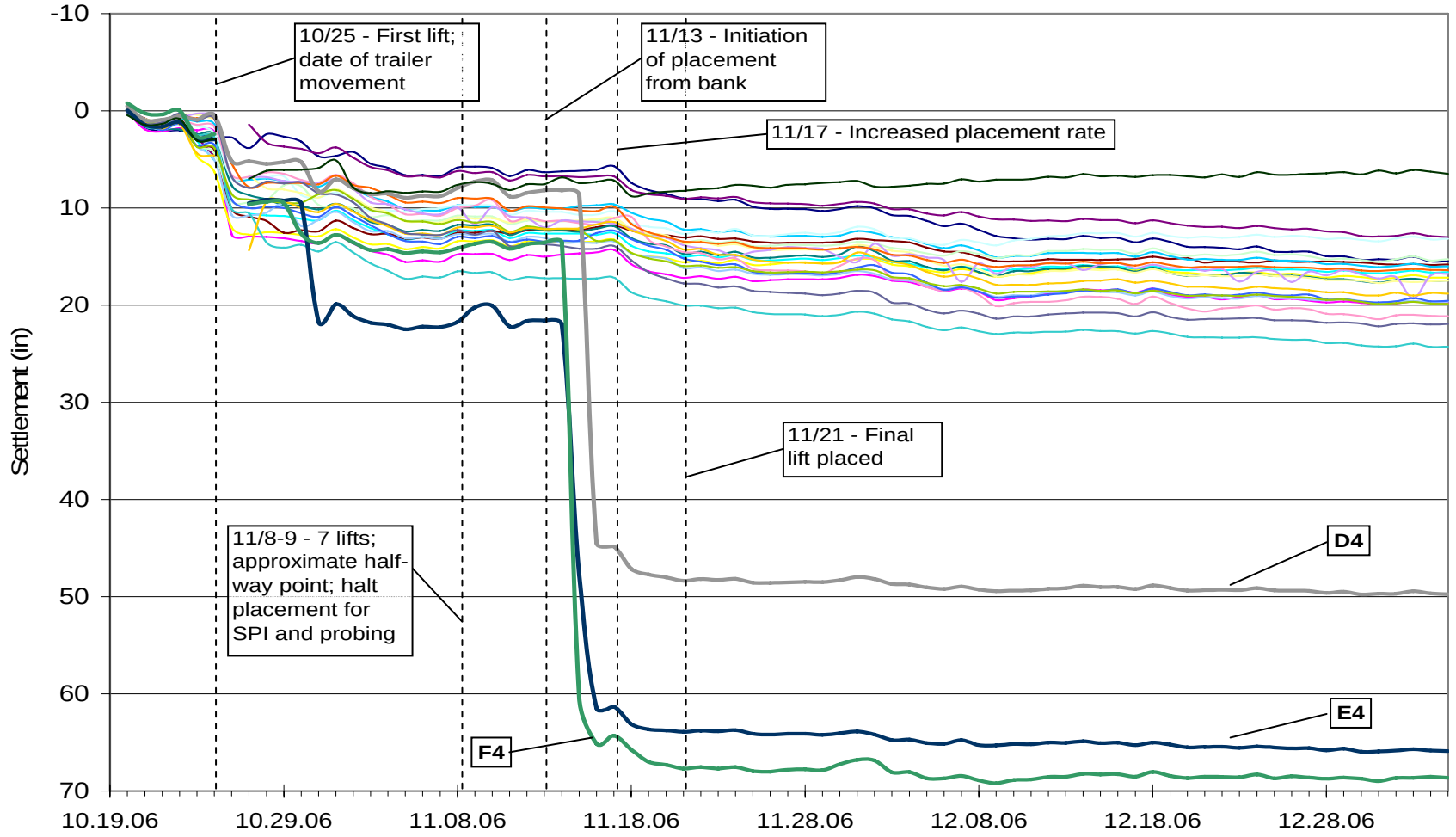


NOTES:

1. TIME SERIES PLOT REPRESENTS ESTIMATED SEDIMENT SETTLEMENT BASED ON VIBRATING WIRE SETTLEMENT CELL DATA.

2. CERTAIN CELLS (E.G., A1, A4, B2, C3, and G4) EXHIBITED ERRATIC BEHAVIOR, AND REPORTED DATA WERE NOT INCLUDED IN OVERALL ASSESSMENT OF SETTLEMENT.

GENERAL ELECTRIC COMPANY

PITTSFIELD, MASSACHUSETTS

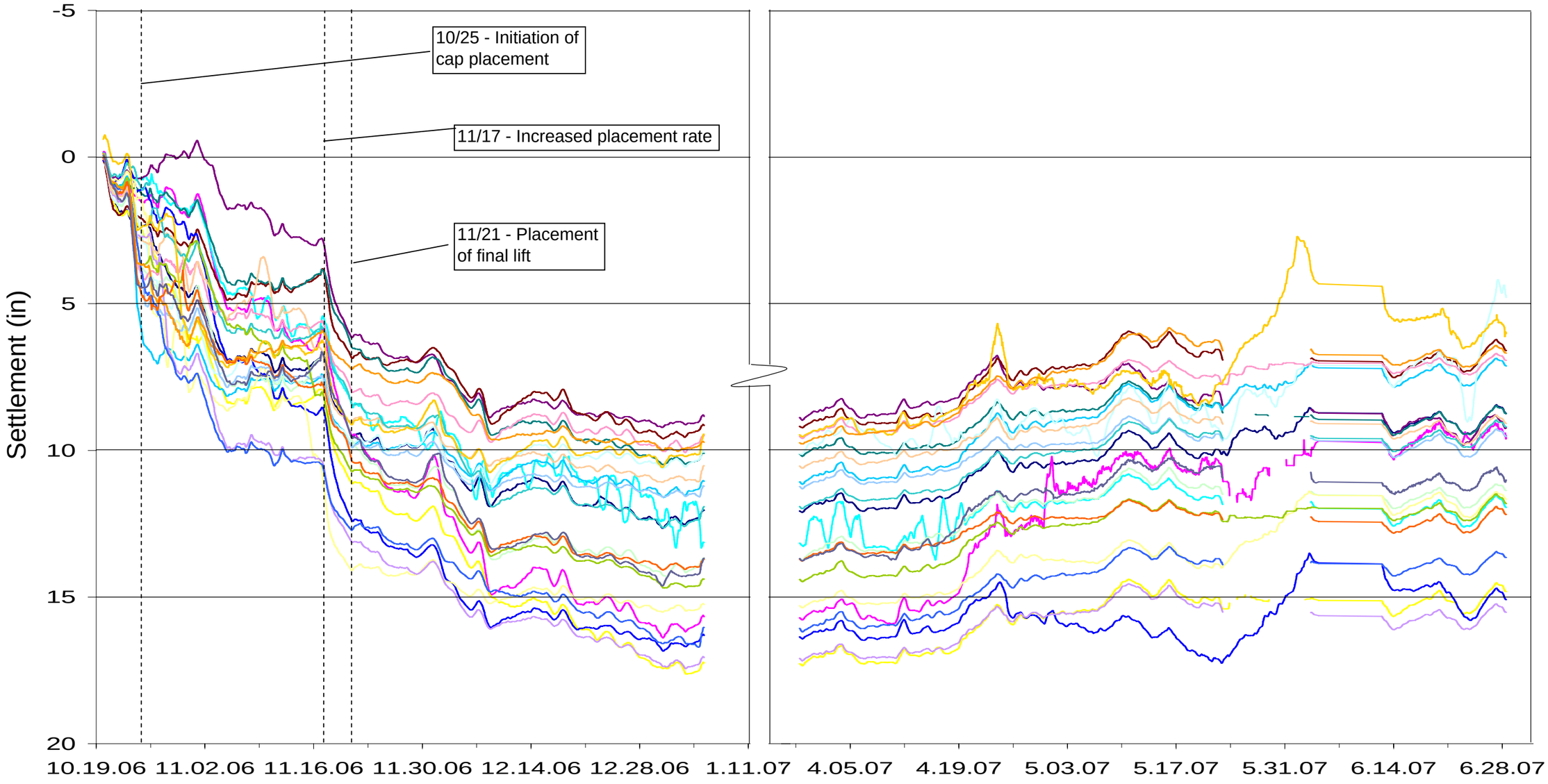
PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

VW SETTLEMENT TIME SERIES - 2006

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE

11



NOTES:

1. GRAPH REPRESENTS ESTIMATED AVERAGE SETTLEMENT ACROSS ENTIRE PILOT STUDY AREA BASED ON ADJUSTED/SMOOTHED VW SETTLEMENT CELL DATA.
2. DATA BETWEEN JANUARY 5 AND MARCH 28, 2007 WAS IRRETRIEVABLE. CHART HAS BEEN MODIFIED FOR CLARITY.
3. DATA BETWEEN MAY 23 AND JUNE 14, 2007 WAS NOT RETRIEVED FOR CERTAIN CELLS DUE TO DIMINISHED BATTERY STRENGTH.

GENERAL ELECTRIC COMPANY

PITTSFIELD, MASSACHUSETTS

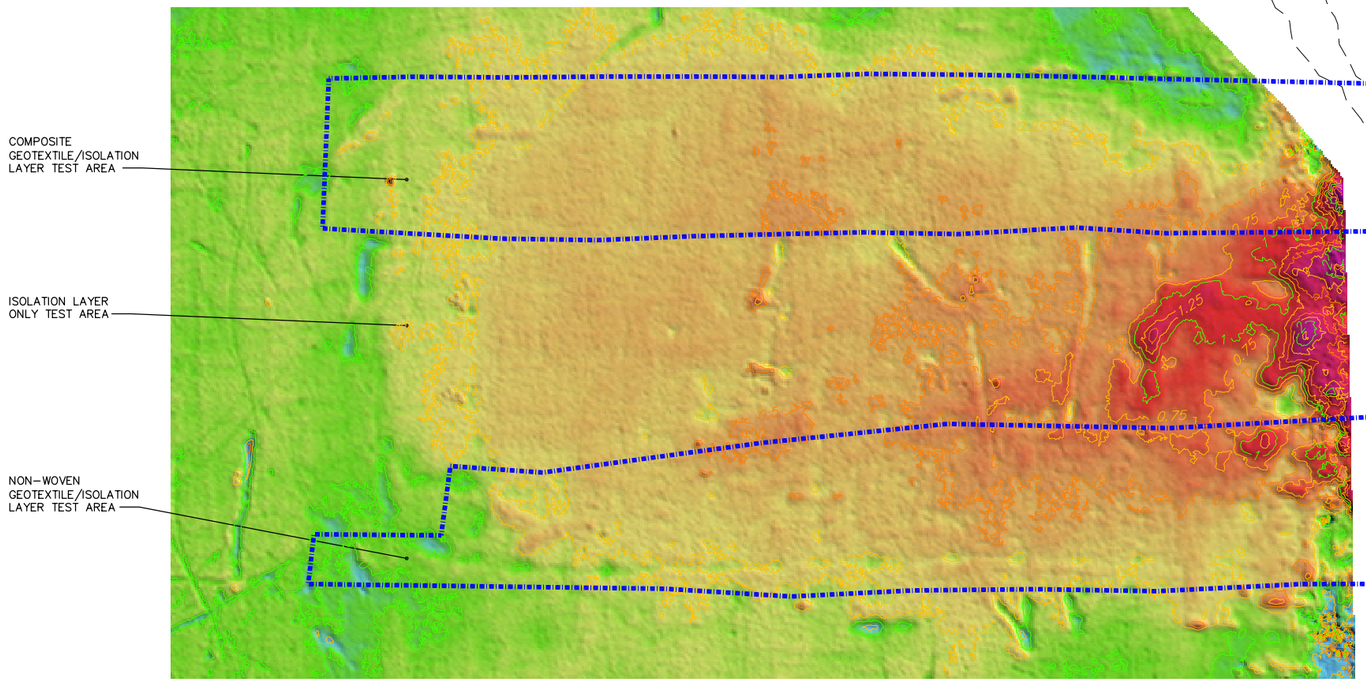
PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

ESTIMATED TOTAL VW SETTLEMENT

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE

12



LEGEND:

- BANK ELEVATION (1-FT CONTOUR)
- INTERPOLATED ELEVATION CONTOUR
- EDGE OF BUSHES
- MEAN WATER ELEVATION (975.9) (APPROX.)
- 1-FT ELEVATION DIFFERENCE CONTOUR
- 0.5-FT ELEVATION DIFFERENCE CONTOUR
- 0.25-FT ELEVATION DIFFERENCE CONTOUR
- APPROXIMATE SURVEYED EXTENT OF GEOTEXTILE

ELEVATION DIFFERENCE (FEET)

−2 −1 0 1 2 3

NOTES:

1. BASE MAP AND BANK CONTOURS MODIFIED FROM ELECTRONIC FILE OF SURVEY PERFORMED BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, DRAWING NO. CX101, REV A, DATED 15 MARCH 2006. DUE TO SNOW COVER AT TIME OF SURVEY, ALL PHYSICAL FEATURES MAY NOT BE SHOWN.
2. GEOTEXTILE LOCATIONS PRESENTED ON THIS FIGURE ARE BASED ON SURVEYS CONDUCTED FROM 11–17 OCTOBER 2006 BY HILL ENGINEERS, ARCHITECTS AND PLANNERS.
3. BATHYMETRIC CONTOUR INFORMATION PRESENTED ON THIS FIGURE REPRESENTS THE RESULTS OF SURVEYS PERFORMED BY OCEAN SURVEYS, INC. ON 8–10 SEPTEMBER 2006 AND 6 DECEMBER 2006. ASSOCIATED DATA COLLECTED USING A RESON SEABAT 8125 ULTRAHIGH RESOLUTION MULTIBEAM ECHOSOUNDER. CONTOURS ILLUSTRATED REPRESENT OSI'S INTERPRETATION OF SURVEY DATA.
4. THE ELEVATION DIFFERENCE VALUES ARE EQUAL TO THE ELEVATION OF THE DECEMBER 2006 BATHYMETRY MINUS THE ELEVATION OF THE SEPTEMBER 2006 BATHYMETRY.
5. INTERPOLATED CONTOURS REPRESENT ESTIMATED ELEVATIONS BASED ON OSI AND HILL SURVEYS.
6. NOT ALL PHYSICAL FEATURES SHOWN.
7. ALL LOCATIONS ARE APPROXIMATE.

0 20' 40'

GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

PRE-CONSTRUCTION VS. IMMEDIATE POST-CONSTRUCTION BATHYMETRY DIFFERENCE MAP

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
13

SYR-85-LJP BGP GMS LAYER: ON=*; OFF=*REF
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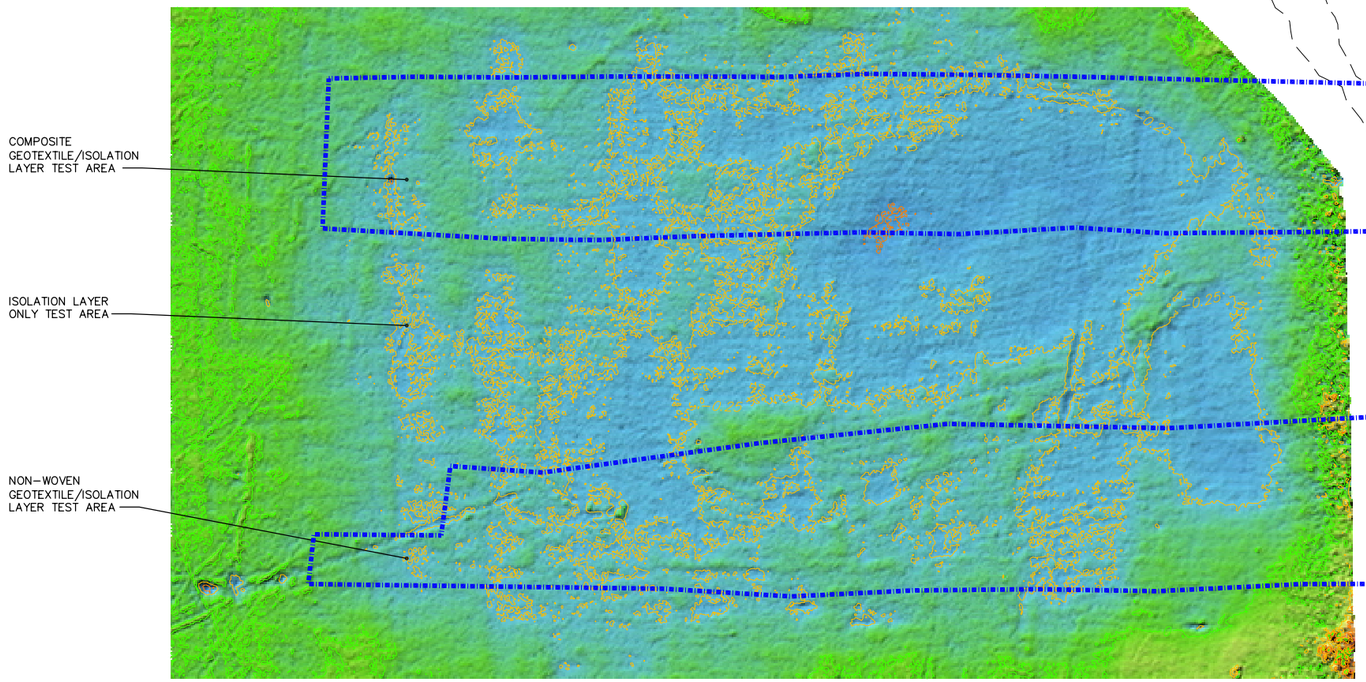

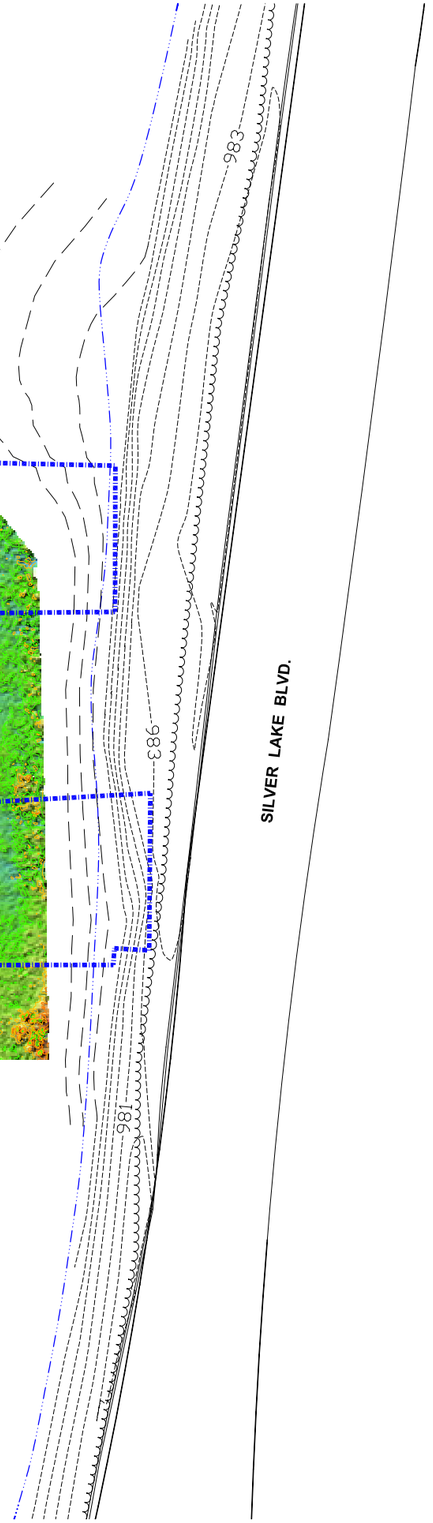

LEGEND:

- BANK ELEVATION (1-FT CONTOUR)
- INTERPOLATED ELEVATION CONTOUR
- EDGE OF BUSHES
- MEAN WATER ELEVATION (975.9) (APPROX.)
- 1-FT ELEVATION DIFFERENCE CONTOUR
- 0.5-FT ELEVATION DIFFERENCE CONTOUR
- 0.25-FT ELEVATION DIFFERENCE CONTOUR
- APPROXIMATE SURVEYED EXTENT OF GEOTEXTILE

ELEVATION DIFFERENCE (FEET)

−2 −1 0 1 2 3

NOTES:

1. BASE MAP AND BANK CONTOURS MODIFIED FROM ELECTRONIC FILE OF SURVEY PERFORMED BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, DRAWING NO. CX101, REV A, DATED 15 MARCH 2006. DUE TO SNOW COVER AT TIME OF SURVEY, ALL PHYSICAL FEATURES MAY NOT BE SHOWN.
2. GEOTEXTILE LOCATIONS PRESENTED ON THIS FIGURE ARE BASED ON SURVEYS CONDUCTED FROM 11-17 OCTOBER 2006 BY HILL ENGINEERS, ARCHITECTS AND PLANNERS.
3. BATHYMETRIC CONTOUR INFORMATION PRESENTED ON THIS FIGURE REPRESENTS THE RESULTS OF SURVEYS PERFORMED BY OCEAN SURVEYS, INC. ON 6 DECEMBER 2006 AND 30-31 MAY 2007. ASSOCIATED DATA COLLECTED USING A RESON SEABAT 8125 ULTRAHIGH RESOLUTION MULTIBEAM ECHOSOUNDER. CONTOURS ILLUSTRATED REPRESENT OSI'S INTERPRETATION OF SURVEY DATA.
4. THE ELEVATION DIFFERENCE VALUES ARE EQUAL TO THE ELEVATION OF THE MAY 2007 BATHYMETRY MINUS THE ELEVATION OF THE DECEMBER 2006 BATHYMETRY.
5. INTERPOLATED CONTOURS REPRESENT ESTIMATED ELEVATIONS BASED ON OSI AND HILL SURVEYS.
6. NOT ALL PHYSICAL FEATURES SHOWN.
7. ALL LOCATIONS ARE APPROXIMATE.

0 20' 40'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

IMMEDIATE POST-CONSTRUCTION VS. 6-MONTH POST-CONSTRUCTION BATHYMETRY DIFFERENCE MAP

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
14

SYR-85-LJP BGP GMS LAYER: ON=*; OFF=*REF
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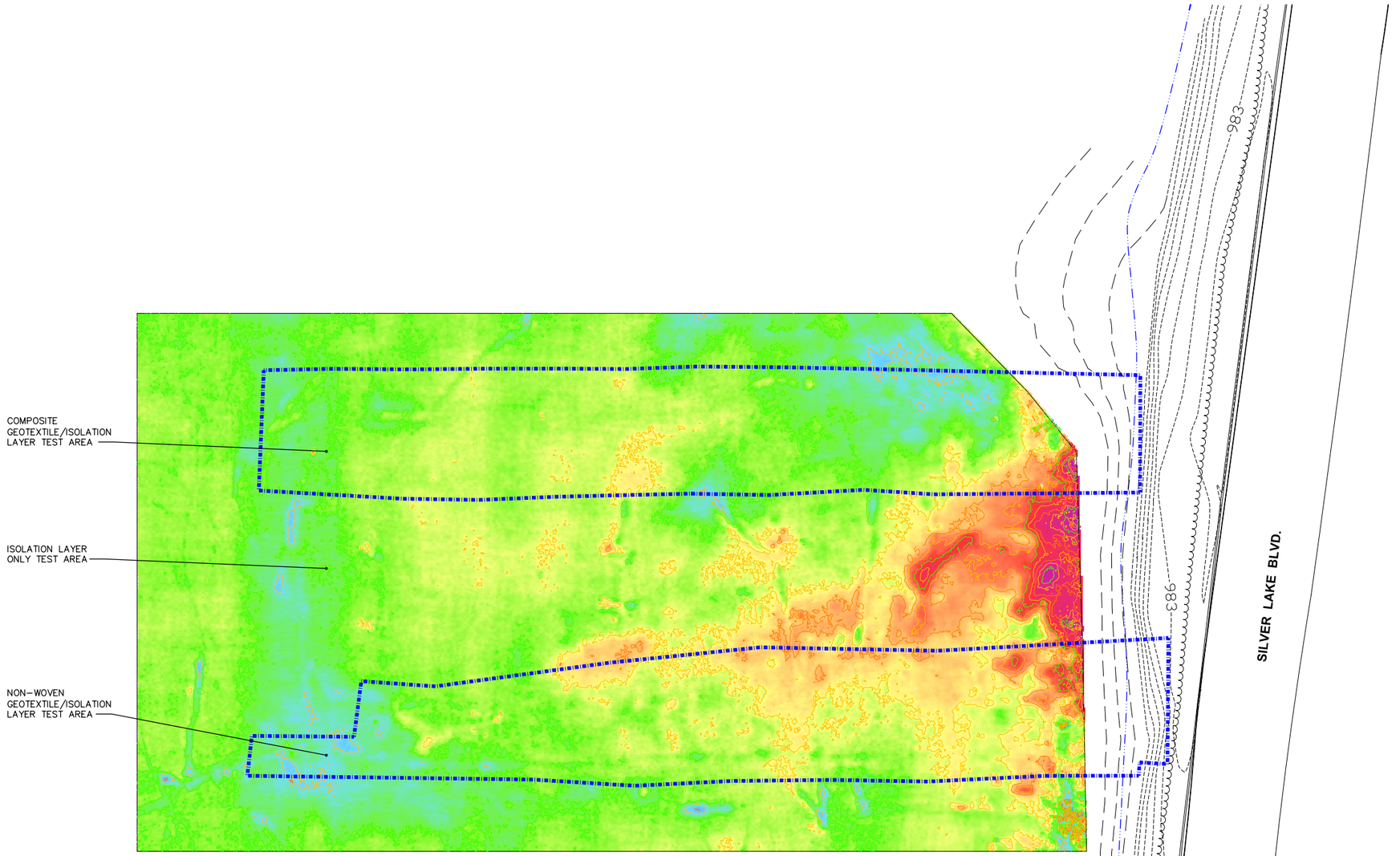

LEGEND:

- BANK ELEVATION (1-FT CONTOUR)
- INTERPOLATED ELEVATION CONTOUR
- EDGE OF BUSHES
- MEAN WATER ELEVATION (975.9) (APPROX.)
- 1-FT ELEVATION DIFFERENCE CONTOUR
- 0.5-FT ELEVATION DIFFERENCE CONTOUR
- 0.25-FT ELEVATION DIFFERENCE CONTOUR
- APPROXIMATE SURVEYED EXTENT OF GEOTEXTILE

ELEVATION DIFFERENCE (FEET)

−2 −1 0 1 2 3

NOTES:

1. BASE MAP AND BANK CONTOURS MODIFIED FROM ELECTRONIC FILE OF SURVEY PERFORMED BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, DRAWING NO. CX101, REV A, DATED 15 MARCH 2006. DUE TO SNOW COVER AT TIME OF SURVEY, ALL PHYSICAL FEATURES MAY NOT BE SHOWN.
2. GEOTEXTILE LOCATIONS PRESENTED ON THIS FIGURE ARE BASED ON SURVEYS CONDUCTED FROM 11-17 OCTOBER 2006 BY HILL ENGINEERS, ARCHITECTS AND PLANNERS.
3. BATHYMETRIC CONTOUR INFORMATION PRESENTED ON THIS FIGURE REPRESENTS THE RESULTS OF SURVEYS PERFORMED BY OCEAN SURVEYS, INC. ON 8-10 SEPTEMBER 2006 AND 30-31 MAY 2007. ASSOCIATED DATA COLLECTED USING A RESON SEABAT 8125 ULTRAHIGH RESOLUTION MULTIBEAM ECHOSOUNDER. CONTOURS ILLUSTRATED REPRESENT OSI'S INTERPRETATION OF SURVEY DATA.
4. THE ELEVATION DIFFERENCE VALUES ARE EQUAL TO THE ELEVATION OF THE MAY 2007 BATHYMETRY MINUS THE ELEVATION OF THE SEPTEMBER 2006 BATHYMETRY.
5. INTERPOLATED CONTOURS REPRESENT ESTIMATED ELEVATIONS BASED ON OSI AND HILL SURVEYS.
6. NOT ALL PHYSICAL FEATURES SHOWN.
7. ALL LOCATIONS ARE APPROXIMATE.

0 20' 40'

GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

PRE-CONSTRUCTION VS. 6-MONTH POST-CONSTRUCTION BATHYMETRY DIFFERENCE MAP

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
15

SYR-85-LJP BGP GMS LAYER: ON=*; OFF=*REF
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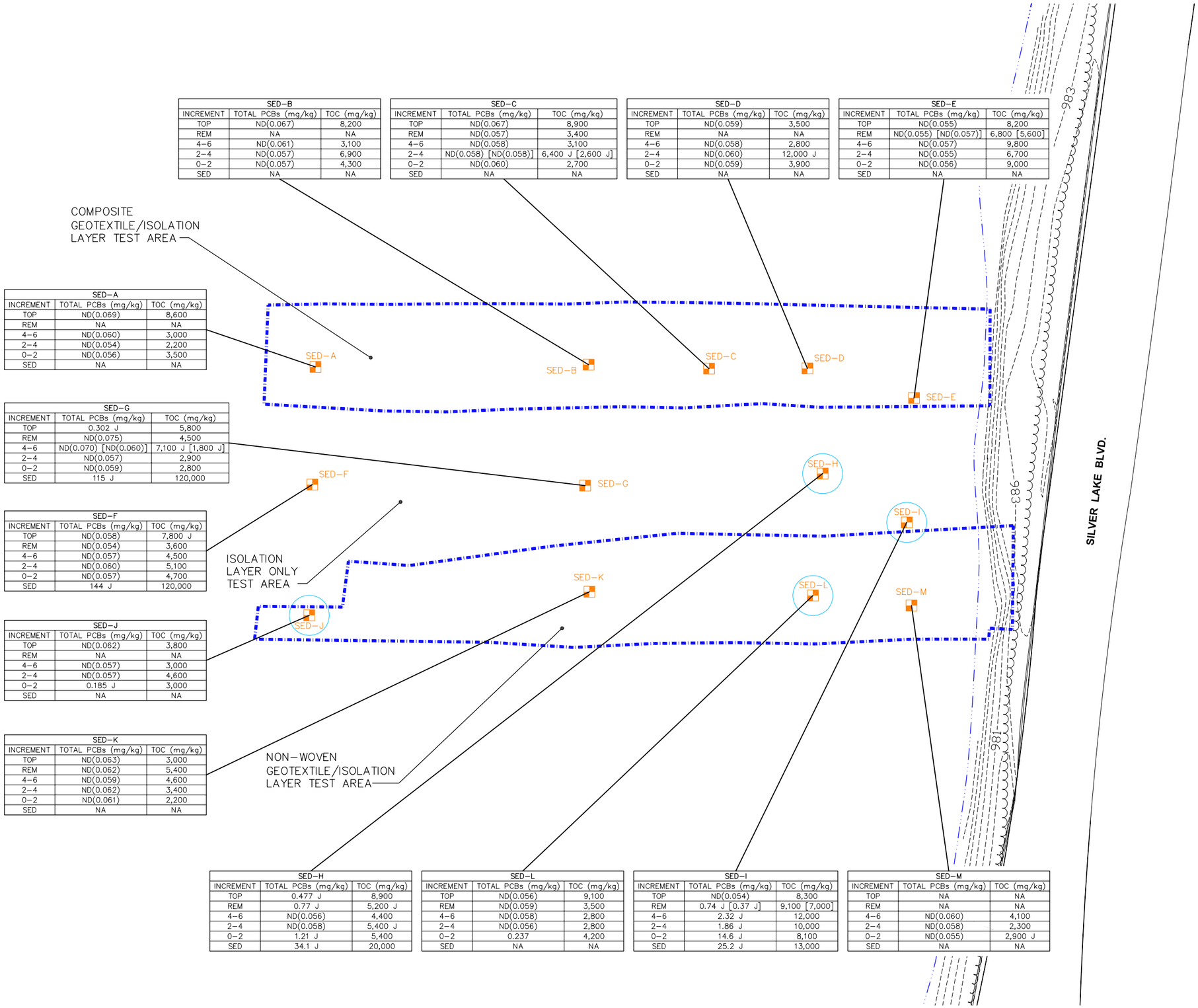

SED-A		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.069)	8,600
REM	NA	NA
4–6	ND(0.060)	3,000
2–4	ND(0.054)	2,200
0–2	ND(0.056)	3,500
SED	NA	NA

SED-B		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.067)	8,200
REM	NA	NA
4–6	ND(0.061)	3,100
2–4	ND(0.057)	6,900
0–2	ND(0.057)	4,300
SED	NA	NA

SED-C		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.067)	8,900
REM	ND(0.057)	3,400
4–6	ND(0.058)	3,100
2–4	ND(0.058) [ND(0.058)]	6,400 J [2,600 J]
0–2	ND(0.060)	2,700
SED	NA	NA

SED-D		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.059)	3,500
REM	NA	NA
4–6	ND(0.058)	2,800
2–4	ND(0.060)	12,000 J
0–2	ND(0.059)	3,900
SED	NA	NA

SED-E		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.055)	8,200
REM	ND(0.055) [ND(0.057)]	6,800 [5,600]
4–6	ND(0.057)	9,800
2–4	ND(0.055)	6,700
0–2	ND(0.056)	9,000
SED	NA	NA

SED-F		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.058)	7,800 J
REM	ND(0.054)	3,600
4–6	ND(0.057)	4,500
2–4	ND(0.060)	5,100
0–2	ND(0.057)	4,700
SED	144 J	120,000

SED-G		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	0.302 J	5,800
REM	ND(0.075)	4,500
4–6	ND(0.070) [ND(0.060)]	7,100 J [1,800 J]
2–4	ND(0.057)	2,900
0–2	ND(0.059)	2,800
SED	115 J	120,000

SED-H		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	0.477 J	8,900
REM	0.77 J	5,200 J
4–6	ND(0.056)	4,400
2–4	ND(0.058)	5,400 J
0–2	1.21 J	5,400
SED	34.1 J	20,000

SED-I		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.054)	8,300
REM	0.74 J [0.37 J]	9,100 [7,000]
4–6	2.32 J	12,000
2–4	1.86 J	10,000
0–2	14.6 J	8,100
SED	25.2 J	13,000

SED-J		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.062)	3,800
REM	NA	NA
4–6	ND(0.057)	3,000
2–4	ND(0.057)	4,600
0–2	0.185 J	3,000
SED	NA	NA

SED-K		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.063)	3,000
REM	ND(0.062)	5,400
4–6	ND(0.059)	4,600
2–4	ND(0.062)	3,400
0–2	ND(0.061)	2,200
SED	NA	NA

SED-L		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.056)	9,100
REM	ND(0.059)	3,500
4–6	ND(0.058)	2,800
2–4	ND(0.056)	2,800
0–2	0.237	4,200
SED	NA	NA

SED-M		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	NA	NA
REM	NA	NA
4–6	ND(0.060)	4,100
2–4	ND(0.058)	2,300
0–2	ND(0.055)	2,900 J
SED	NA	NA

LEGEND:

- BANK ELEVATION (1-FT CONTOUR)
- EDGE OF BUSHES
- MEAN WATER ELEV (975.9) (APPROX.)
- APPROXIMATE SURVEYED EXTENT OF GEOTEXTILE
- SED-A — ISOLATION LAYER MATERIAL COLLECTION LOCATION
- MIXING OBSERVED DURING COLLECTION

NOTES:

1. BASE MAP AND BANK CONTOURS MODIFIED FROM ELECTRONIC FILE OF SURVEY PERFORMED BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, DRAWING NO. CX101, REV A, DATED 15 MARCH 2006. DUE TO SNOW COVER AT TIME OF SURVEY, ALL PHYSICAL FEATURES MAY NOT BE SHOWN.
2. SAMPLES WERE COLLECTED ON 27 DECEMBER 2006 AND WERE SENT TO NORTHEAST ANALYTICAL IN SCHENECTADY, NEW YORK FOR ANALYSIS OF PCBs AND TOC.
3. SAMPLES HAVE BEEN VALIDATED AS PER FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN (FSP/QAPP), GENERAL ELECTRIC COMPANY, PITTSFIELD, MASSACHUSETTS, ARCADIS OF NEW YORK, INC. (APPROVED MARCH 15, 2007 AND RE-SUBMITTED MARCH 30, 2007).
4. GEOTEXTILE LOCATIONS PRESENTED ON THIS FIGURE ARE BASED ON SURVEYS CONDUCTED FROM 11-17 OCTOBER 2006 BY HILL ENGINEERS, ARCHITECTS AND PLANNERS.
5. NOT ALL PHYSICAL FEATURES SHOWN.
6. ALL LOCATIONS ARE APPROXIMATE.

DATA QUALIFIERS:

J – INDICATES THAT THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION.

0 20' 40'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

ISOLATION LAYER MATERIAL COLLECTION LOCATIONS IMMEDIATE POST-CONSTRUCTION

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
16

SYR-85-LJP BGP GMS LAYER: ON=*, OFF=REF
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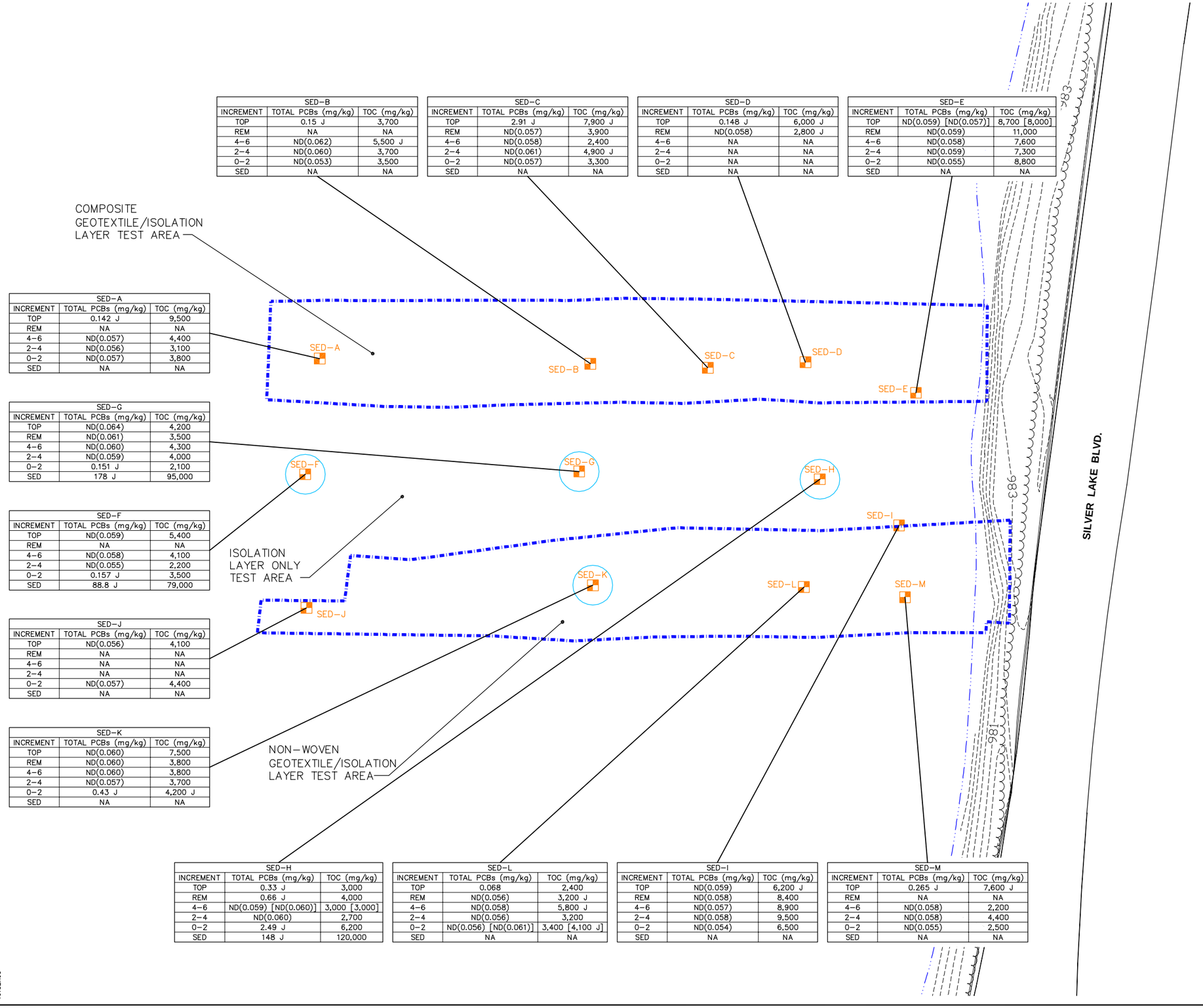


SED-B		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	0.15 J	3,700
REM	NA	NA
4–6	ND(0.062)	5,500 J
2–4	ND(0.060)	3,700
0–2	ND(0.053)	3,500
SED	NA	NA

SED-C		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	2.91 J	7,900 J
REM	ND(0.057)	3,900
4–6	ND(0.058)	2,400
2–4	ND(0.061)	4,900 J
0–2	ND(0.057)	3,300
SED	NA	NA

SED-D		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	0.148 J	6,000 J
REM	ND(0.058)	2,800 J
4–6	NA	NA
2–4	NA	NA
0–2	NA	NA
SED	NA	NA

SED-E		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.059) [ND(0.057)]	8,700 [8,000]
REM	ND(0.059)	11,000
4–6	ND(0.058)	7,600
2–4	ND(0.059)	7,300
0–2	ND(0.055)	8,800
SED	NA	NA

SED-A		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	0.142 J	9,500
REM	NA	NA
4–6	ND(0.057)	4,400
2–4	ND(0.056)	3,100
0–2	ND(0.057)	3,800
SED	NA	NA

SED-G		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.064)	4,200
REM	ND(0.061)	3,500
4–6	ND(0.060)	4,300
2–4	ND(0.059)	4,000
0–2	0.151 J	2,100
SED	178 J	95,000

SED-F		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.059)	5,400
REM	NA	NA
4–6	ND(0.058)	4,100
2–4	ND(0.055)	2,200
0–2	0.157 J	3,500
SED	88.8 J	79,000

SED-J		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.056)	4,100
REM	NA	NA
4–6	NA	NA
2–4	NA	NA
0–2	ND(0.057)	4,400
SED	NA	NA

SED-K		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.060)	7,500
REM	ND(0.060)	3,800
4–6	ND(0.060)	3,800
2–4	ND(0.057)	3,700
0–2	0.43 J	4,200 J
SED	NA	NA

SED-H		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	0.33 J	3,000
REM	0.66 J	4,000
4–6	ND(0.059) [ND(0.060)]	3,000 [3,000]
2–4	ND(0.060)	2,700
0–2	2.49 J	6,200
SED	148 J	120,000

SED-L		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	0.068	2,400
REM	ND(0.056)	3,200 J
4–6	ND(0.058)	5,800 J
2–4	ND(0.056)	3,200
0–2	ND(0.056) [ND(0.061)]	3,400 [4,100 J]
SED	NA	NA

SED-I		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	ND(0.059)	6,200 J
REM	ND(0.058)	8,400
4–6	ND(0.057)	8,900
2–4	ND(0.058)	9,500
0–2	ND(0.054)	6,500
SED	NA	NA

SED-M		
INCREMENT	TOTAL PCBs (mg/kg)	TOC (mg/kg)
TOP	0.265 J	7,600 J
REM	NA	NA
4–6	ND(0.058)	2,200
2–4	ND(0.058)	4,400
0–2	ND(0.055)	2,500
SED	NA	NA

LEGEND:

- BANK ELEVATION (1-FT CONTOUR)
- EDGE OF BUSHES
- MEAN WATER ELEV (975.9) (APPROX.)
- APPROXIMATE SURVEYED EXTENT OF GEOTEXTILE
- SED-A — ISOLATION LAYER MATERIAL COLLECTION LOCATION
- MIXING OBSERVED DURING COLLECTION

NOTES:

1. BASE MAP AND BANK CONTOURS MODIFIED FROM ELECTRONIC FILE OF SURVEY PERFORMED BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, DRAWING NO. CX101, REV A, DATED 15 MARCH 2006. DUE TO SNOW COVER AT TIME OF SURVEY, ALL PHYSICAL FEATURES MAY NOT BE SHOWN.
2. SAMPLES WERE COLLECTED ON 12 JUNE 2007 AND WERE SENT TO NORTHEAST ANALYTICAL IN SCHENECTADY, NEW YORK FOR ANALYSIS OF PCBs AND TOC.
3. SAMPLES HAVE BEEN VALIDATED AS PER FIELD SAMPLING PLAN/QUALITY ASSURANCE PROJECT PLAN (FSP/QAPP), GENERAL ELECTRIC COMPANY, PITTSFIELD, MASSACHUSETTS, ARCADIS OF NEW YORK, INC. (APPROVED MARCH 15, 2007 AND RE-SUBMITTED MARCH 30, 2007).
4. GEOTEXTILE LOCATIONS PRESENTED ON THIS FIGURE ARE BASED ON SURVEYS CONDUCTED FROM 11-17 OCTOBER 2006 BY HILL ENGINEERS, ARCHITECTS AND PLANNERS.
5. NOT ALL PHYSICAL FEATURES SHOWN.
6. ALL LOCATIONS ARE APPROXIMATE.

DATA QUALIFIERS:

J – INDICATES THAT THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION.

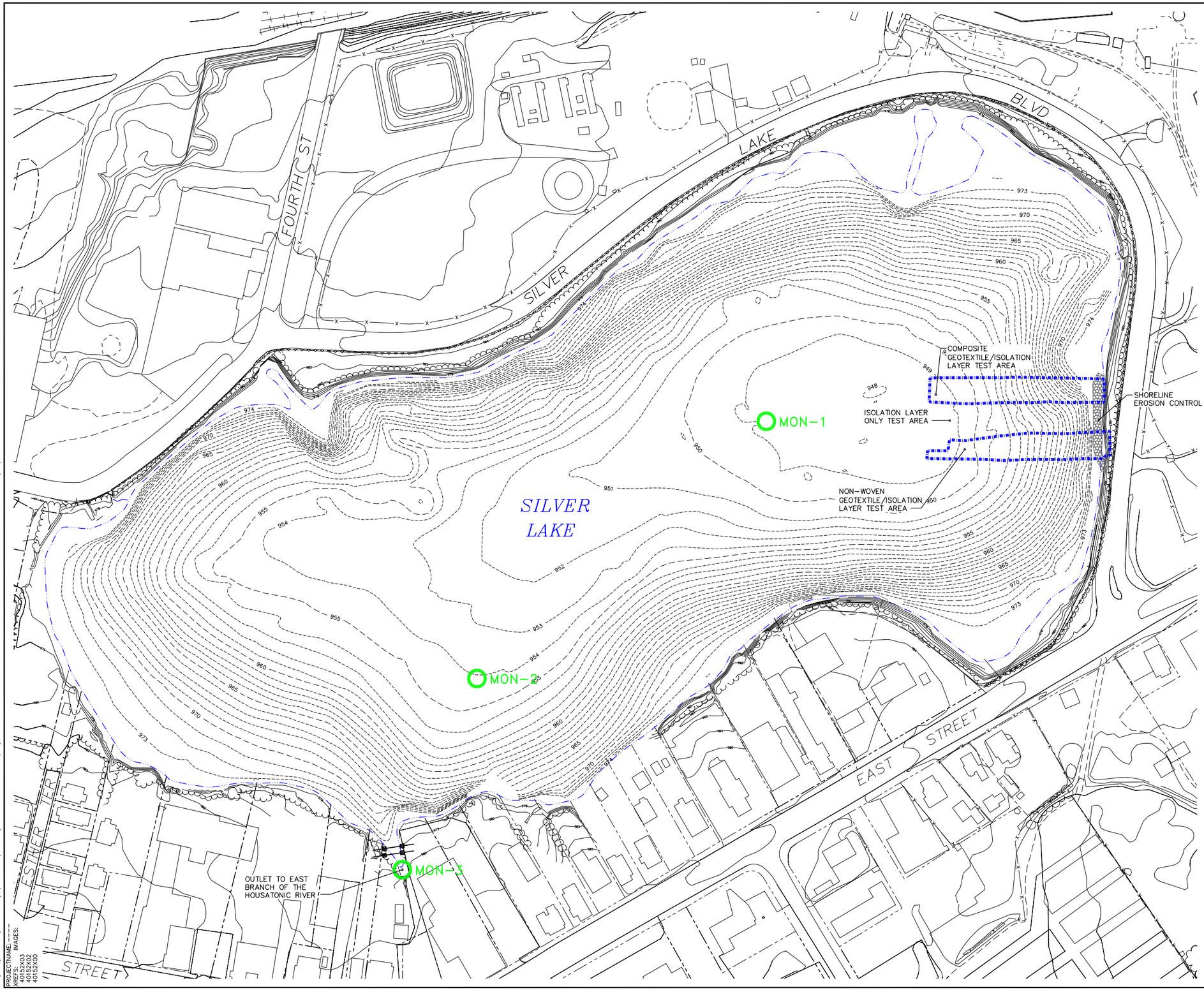
0 20' 40'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

ISOLATION LAYER MATERIAL COLLECTION LOCATIONS 6-MONTH POST-CONSTRUCTION

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
17



LEGEND:

- MEAN WATER ELEVATION (975.9) (APPROX.)
- VEGETATION
- PAVED ROADWAY
- FENCELINE
- SILT CURTAIN
- ELEVATION CONTOUR
- –950– SILVER LAKE ELEVATION CONTOUR
- APPROXIMATE SURVEYED EXTENT OF GEOTEXTILE
- APPROXIMATE WATER MONITORING LOCATIONS

NOTES:

1. BASE MAP AND BANK CONTOURS MODIFIED FROM ELECTRONIC FILE OF SURVEY PERFORMED BY HILL ENGINEERS, ARCHITECTS AND PLANNERS, DRAWING NO. CX101, REV A, DATED 15 MARCH 2006. DUE TO SNOW COVER AT TIME OF SURVEY, ALL PHYSICAL FEATURES MAY NOT BE SHOWN.
2. THE SILVER LAKE BATHYMETRIC CONTOUR INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY OCEAN SURVEYS, INC. ON 10–13 JUNE 2003 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME.
3. GEOTEXTILE LOCATIONS PRESENTED ON THIS FIGURE ARE BASED ON SURVEYS CONDUCTED FROM 11–17 OCTOBER 2006 BY HILL ENGINEERS, ARCHITECTS AND PLANNERS.
4. NOT ALL PHYSICAL FEATURES SHOWN.
5. ALL LOCATIONS ARE APPROXIMATE.

0 80' 160'
GRAPHIC SCALE

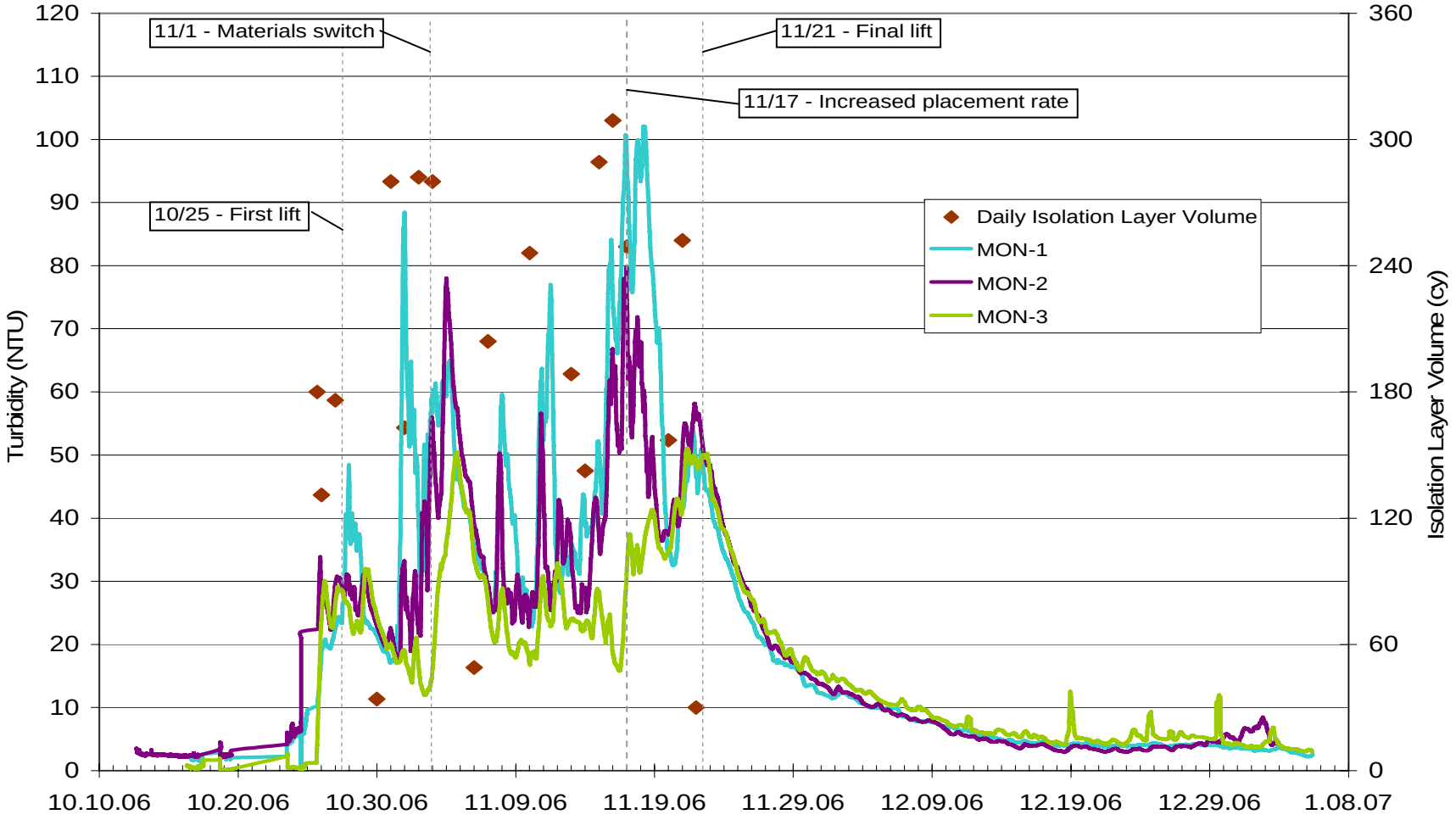
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

APPROXIMATE WATER MONITORING LOCATIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
18

9/28/2007
G:\GE\GE_Silver_Lake\Reports and Presentations\PS Report\Figures\Figure 19.xlsFigure 19



NOTES:

1. AVERAGE TURBIDITY BASED ON IN-SITU MEASUREMENTS COLLECTED BEFORE, DURING, AND AFTER PILOT STUDY CONSTRUCTION.

2. DAILY ISOLATION LAYER VOLUME IS APPROXIMATE AND AS REPORTED BY THE CONTRACTOR.

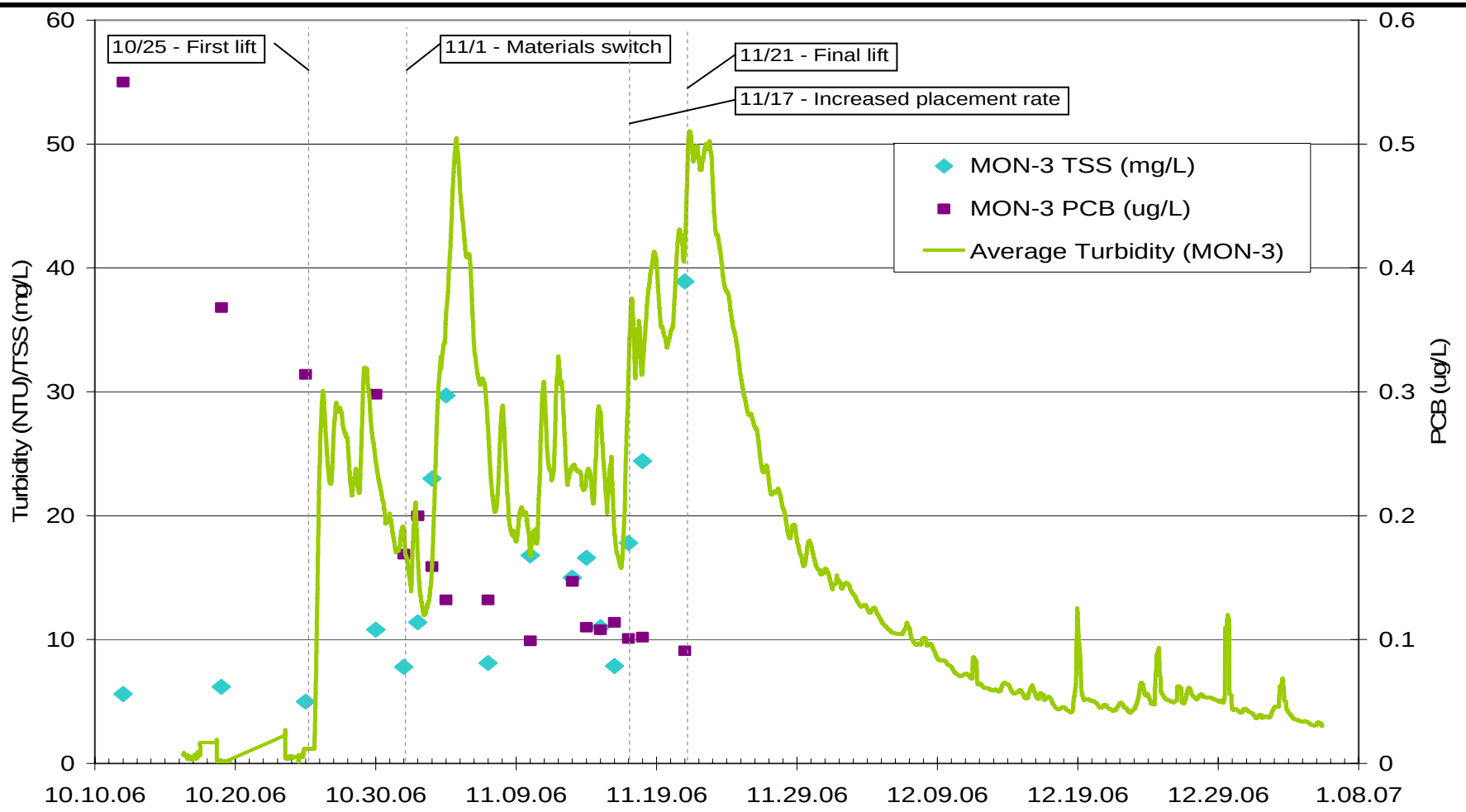
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

AVERAGE TURBIDITY RELATIVE TO ISOLATION LAYER PLACEMENT RATES

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
19

9/28/2007
G:\GE\GE_Silver_Lake\Reports and Presentations\PS Report\Figures\Figure 20.xlsFigure 20



NOTES:

1. TSS AND PCB ANALYTICAL RESULTS FROM WATER SAMPLES COLLECTED AT SILVER LAKE OUTLET.

2. AVERAGE TURBIDITY BASED ON IN-SITU MEASUREMENTS COLLECTED BEFORE, DURING, AND AFTER PILOT STUDY CONSTRUCTION.

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

MON-3 TSS, PCB, AND AVERAGE TURBIDITY DURING PILOT STUDY

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
20

Appendices

ARCADIS BBL

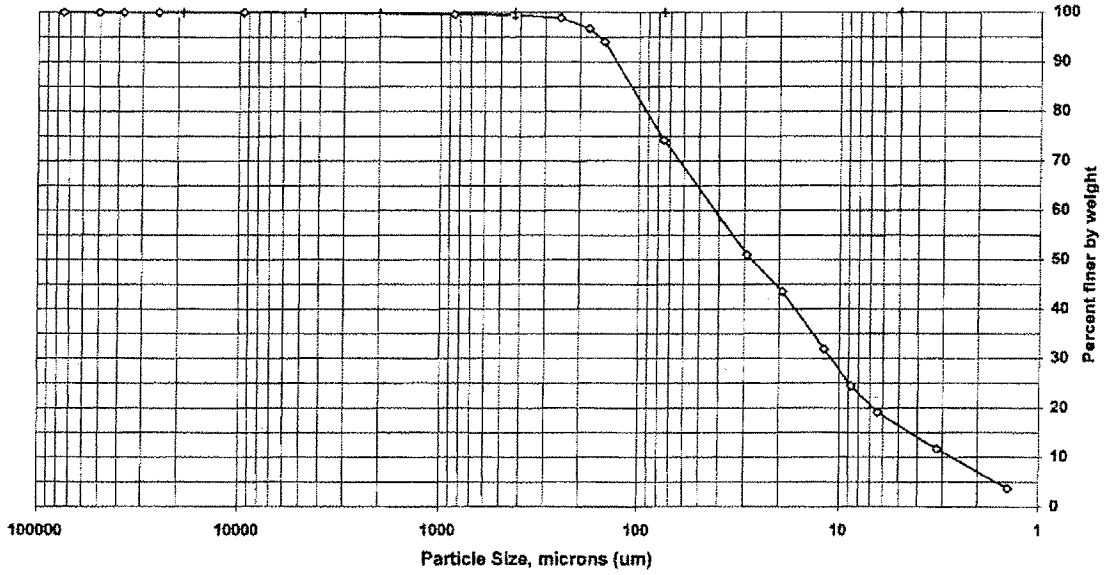
Appendix A

Pre-Construction Grain Size Analysis

Particle Size of Soils by ASTM D422

Client Code:	NORANA	**SDG:**	N/A	**Date Received:**	8/25/2006
Sample ID:	POND-1	**ETR(s):**	116015	**Start Date:**	9/18/2006
Lab ID:	680965			**End Date:**	9/22/2006

Percent Solids:	77.4%		**Non-soil material:**	plant
Specific Gravity:	2.650	(assumed)	**Shape (> #10):**	angular
Maximum Particle Size:	9.5 mm		**Hardness (> #10):**	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	99.6	0.1
#40	425	99.4	0.2
#60	250	98.9	0.5
#80	180	96.8	2.1
#100	150	94.1	2.7
#200	75	74.3	19.8
Hydrometer	29.1	51.0	23.2
|	19.3	43.6	7.4
|	11.9	31.9	11.7
|	8.7	24.4	7.4
|	6.4	19.1	5.3
|	3.2	11.7	7.4
V	1.4	3.7	8.0

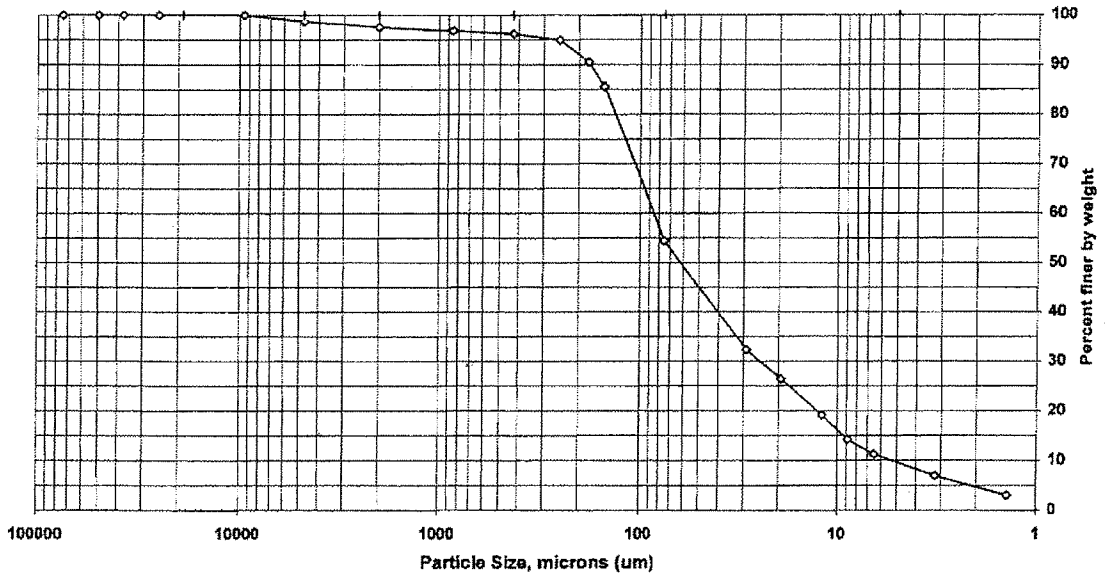
Soil Classification	Percent of Total Sample
Gravel	0.0
Sand	25.7
Coarse Sand	0.2
Medium Sand	0.4
Fine Sand	25.2
Silt	55.1
Clay	19.1

Preparation Method: **D2217**
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

Particle Size of Soils by ASTM D422

Client Code:	NORANA	**SDG:**	N/A	**Date Received:**	8/25/2006
Sample ID:	POND-2	**ETR(s):**	116015	**Start Date:**	9/18/2006
Lab ID:	680966			**End Date:**	9/22/2006

Percent Solids:	84.2%		**Non-soil material:**	na
Specific Gravity:	2.650	(assumed)	**Shape (> #10):**	rounded
Maximum Particle Size:	9.5 mm		**Hardness (> #10):**	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.7	1.3
#10	2000	97.6	1.2
#20	850	96.8	0.7
#40	425	96.2	0.6
#60	250	94.9	1.3
#80	180	90.6	4.4
#100	150	85.6	5.0
#200	75	54.4	31.2
Hydrometer	28.8	32.3	22.1
I	19.4	26.4	5.9
I	12.0	19.1	7.3
I	8.8	14.2	5.0
I	6.5	11.2	3.0
I	3.2	6.9	4.3
V	1.4	3.0	4.0

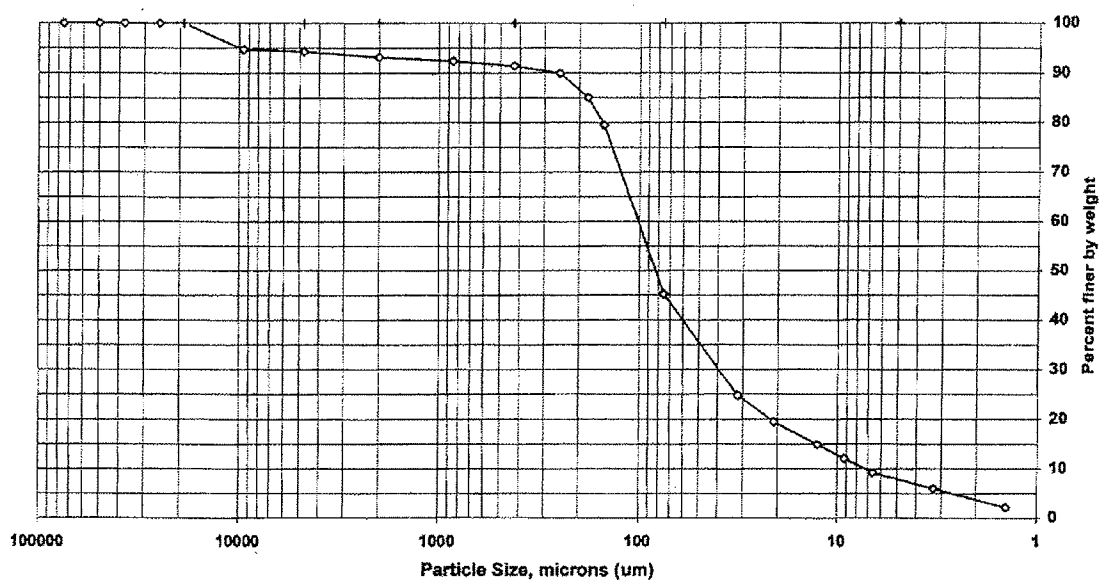
Soil Classification	Percent of Total Sample
Gravel	1.3
Sand	44.3
Coarse Sand	1.2
Medium Sand	1.3
Fine Sand	41.8
Silt	43.2
Clay	11.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

Particle Size of Soils by ASTM D422

Client Code:	NORANA	**SDG:**	N/A	**Date Received:**	8/25/2006
Sample ID:	POND-3	**ETR(s):**	116015	**Start Date:**	9/18/2006
Lab ID:	680967			**End Date:**	9/22/2006

Percent Solids:	82.3%		**Non-soil material:**	na
Specific Gravity:	2.650	(assumed)	**Shape (> #10):**	angular
Maximum Particle Size:	19 mm		**Hardness (> #10):**	brittle



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	94.7	5.3
#4	4750	94.3	0.4
#10	2000	93.2	1.1
#20	850	92.4	0.8
#40	425	91.5	0.9
#60	250	90.0	1.5
#80	180	85.0	4.9
#100	150	79.5	5.6
#200	75	45.2	34.3
Hydrometer	31.6	24.8	20.4
I	20.8	19.5	5.3
I	12.5	14.9	4.6
I	9.2	12.0	2.8
I	6.6	9.2	2.8
I	3.3	6.0	3.2
V	1.4	2.1	3.9

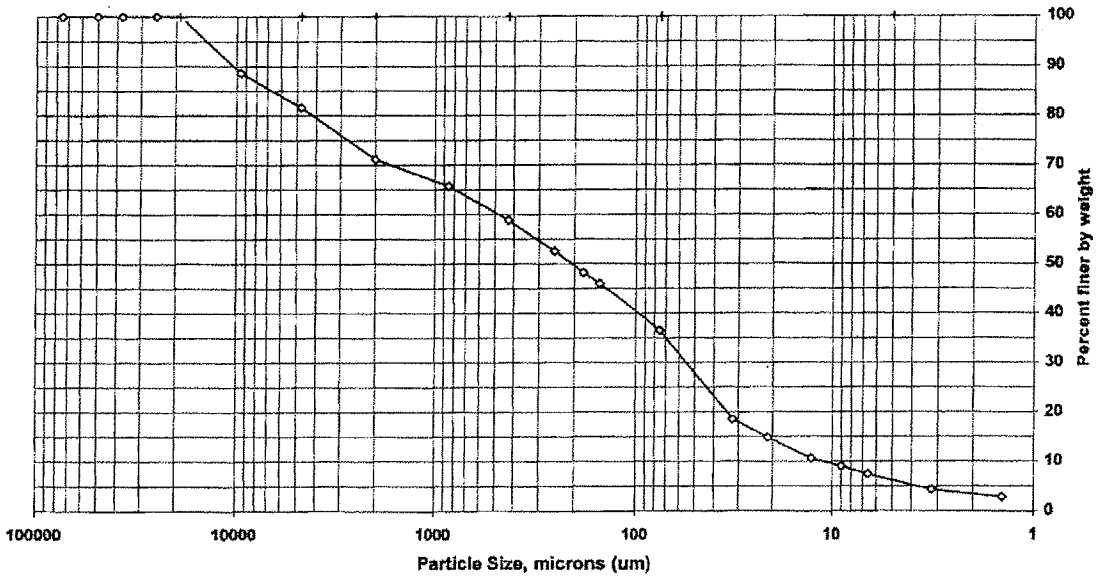
Soil Classification	Percent of Total Sample
Gravel	5.7
Sand	49.1
Coarse Sand	1.1
Medium Sand	1.7
Fine Sand	46.3
Silt	36.0
Clay	9.2

Preparation Method: **D2217**
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

Particle Size of Soils by ASTM D422

Client Code:	NORANA	**SDG:**	N/A	**Date Received:**	8/29/2006
Sample ID:	CLARK-TOP-SOIL-1	**ETR(s):**	116046	**Start Date:**	8/31/2006
Lab ID:	681192			**End Date:**	9/22/2006

Percent Solids:	80.7%		**Non-soil material:**	plant
Specific Gravity:	2.650	(assumed)	**Shape (> #10):**	angular
Maximum Particle Size:	19 mm		**Hardness (> #10):**	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	88.6	11.4
#4	4750	81.6	7.0
#10	2000	71.1	10.5
#20	850	65.7	5.4
#40	425	58.8	6.9
#60	250	52.6	6.3
#80	180	48.2	4.3
#100	150	46.0	2.2
#200	75	36.6	9.5
Hydrometer	32.0	18.5	18.1
|	21.1	14.8	3.7
|	12.7	10.6	4.2
|	9.0	9.0	1.6
|	6.6	7.4	1.6
|	3.2	4.3	3.1
V	1.4	2.8	1.5

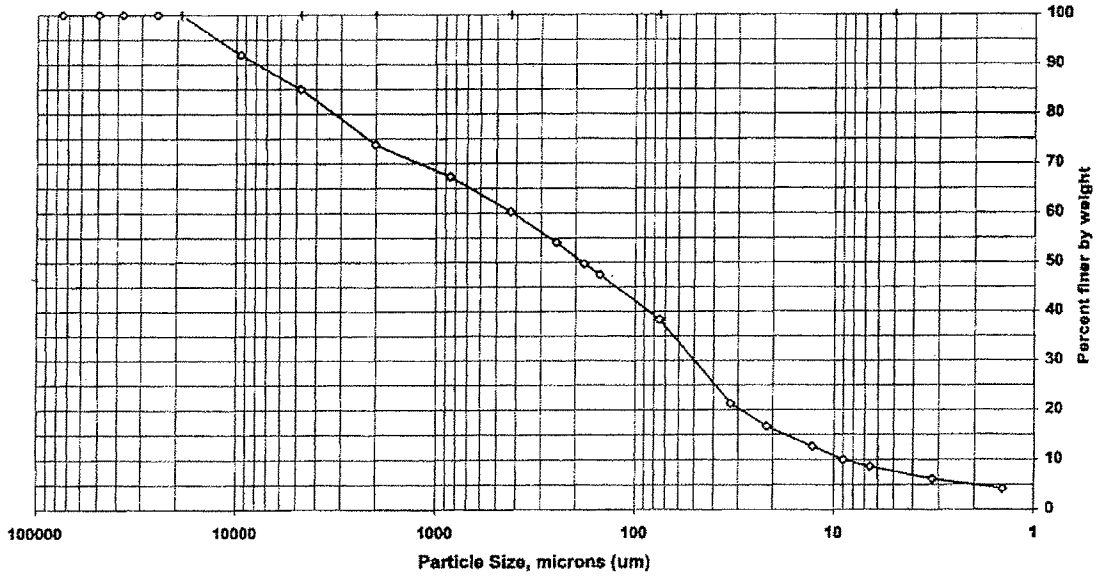
Soil Classification	Percent of Total Sample
Gravel	18.4
Sand	45.1
Coarse Sand	10.5
Medium Sand	12.3
Fine Sand	22.3
Silt	29.2
Clay	7.4

Preparation Method: **D2217**
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

Particle Size of Soils by ASTM D422

Client Code:	NORANA	**SDG:**	N/A	**Date Received:**	8/29/2006
Sample ID:	CLARK-TOP-SOIL-2	**ETR(s):**	116046	**Start Date:**	8/31/2006
Lab ID:	681193			**End Date:**	9/22/2006

Percent Solids:	79.4%		**Non-soil material:**	plant
Specific Gravity:	2.650	(assumed)	**Shape (> #10):**	angular
Maximum Particle Size:	19 mm		**Hardness (> #10):**	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	92.0	8.0
#4	4750	85.0	7.0
#10	2000	73.8	11.2
#20	850	67.3	6.4
#40	425	60.3	7.0
#60	250	54.0	6.3
#80	180	49.7	4.3
#100	150	47.5	2.2
#200	75	38.4	9.1
Hydrometer	32.6	21.3	17.1
|	21.4	16.6	4.7
|	12.8	12.7	4.0
|	8.9	10.0	2.7
|	6.6	8.7	1.3
|	3.2	6.1	2.6
V	1.4	4.2	1.9

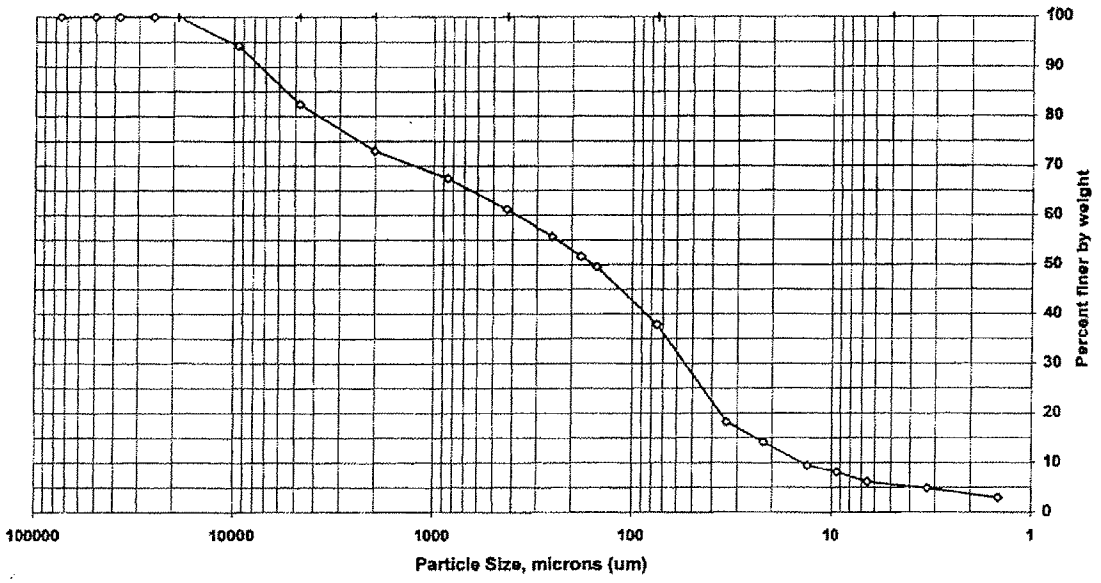
Soil Classification	Percent of Total Sample
Gravel	15.0
Sand	46.6
Coarse Sand	11.2
Medium Sand	13.5
Fine Sand	21.9
Silt	29.7
Clay	8.7

Preparation Method: **D2217**
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

Particle Size of Soils by ASTM D422

Client Code:	NORANA	**SDG:**	N/A	**Date Received:**	8/29/2006
Sample ID:	CLARK-TOP-SOIL-3	**ETR(s):**	116046	**Start Date:**	8/31/2006
Lab ID:	681194			**End Date:**	9/22/2006

Percent Solids:	78.9%		**Non-soil material:**	plant	
Specific Gravity:	2.650	(assumed)	**Shape (> #10):**	angular	
Maximum Particle Size:	19 mm		**Hardness (> #10):**	hard	



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	94.2	5.8
#4	4750	82.4	11.8
#10	2000	73.0	9.4
#20	850	67.5	5.6
#40	425	61.2	6.2
#60	250	55.7	5.5
#80	180	51.7	4.0
#100	150	49.6	2.1
#200	75	37.9	11.7
Hydrometer	33.7	18.2	19.6
I	22.0	14.2	4.1
I	13.2	9.4	4.8
I	9.3	8.2	1.2
I	6.5	6.1	2.0
I	3.3	4.9	1.2
V	1.4	2.9	1.9

Soil Classification	Percent of Total Sample
Gravel	17.6
Sand	44.5
Coarse Sand	9.4
Medium Sand	11.8
Fine Sand	23.3
Silt	31.8
Clay	6.1

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

ARCADIS BBL

Appendix B

Construction Material Specifications

Sevenson Environmental 10 Lyman St. Pittsfield, MA (413) 236-5676	**SUBMITTAL**

SUBMITTAL NO. 932-02

PROJECT: Silver Lake Pilot Study Sediment Capping Project

SUBMITTED TO: Mr. Todd Cridge
Blasland, Bouck & Lee, Inc.
6723 Towpath Road
Syracuse, NY 13214
(413) 671-9271

DATE: 9/29/2006

SUBMITTED BY: Michael W. Muth

INFORMATION FOR PROCESSING:

ITEM #	QTY.	DESCRIPTION	STATUS
1	2	Armor Stone Particle Size Analysis.	
		Material is located at the Lucia pit in Chesire, MA.	
		Material supplied by the Petricca Construction company.	

REMARKS:

Michael W. Muth Signature

9-29-06
Date

NO. 932-02

Advance Testing

3348 Route 208, Campbell Hall, NY 10916
Phone: 845-496-1600 Fax: 845-496-1398
42 Day Farm Road, West Stockbridge, MA 01266
Phone/Fax: 413-232-8566

Client:	Sevenson Environmental	**Project:**	Housatonic River Phase III
Item:	9 in. Rip-Rap	**ATC Project #:**	050172
Source:	Lucia	**Stockpile #**	9 inch
Sampled:	11/30/2005	**Sampled By:**	M Meyer
Tested:	11/30/05 (field test)	**Tested By:**	M Meyer

Particle Size Analysis of Crushed Stone Rip-Rap

Test Method: ASTM D5519

Summary of Test Results

By Weight

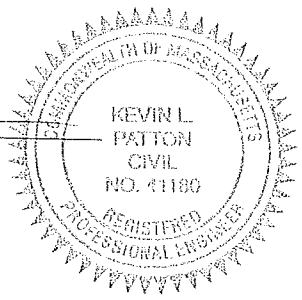
Percent Lighter	Stockpile	Specification
100	31.4	15 to 36
50	10.4	7 to 11
15	4.3	2 to 5

By Size

Percent Smaller	Stockpile	Specification
100	8.55	6.7 to 9.0
50	5.92	5.2 to 6.0
15	4.41	3.4 to 4.6

Test results comply with specifications.

Report Reviewed by:



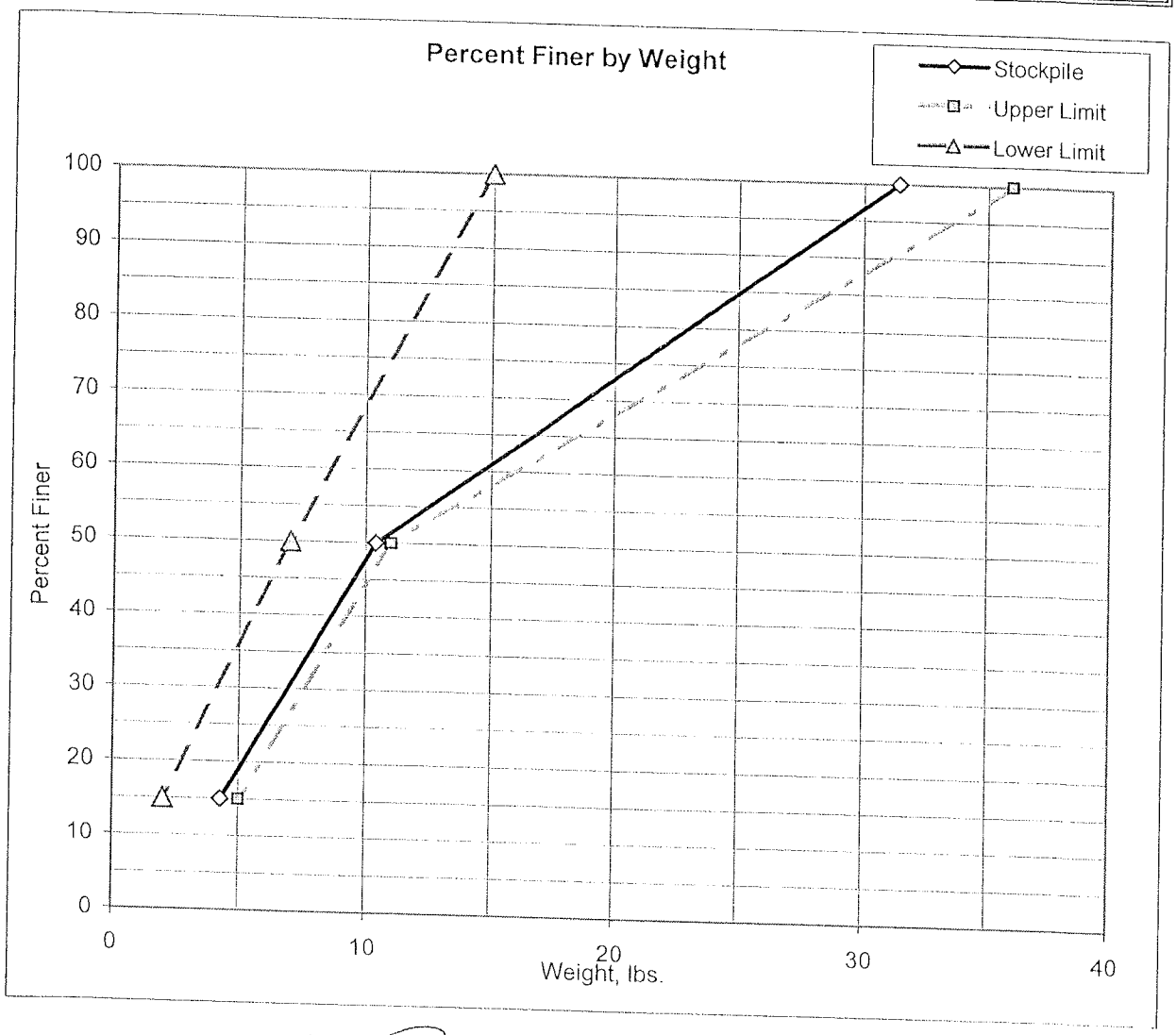
Advance Testing

3348 Route 208, Campbell Hall, NY 10916
Phone: 845-496-1600 Fax: 845-496-1398
42 Day Farm Road, West Stockbridge, MA 01266
Phone/Fax: 413-232-8566

Client:	Sevenson Environmental	Project:	Housatonic River Phase III
Item:	9 in. Rip-Rap	ATC Project #:	050172
Source:	Lucia	Stockpile #	9 inch
Sampled:	11/30/2005	Sampled By:	M Meyer
Tested:	11/30/05 (field test)	Tested By:	M Meyer

Particle Size Analysis of Crushed Stone Rip-Rap

Test Method: ASTM D5519



Report Reviewed by:

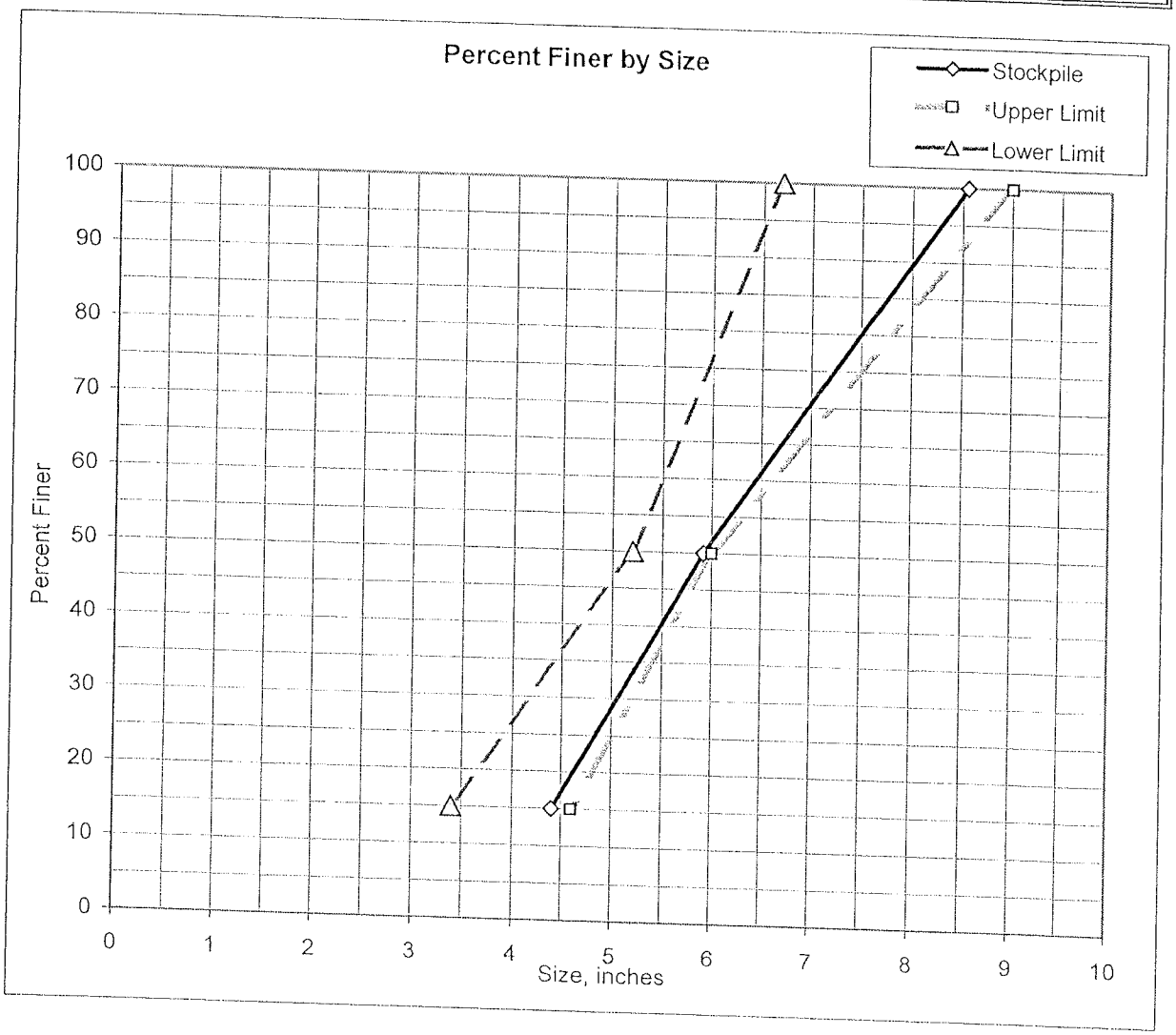
Advance Testing

3348 Route 208, Campbell Hall, NY 10916
Phone: 845-496-1600 Fax: 845-496-1398
42 Day Farm Road, West Stockbridge, MA 01266
Phone/Fax: 413-232-8566

Client:	Sevenson Environmental	Project:	Housatonic River Phase III
Item:	9 in. Rip-Rap	ATC Project #:	050172
Source:	Lucia	Stockpile #	9 inch
Sampled:	11/30/2005	Sampled By:	M Meyer
Tested:	11/30/05 (field test)	Tested By:	M Meyer

Particle Size Analysis of Crushed Stone Rip-Rap

Test Method: ASTM D5519



Report Reviewed by:

ADVANCE TESTING COMPANY, INC.

Sevenson Environmental Services
Phase III - Housatonic River Project

Particle weights (lbs.)	Weights (sorted)	Cumulative Weight	Cumulative Percent
2.1	2.1	2.1	0.1
3.6	2.1	4.2	0.2
3.8	2.1	6.3	0.3
4.9	2.1	8.4	0.4
3.2	2.1	10.5	0.5
4.3	2.1	12.6	0.6
2.1	2.1	14.7	0.7
2.8	2.2	16.9	0.8
4.9	2.2	19.1	0.9
3.3	2.2	21.3	1.0
3.6	2.2	23.5	1.1
3.1	2.2	25.7	1.2
4.2	2.4	28.1	1.3
3.3	2.4	30.5	1.4
3.2	2.4	32.9	1.6
4.1	2.4	35.3	1.7
3.3	2.5	37.8	1.8
3.1	2.5	40.3	1.9
2.2	2.5	42.8	2.0
3.5	2.5	45.3	2.2
4.8	2.5	47.8	2.3
2.2	2.5	50.3	2.4
2.1	2.7	53.0	2.5
3.4	2.7	55.7	2.6
3.8	2.7	58.4	2.8
2.5	2.7	61.1	2.9
2.2	2.7	63.8	3.0
3.1	2.8	66.6	3.2
3.7	2.8	69.4	3.3
4.1	2.8	72.2	3.4
3.4	2.9	75.1	3.6
3.4	2.9	78.0	3.7
4.3	2.9	80.9	3.8
3.8	3	83.9	4.0
3.3	3	86.9	4.1
4.4	3.1	90.0	4.3
4.2	3.1	93.1	4.4
2.5	3.1	96.2	4.6
2.7	3.1	99.3	4.7
2.2	3.1	102.4	4.9
2.1	3.1	105.5	5.0
4	3.1	108.6	5.2
3.3	3.2	111.8	5.3
3.9	3.2	115.0	5.5
3.2	3.2	118.2	5.6
4.6	3.2	121.4	5.8
4.4	3.2	124.6	5.9
3.1	3.2	127.8	6.1

9-inch Rip-Rap,
Lucia, 11/30/05

Prepared by K Patton 12/13/2005

2.5	3.2	131.0	6.2
3	3.2	134.2	6.4
4.2	3.2	137.4	6.5
3.2	3.2	140.6	6.7
2.5	3.2	143.8	6.8
2.5	3.2	147.0	7.0
3.1	3.2	150.2	7.1
3.8	3.3	153.5	7.3
2.7	3.3	156.8	7.4
2.1	3.3	160.1	7.6
3.6	3.3	163.4	7.8
4.1	3.3	166.7	7.9
4.9	3.3	170.0	8.1
4.2	3.3	173.3	8.2
2.2	3.4	176.7	8.4
4.3	3.4	180.1	8.6
3.2	3.4	183.5	8.7
2.9	3.4	186.9	8.9
2.4	3.4	190.3	9.0
4.1	3.4	193.7	9.2
3.3	3.5	197.2	9.4
2.7	3.5	200.7	9.5
4.2	3.6	204.3	9.7
3.4	3.6	207.9	9.9
2.7	3.6	211.5	10.0
3.1	3.7	215.2	10.2
3.2	3.8	219.0	10.4
3	3.8	222.8	10.6
4.7	3.8	226.6	10.8
2.9	3.8	230.4	10.9
4.1	3.9	234.3	11.1
2.8	3.9	238.2	11.3
3.2	3.9	242.1	11.5
4.5	3.9	246.0	11.7
4.8	4	250.0	11.9
3.3	4.1	254.1	12.1
3.2	4.1	258.2	12.3
2.4	4.1	262.3	12.5
2.5	4.1	266.4	12.7
4.4	4.1	270.5	12.8
3.2	4.1	274.6	13.0
3.9	4.2	278.8	13.2
2.8	4.2	283.0	13.4
3.4	4.2	287.2	13.6
4.4	4.2	291.4	13.8
4.3	4.2	295.6	14.0
5	4.2	299.8	14.2
3.2	4.3	304.1	14.4
2.7	4.3	308.4	14.6
3.4	4.3	312.7	14.9
2.9	4.3	317.0	15.1
3.2	4.3	321.3	15.3
4.3	4.3	325.6	15.5
3.9	4.4	330.0	15.7
2.1	4.4	334.4	15.9
3.2	4.4	338.8	16.1
4.2	4.4	343.2	16.3
2.1	4.5	347.7	16.5

9-inch Rip-Rap,
Lucia, 11/30/05

2.4	4.6	352.3	16.7
3.9	4.7	357.0	17.0
3.2	4.8	361.8	17.2
3.1	4.8	366.6	17.4
4.9	4.9	371.5	17.6
4.1	4.9	376.4	17.9
4.3	4.9	381.3	18.1
3.5	4.9	386.2	18.3
2.4	5	391.2	18.6
8.7	5.2	396.4	18.8
6.6	5.2	401.6	19.1
6.7	5.3	406.9	19.3
7.9	5.3	412.2	19.6
5.8	5.4	417.6	19.8
10.1	5.4	423.0	20.1
10.3	5.4	428.4	20.3
9	5.4	433.8	20.6
5.7	5.5	439.3	20.9
5.4	5.6	444.9	21.1
7.3	5.7	450.6	21.4
11.9	5.8	456.4	21.7
10.3	6.2	462.6	22.0
6.2	6.2	468.8	22.3
7.5	6.2	475.0	22.6
9.2	6.2	481.2	22.9
6.5	6.2	487.4	23.1
8.5	6.4	493.8	23.5
8.9	6.5	500.3	23.8
5.6	6.5	506.8	24.1
10.1	6.6	513.4	24.4
7.6	6.6	520.0	24.7
8.2	6.6	526.6	25.0
10.5	6.7	533.3	25.3
11.4	6.8	540.1	25.7
9.4	7.2	547.3	26.0
9.2	7.3	554.6	26.3
11.4	7.4	562.0	26.7
10.2	7.5	569.5	27.0
9.4	7.6	577.1	27.4
6.5	7.6	584.7	27.8
8.3	7.6	592.3	28.1
8.2	7.6	599.9	28.5
8.9	7.6	607.5	28.9
9.2	7.7	615.2	29.2
9.6	7.9	623.1	29.6
8	8	631.1	30.0
6.6	8.2	639.3	30.4
9.8	8.2	647.5	30.8
5.3	8.2	655.7	31.1
6.2	8.3	664.0	31.5
7.4	8.3	672.3	31.9
5.4	8.4	680.7	32.3
7.7	8.4	689.1	32.7
10.2	8.5	697.6	33.1
8.4	8.7	706.3	33.5
9	8.7	715.0	34.0
9.1	8.7	723.7	34.4
8.4	8.8	732.5	34.8

9-inch Rip-Rap,
Lucia, 11/30/05

Prepared by K Patton 12/13/2005

6.8	8.8	741.3	35.2
7.6	8.9	750.2	35.6
5.3	8.9	759.1	36.1
6.6	8.9	768.0	36.5
7.2	9	777.0	36.9
10.3	9	786.0	37.3
5.4	9.1	795.1	37.8
7.6	9.1	804.2	38.2
5.5	9.2	813.4	38.6
10.2	9.2	822.6	39.1
9.8	9.2	831.8	39.5
5.2	9.4	841.2	40.0
6.4	9.4	850.6	40.4
8.9	9.6	860.2	40.9
10.8	9.7	869.9	41.3
9.8	9.8	879.7	41.8
8.8	9.8	889.5	42.2
5.2	9.8	899.3	42.7
9.7	9.8	909.1	43.2
8.3	9.8	918.9	43.6
6.2	9.8	928.7	44.1
10.9	9.8	938.5	44.6
9.8	10	948.5	45.0
10.3	10.1	958.6	45.5
6.2	10.1	968.7	46.0
5.4	10.2	978.9	46.5
8.7	10.2	989.1	47.0
7.6	10.2	999.3	47.5
6.2	10.2	1009.5	47.9
9.8	10.3	1019.8	48.4
10	10.3	1030.1	48.9
8.8	10.3	1040.4	49.4
10.2	10.3	1050.7	49.9
9.8	10.5	1061.2	50.4
8.7	10.6	1071.8	50.9
8.2	10.8	1082.6	51.4
9.1	10.9	1093.5	51.9
9.8	11.4	1104.9	52.5
7.6	11.4	1116.3	53.0
10.6	11.5	1127.8	53.6
22.8	11.9	1139.7	54.1
25.5	12.1	1151.8	54.7
11.5	12.1	1163.9	55.3
29.5	12.2	1176.1	55.9
27.3	12.4	1188.5	56.4
17.3	12.5	1201.0	57.0
13.8	13.3	1214.3	57.7
25.1	13.6	1227.9	58.3
17.5	13.7	1241.6	59.0
19.5	13.8	1255.4	59.6
17.2	14.3	1269.7	60.3
31.3	14.3	1284.0	61.0
18.6	14.5	1298.5	61.7
13.6	14.6	1313.1	62.4
14.3	15.1	1328.2	63.1
15.6	15.3	1343.5	63.8
16.1	15.6	1359.1	64.5
18.2	16.1	1375.2	65.3

9-inch Rip-Rap,
Lucia, 11/30/05

12.2	16.1	1391.3	66.1
23.4	16.2	1407.5	66.8
19.7	16.4	1423.9	67.6
21.3	17.2	1441.1	68.4
22.4	17.2	1458.3	69.3
26.6	17.3	1475.6	70.1
21.2	17.4	1493.0	70.9
16.4	17.5	1510.5	71.7
12.1	18.1	1528.6	72.6
14.5	18.2	1546.8	73.5
19.2	18.6	1565.4	74.3
26.4	19.2	1584.6	75.3
21.6	19.4	1604.0	76.2
16.2	19.5	1623.5	77.1
16.1	19.7	1643.2	78.0
21.4	19.8	1663.0	79.0
12.4	20.3	1683.3	79.9
20.3	21.2	1704.5	81.0
23.4	21.3	1725.8	82.0
12.5	21.4	1747.2	83.0
17.4	21.6	1768.8	84.0
14.3	22.4	1791.2	85.1
17.2	22.8	1814.0	86.2
14.6	23.4	1837.4	87.3
18.1	23.4	1860.8	88.4
23.6	23.6	1884.4	89.5
13.3	25.1	1909.5	90.7
29.4	25.5	1935.0	91.9
19.8	26.4	1961.4	93.2
15.1	26.6	1988.0	94.4
15.3	27.3	2015.3	95.7
19.4	29.4	2044.7	97.1
13.7	29.5	2074.2	98.5
12.1	31.3	2105.5	100.0

9-inch Rip-Rap,
Lucia, 11/30/05

Sevenson Environmental 10 Lyman St. Pittsfield, MA (413) 236-5676	**SUBMITTAL**

SUBMITTAL NO. 932-08

PROJECT: Silver Lake Pilot Study Sediment Capping Project

SUBMITTED TO: Mr. Todd Cridge DATE: 10/4/2006
Blasland, Bouck & Lee, Inc.
6723 Towpath Road
Syracuse, NY 13214
(413) 671-9271
SUBMITTED BY: Michael W. Muth

INFORMATION FOR PROCESSING:

ITEM #	QTY.	DESCRIPTION	STATUS
1	2	Gravel and Sand particle size analysis	
		Material is located at the Dalton pit located in Dalton, MA.	
		Material is supplied by the Petricca Construction company.	

REMARKS:

Michael W. Muth Signature

10-4-06
Date

NO. 932-08

Advance Testing
3348 Route 208, Campbell Hall, NY 10916
Phone: 845-496-1600 Fax: 845-496-1398
42 Day Farm Road, West Stockbridge, MA 01266
Phone/Fax: 413-232-8566

Client:	**Sevenson Environmental Services Inc.**	**Project:**	Phase III-Housatonic River Removal
Material:	H2-0T000400-0-6527	**Project Number:**	050172
Source:	Sevenson Enviormental	**Lab Number:**	06-0852
Date Sampled:	9/27/2006	**Sampled By:**	client
Date Tested:	10/2/2006	**Tested By:**	C. Mills

GRADATION (SIEVE ANALYSIS) OF SOIL OR AGGREGATE

Test Method(s): ASTM D422, C136, C117; AASHTO T11, T27, T88

Lab Number	Sample Type	Sampling Location	Specification
06-0852	H2-0T000400-0-6527	Unknown	MP-02235-2 Gravel and Sand

Sieve Size		%	%	Spec. %
mm	Inches	Retain	Passing	Pass
100.0 mm	4"	0.0	100.0	
75.0 mm	3"	0.0	100.0	100
62.5 mm	2 1/2"	0.0	100.0	
50.0 mm	2"	0.0	100.0	
37.5 mm	1 1/2"	0.0	100.0	70-100
25.0 mm	1"	8.4	91.6	
19.0 mm	3/4"	12.7	78.9	50-85
12.5 mm	1/2"	14.9	64.0	
6.32 mm	1/4"	11.9	52.1	
4.75 mm	#4	3.9	48.2	30-60
2.00 mm	#10	9.2	39.0	
0.850 mm	#20	8.2	30.8	
0.600 mm	#30	2.8	28.0	
0.425 mm	#40	2.7	25.3	
0.150 mm	#100	8.7	16.6	
0.075 mm	#200	6.6	10.0	0-10
Pan		10.0		

Comments: Minus #200 by wash-sieve method.
Test results comply with specification.

Report Reviewed By: D. O'Dell

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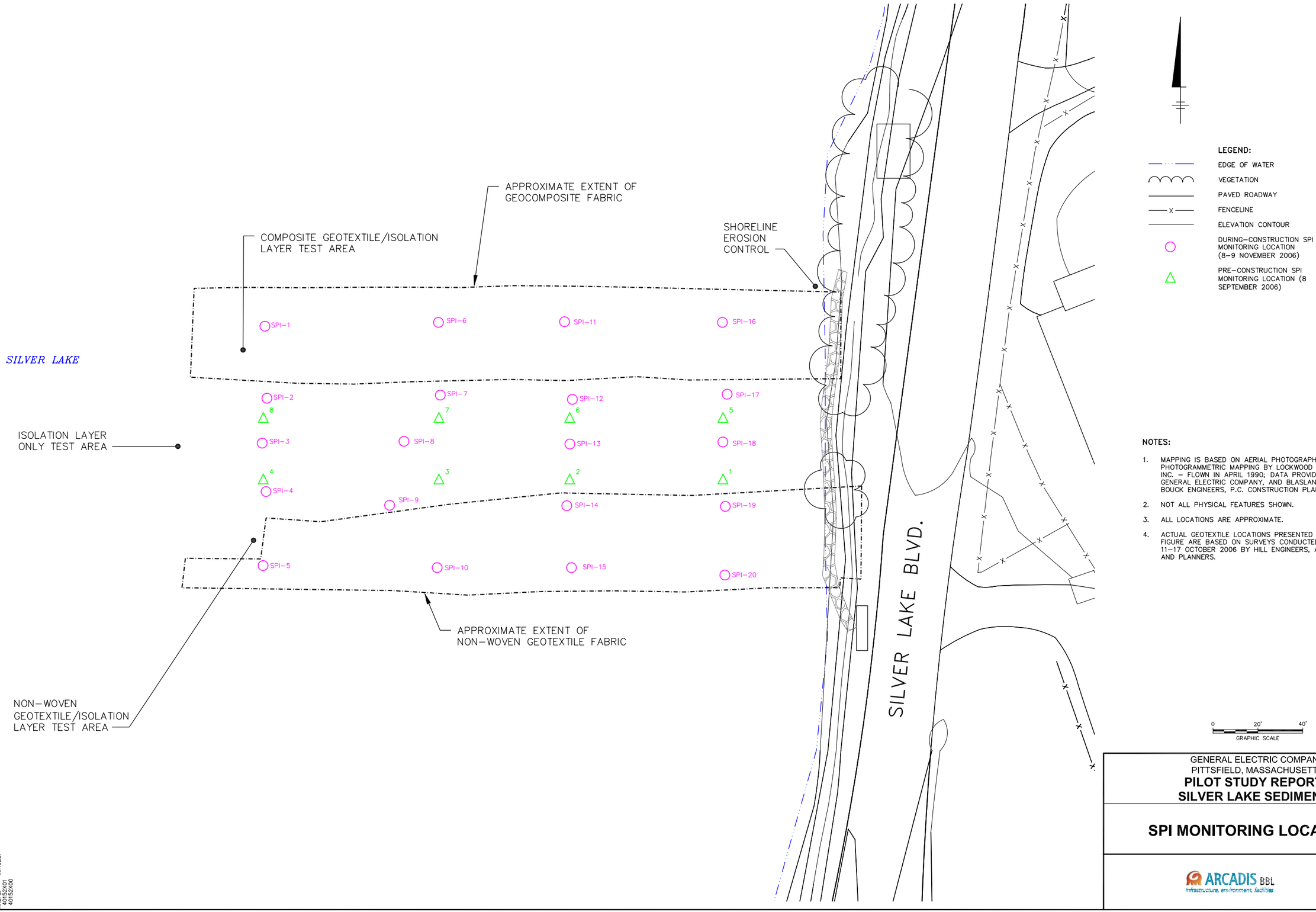
Appendix C

Sediment Profile Images



GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

PILOT STUDY REPORT - SILVER LAKE SEDIMENTS

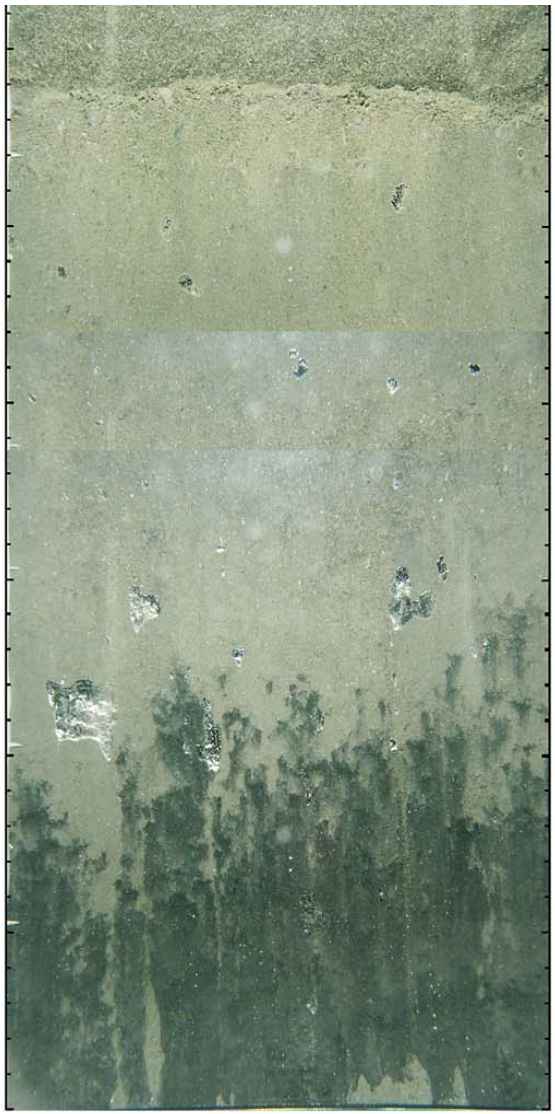
SPI MONITORING LOCATIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
C-1

SYR-BS-DWW LAF GMS LAYER: ON=*, OFF=REF, |BOUNDARY, |PROPERTY*, |ROAD_NAME
G:\CAD\GE-CAD\GE_ACTIVE\N\40152023\PILOT\40152G01.DWG SAVED:9/28/2007 9:23 AM LAYOUT:C-1 PAGESETUP:DL2B-PDF PENTABLE:PLTFULL.CTB PRINTED:9/28/2007 9:23 AM BY:GSTOWELL
PROJECTNAME: ----
XREFS: IMAGES:
40152X01
40152X02

Pre-Construction SPI Location 1



1-1

1-2

1-3

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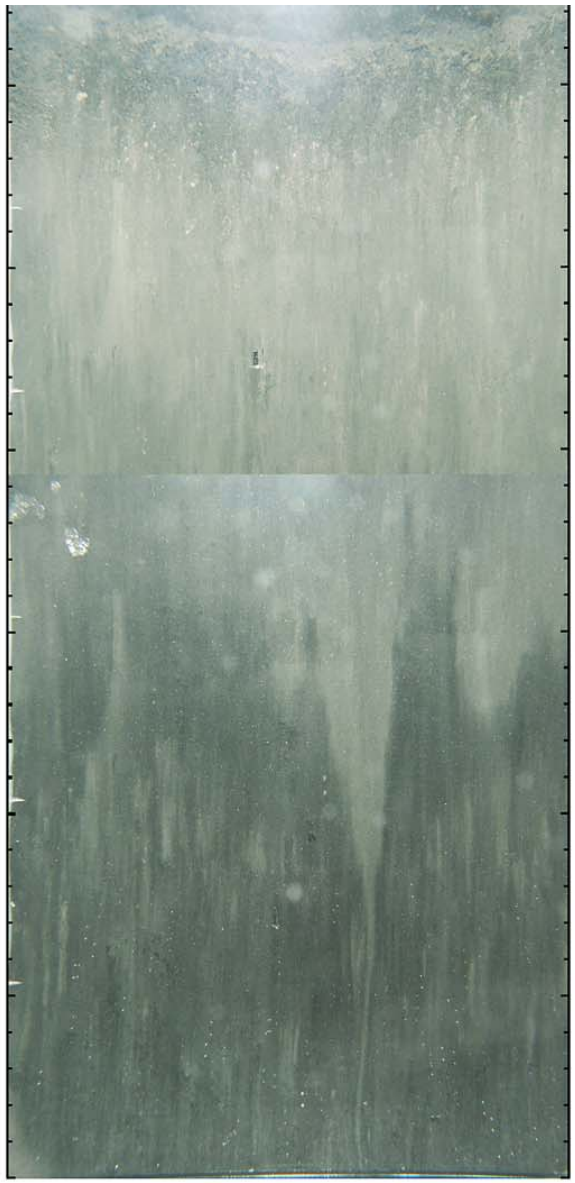
Pre-Construction SPI Location 2

2-1

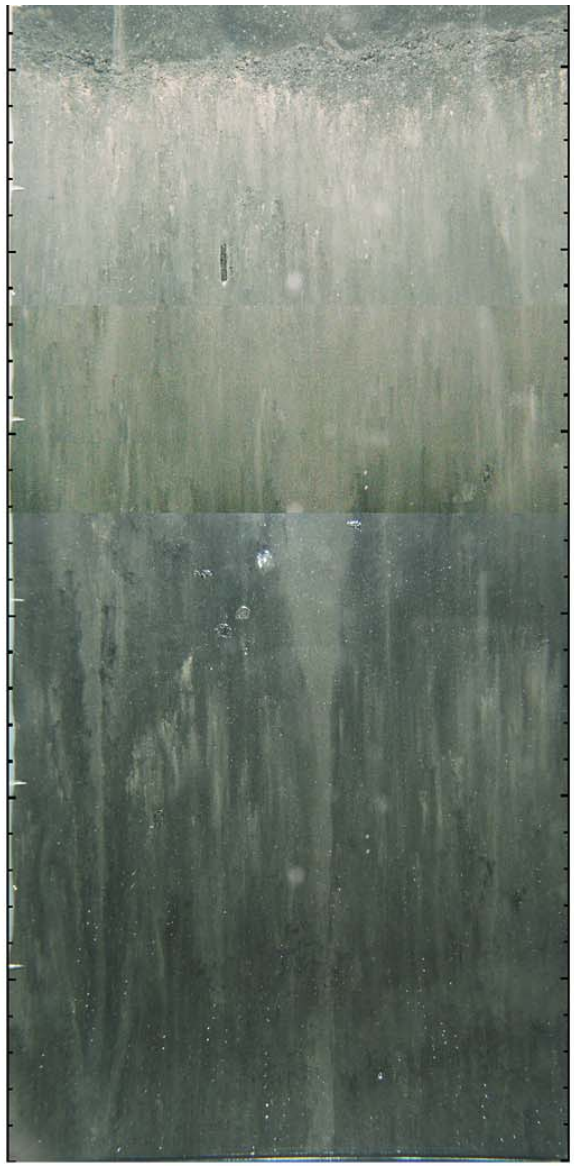
2-2

2-3

Pre-Construction SPI Location 3



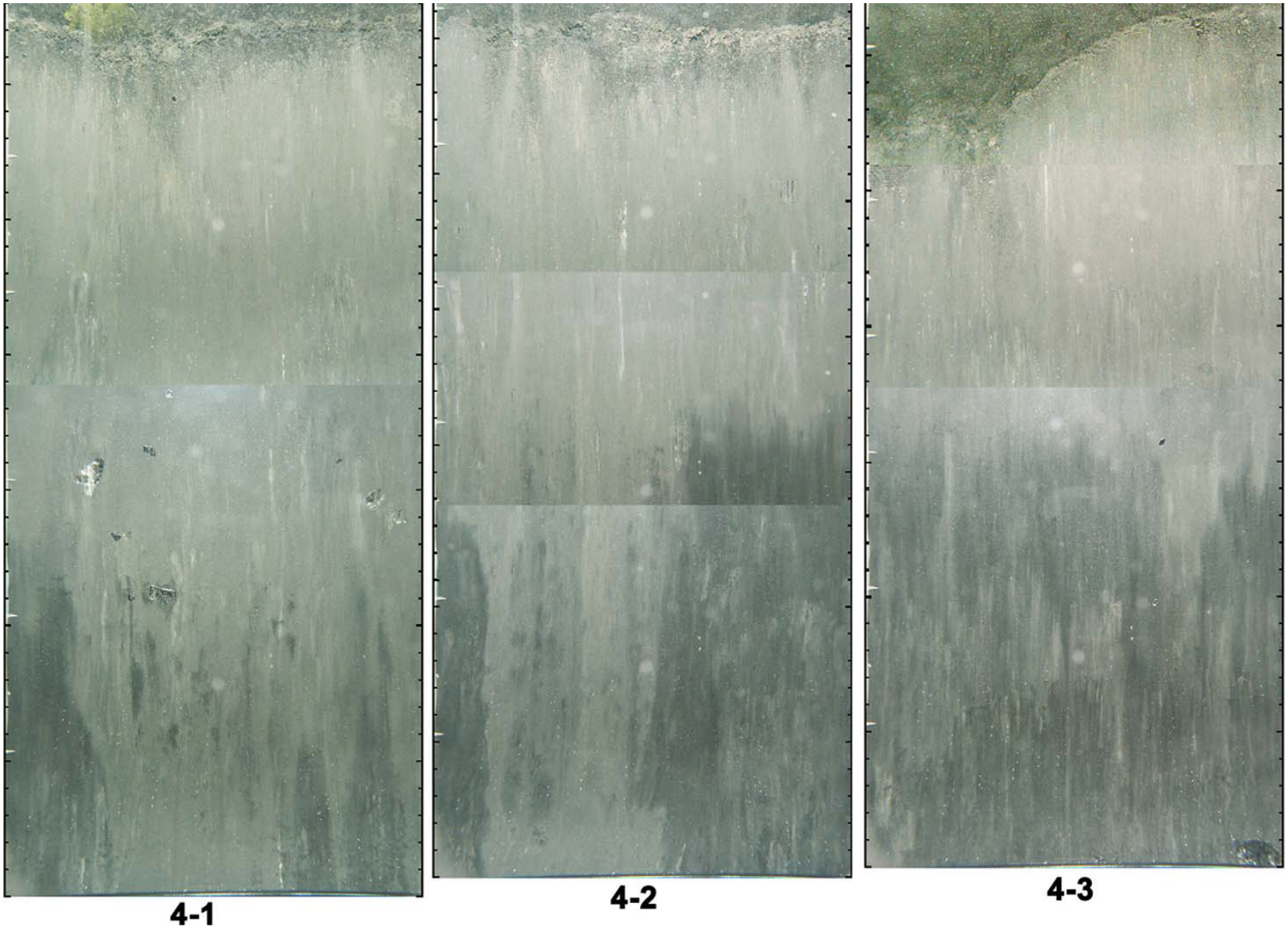
3-1



3-2

3-3

Pre-Construction SPI Location 4



Pre-Construction SPI Location 5

5-1

5-2

5-3

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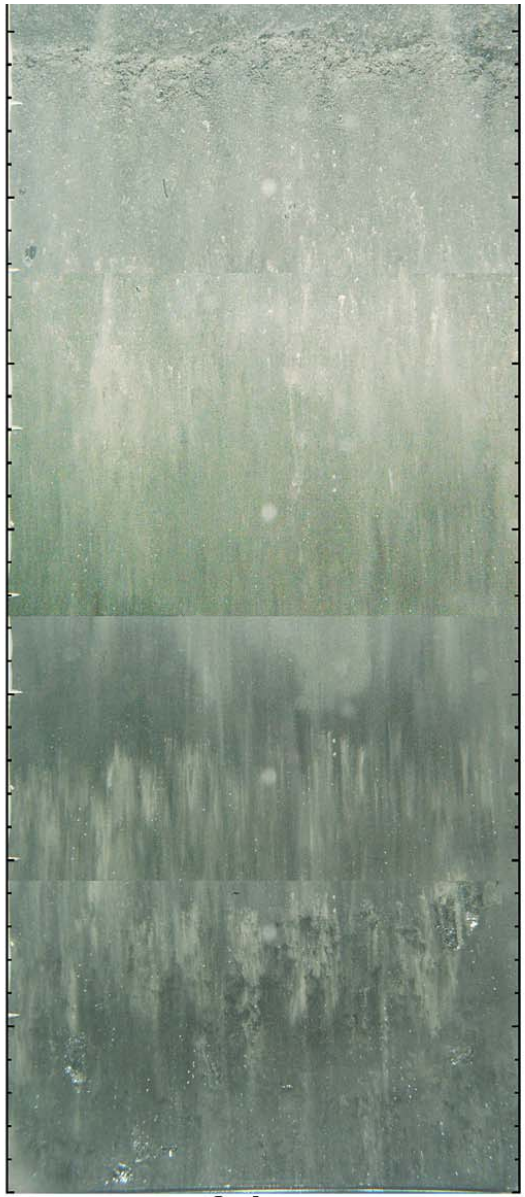
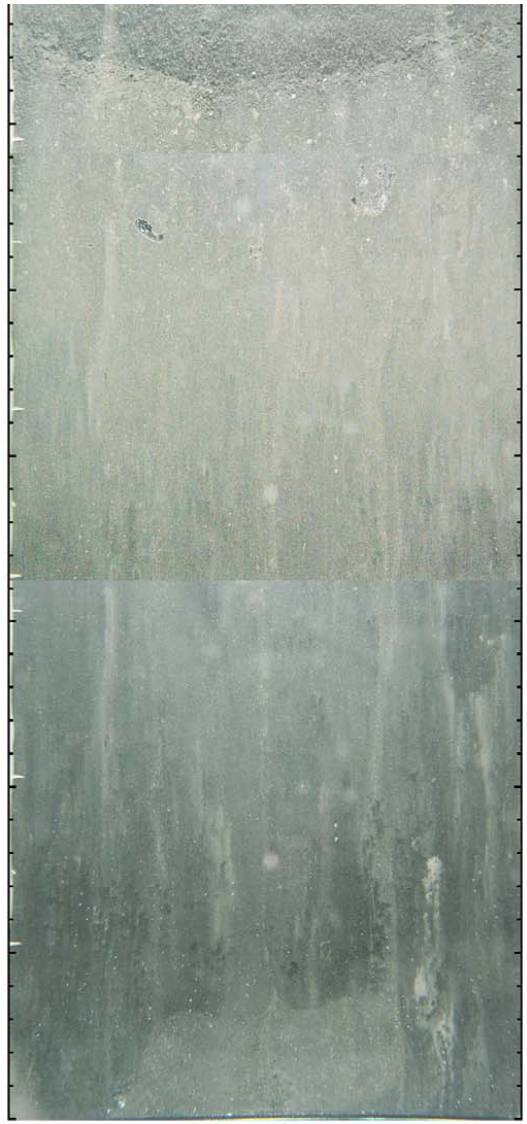
Pre-Construction SPI Location 6



6-1

6-2



6-3

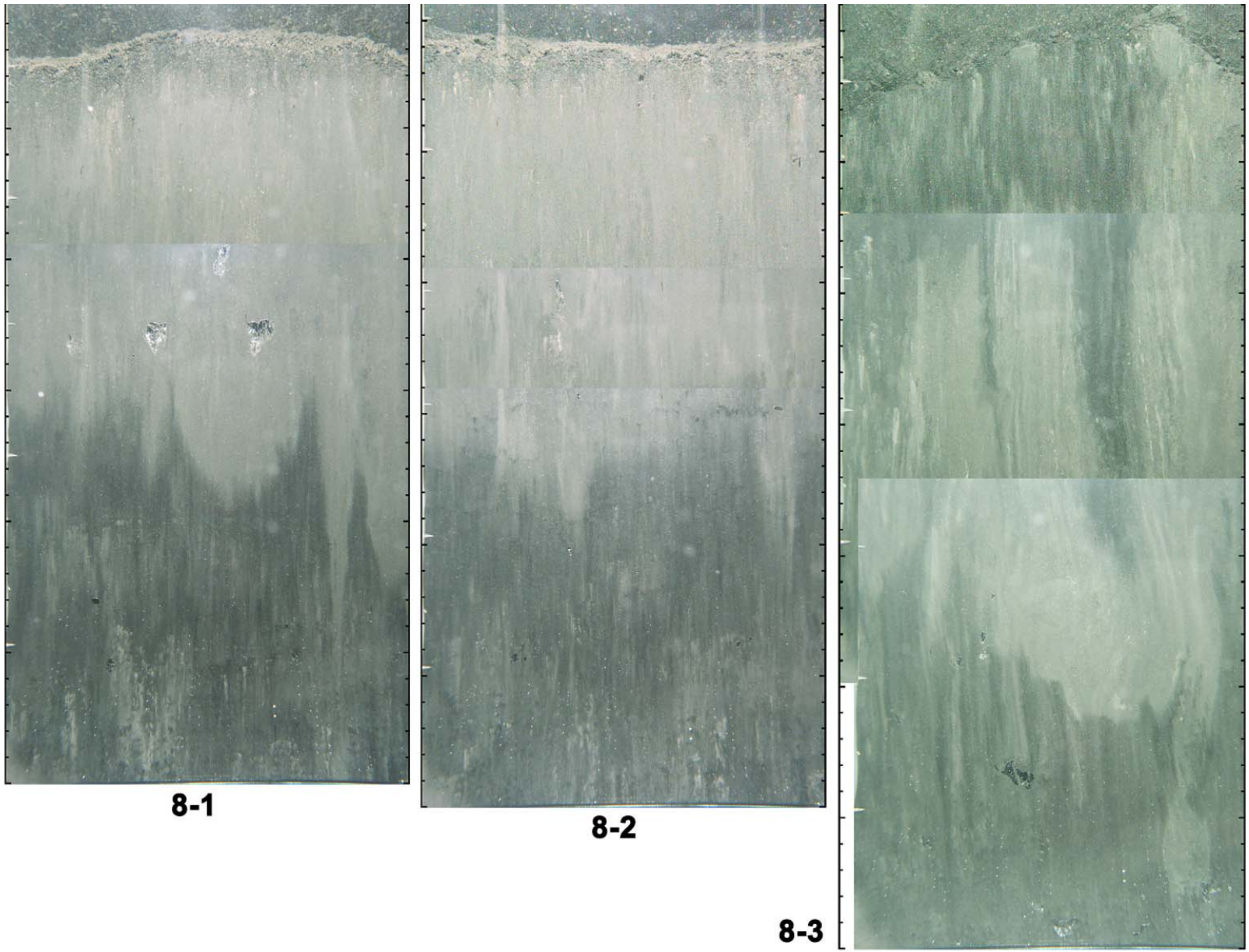
Pre-Construction SPI Location 7

7-1

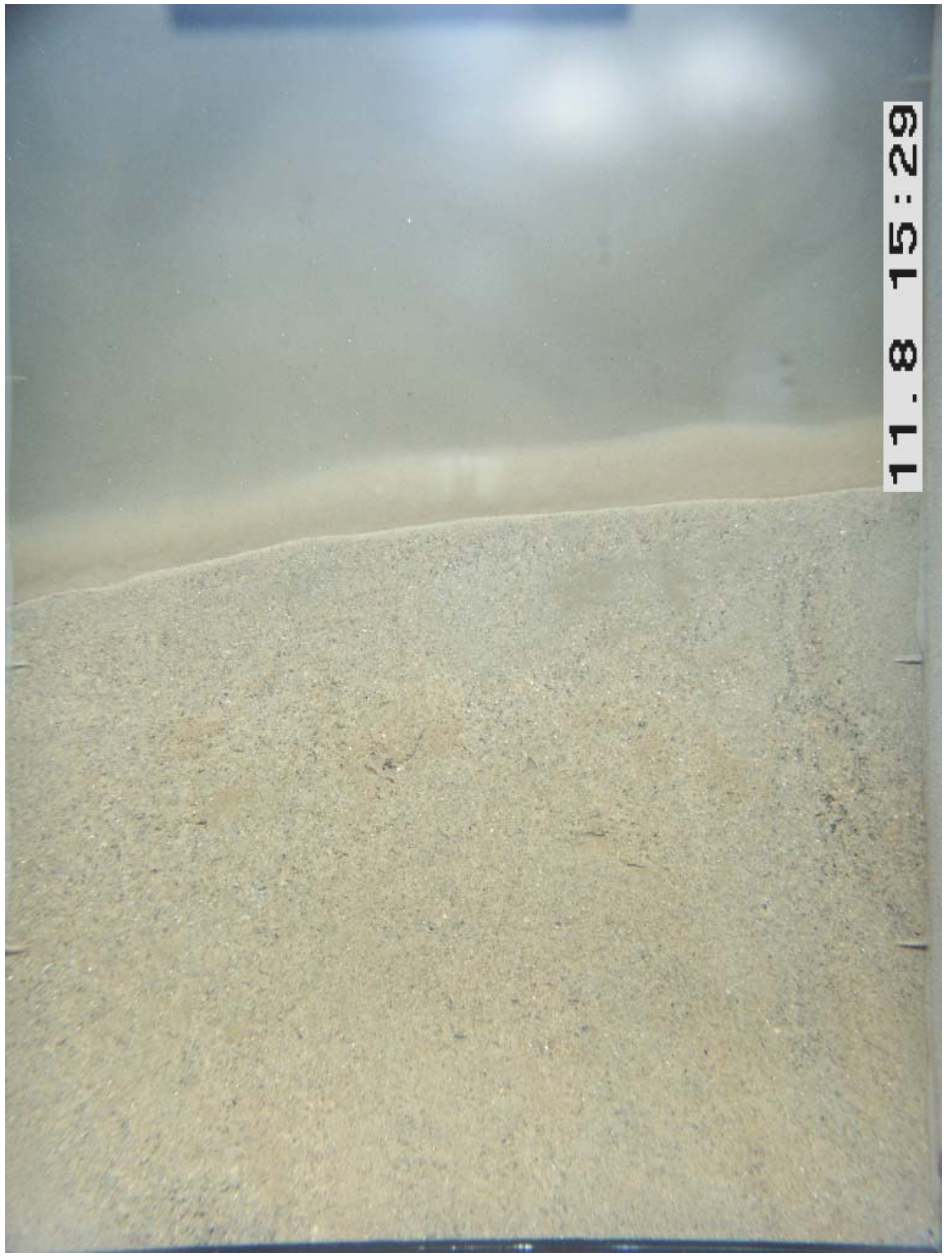
7-2

7-3

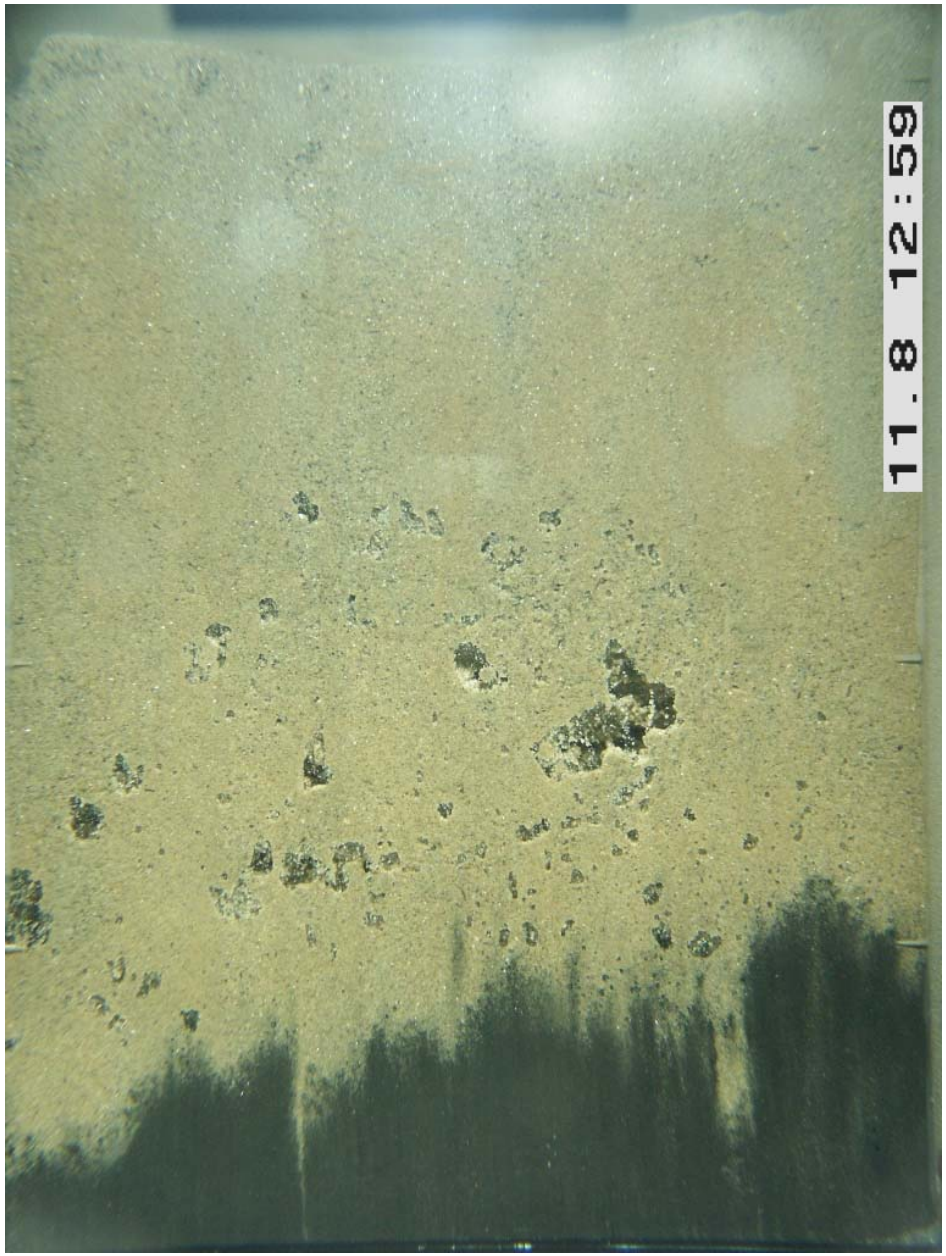
Pre-Construction SPI Location 8



During Construction SPI Location 1



During Construction SPI Location 2



During Construction SPI Location 3

During Construction SPI Location 4

During Construction SPI Location 5

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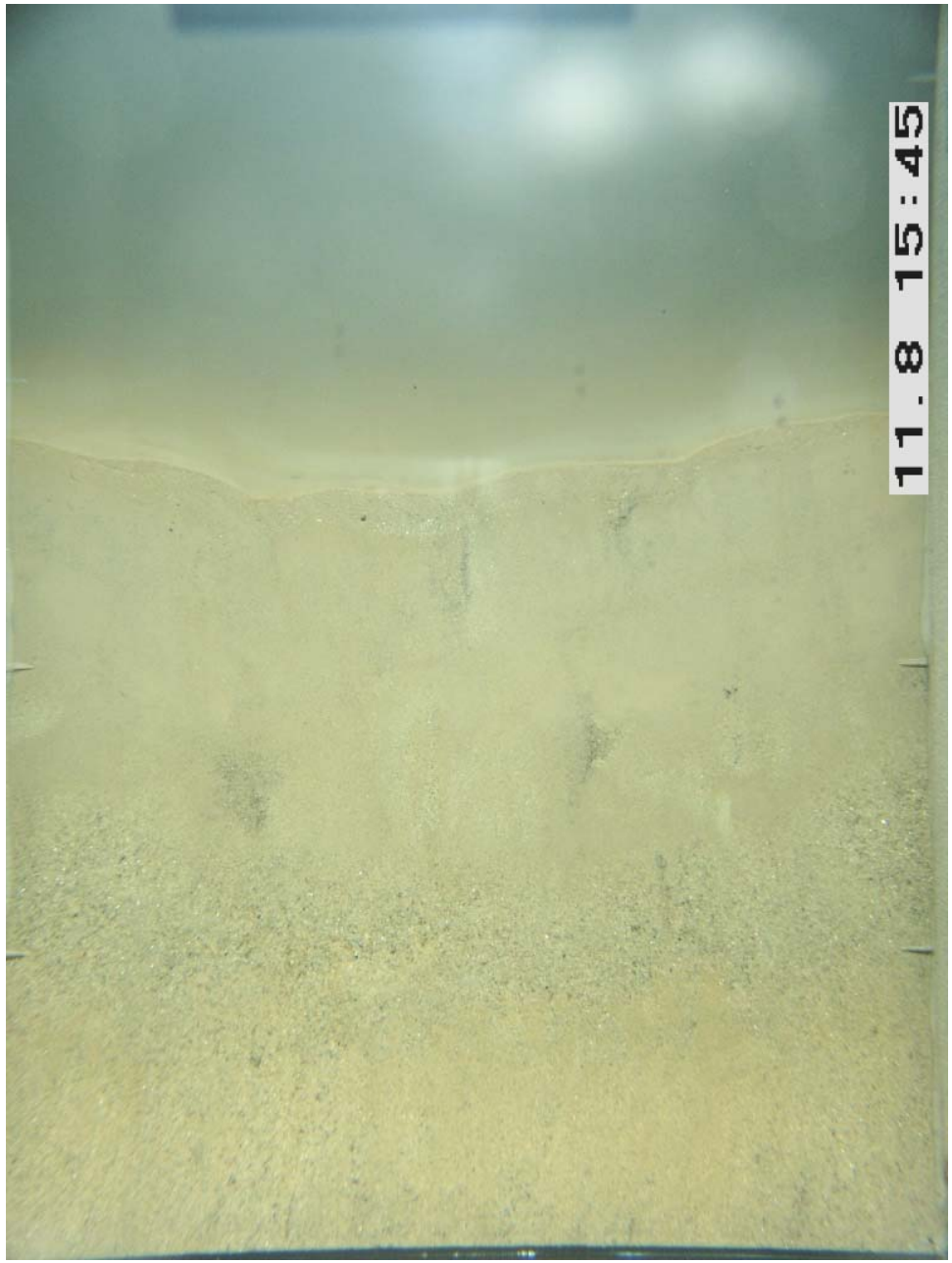
During Construction SPI Location 6



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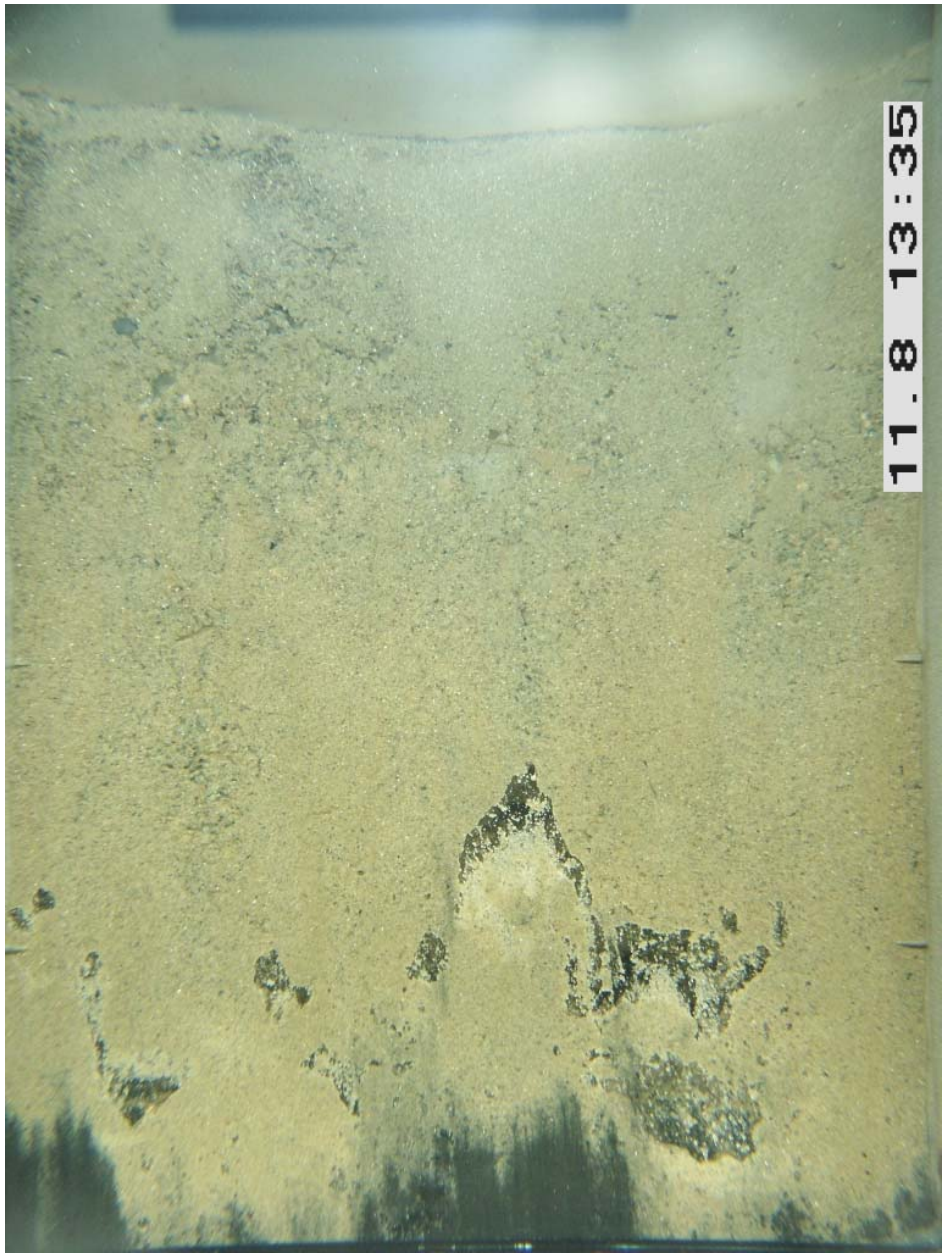
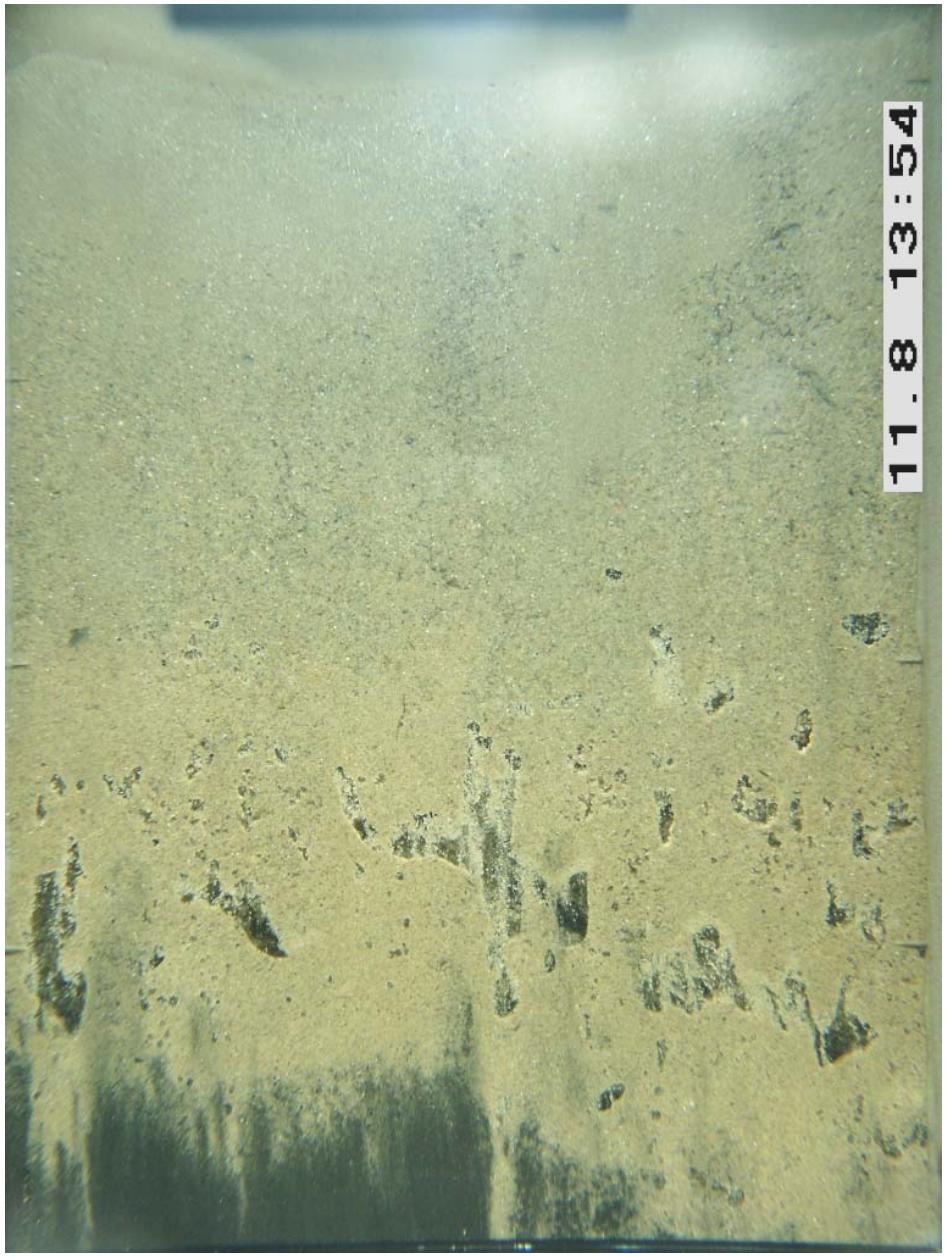
During Construction SPI Location 7



During Construction SPI Location 8

During Construction SPI Location 9



During Construction SPI Location 10

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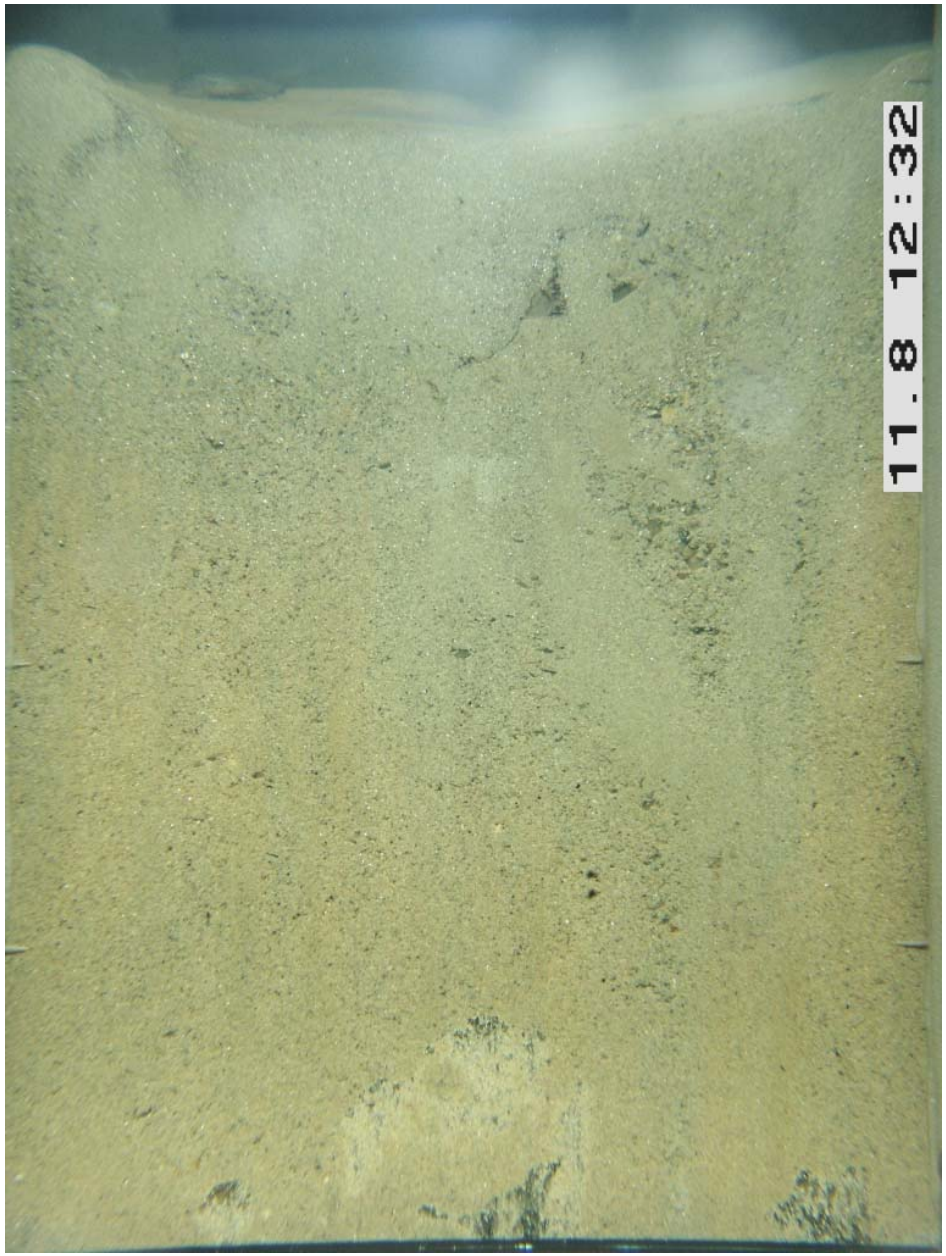
During Construction SPI Location 11

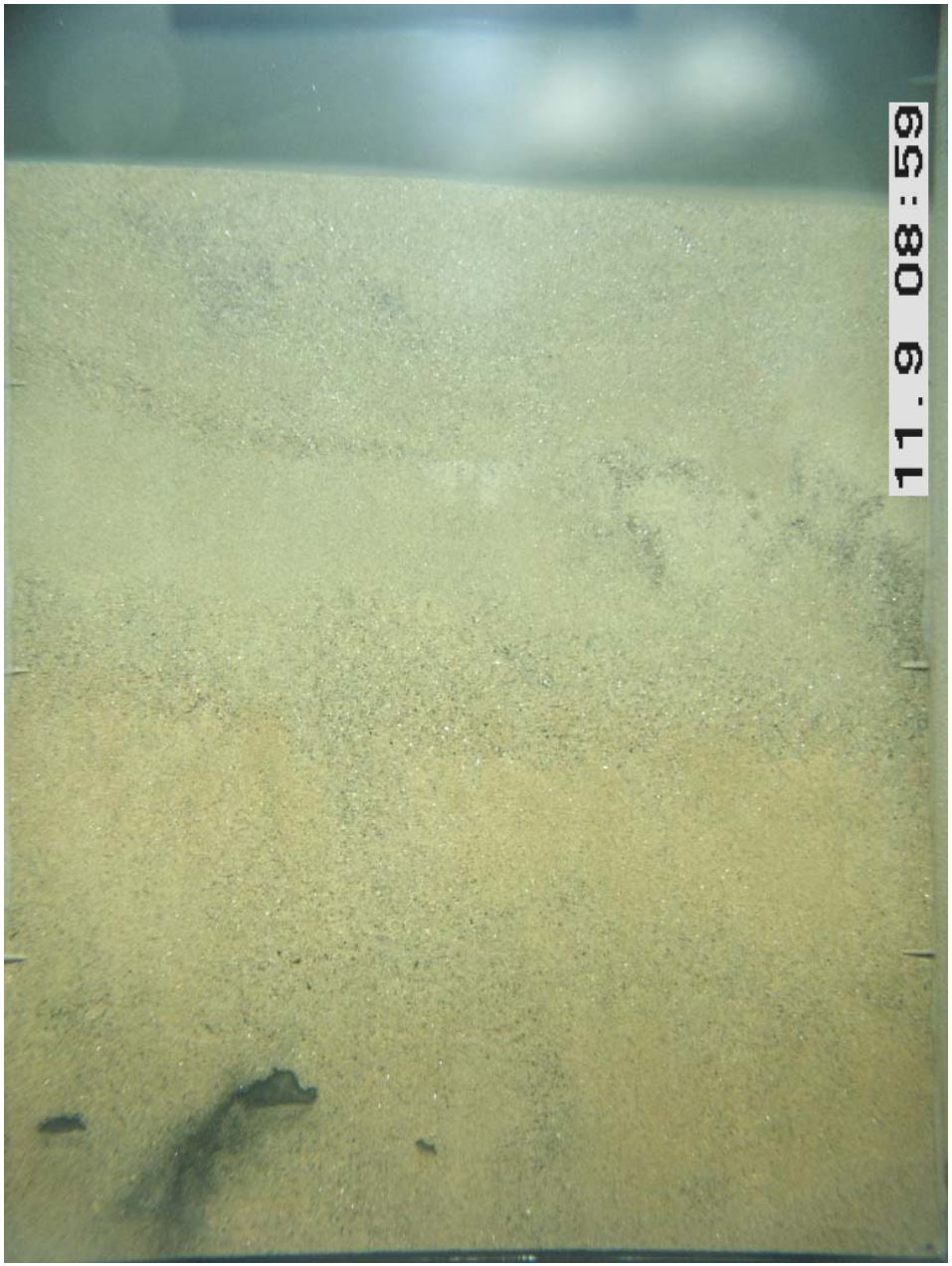
During Construction SPI Location 12



During Construction SPI Location 13

During Construction SPI Location 14

During Construction SPI Location 15



During Construction SPI Location 16

During Construction SPI Location 17

During Construction SPI Location 18

During Construction SPI Location 19

During Construction SPI Location 20

G:\GE\GE_Silver_Lake\Reports and Presentations\PS Report\Appendices\Appendix C

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Appendix D

Ocean Surveys, Inc.
Bathymetric Survey Reports

ARCADIS BBL

Ocean Surveys, Inc.
Bathymetric Survey Report
(25 January 2007)

OCEAN SURVEYS, INC.

MARINE AND FRESHWATER
SURVEY SERVICES

91 SHEFFIELD STREET
OLD SAYBROOK CT 06475

TEL. (860) 388-4631 FAX (860) 388-5879
www.oceansurveys.com

25 January 2007

Mr. Joe Denkenberger
Blasland, Bouck & Lee, Inc.
6723 Towpath Road
Syracuse, NY 13214

SUBJECT: FINAL REPORT (OSI REPORT NO. 06ES064) POST-CAP MONITORING, SILVER LAKE PILOT STUDY AREA, PITTSFIELD, MA

Dear Mr. Denkenberger

During September, November and December 2006, Ocean Surveys, Inc. (OSI) field teams conducted a multidisciplinary phased investigation of Silver Lake located in Pittsfield, MA. The investigations, conducted for Blasland, Bouck & Lee, Inc. (BB&L), were accomplished to evaluate sediment-capping techniques in an area within the lake designated as the Silver Lake Pilot Study Area (SLPSA). Phase I conducted on 8-10 September 2006, prior to construction/installation of a sediment cap in the SLPSA, consisted of the acquisition of multibeam soundings, subbottom profiling data and Sediment Profile Camera Imaging (SPI). Phase II, completed during the period 8-9 November 2006, was performed to provide BB&L with real-time SPI during construction/installation of the sediment cap. During the period 6-8 December 2006, following cap construction/installation, the Phase III survey was performed. Similar to Phase I, the Phase III survey consisted of the acquisition of multibeam soundings and subbottom profiling data in the SLPSA. The Phase III survey was intended to provide BB&L with documentation of post-cap placement conditions and a means to make a comparative analysis with pre-cap conditions (as documented during Phase I).

The results of Phase I and II have been reported under separate cover. This letter report outlines the procedures employed during all phases of the investigation and presents the results of the Phase III survey.

SUMMARY OF FIELD INVESTIGATION & EQUIPMENT

For each phase of the project a Trimble Real Time Kinematic Global Positioning System (RTK GPS) base station was established over a temporary survey control point "Silver OSI" established by OSI in the asphalt parking lot adjacent to the project boat ramp on the lake. The coordinates of the temporary control point were derived by OSI in 2003 based on survey control provided by BB&L during an earlier investigation of the lake. OSI established the temporary survey control point due to equipment security concerns and GPS signal-masking effect of overhanging trees in the vicinity of the BB&L project survey control points. The temporary OSI survey control point was established employing RTK GPS techniques. The following table provides a listing of survey control point coordinates provided by BB&L as well as the temporary point established by OSI.

Coordinates are referenced horizontally to the Massachusetts Mainland State Plane Coordinate System, NAD 83, U.S. Survey Feet. Project control is referenced vertically to the National Geodetic Vertical Datum of 1929 (NGVD29), Feet.

STATION	NORTHING	EASTING	ELEVATION
SL-03	2,993,600.10	186,184.15	978.81
ES-15	2,993,099.60	187,102.53	983.98
SL-01	2,993,892.25	187,208.40	984.58
Silver-OSI	2,993,624.58	186,209.68	978.75

A summary of the primary equipment employed to complete the investigation included:

- Trimble MS750 RTK-GPS (base station),
- Applanix POS MV, Version 4, Position and Orientation System (heave, pitch, roll, and heading for multibeam operations),
- Trimble RTK-GPS integral to the POS MV (vessel navigation for multibeam operations),
- Trimble 7400 Msi RTK-GPS (vessel navigation for SPI and SBP operations),
- HYPACK ® MAX PC-based navigation and data-logging software package,
- Reson SeaBat 8125 ultra high resolution multibeam echosounder,
- Sea-Bird SBE19 CTD profiler for water mass speed of sound determination (water column),
- Sea-Bird SBE37 MicroCat sound velocity sensor (sound velocity determination at multibeam transducer face),
- EdgeTech Chirp Subbottom profiling system equipped with a SB424 tow vehicle (operating at 4-24 kHz) interfaced with an EPC 1086 graphic recorder,
- Dr. Robert Diaz's design narrow prism sediment profiling imaging camera.

Specification sheets for systems utilized on this project are available upon request.

Survey operations were conducted from one of OSI's shallow-draft twin outboard survey vessels equipped with an array of survey and support equipment. The vessel was outfitted with a Trimble RTK GPS receiver configured to receive GPS corrector data broadcast from the OSI base station established over control point "Silver-OSI". Based on the known and the measured position of the RTK GPS base station reference antenna the base unit generates correctors for each GPS satellite in view and transmits these values via radio modem to the shipboard RTK GPS unit. The shipboard RTK GPS unit employs the correctors in calculating 3-D position fixes with a manufacturers stated 1 cm horizontal and 2 cm vertical accuracy.

Survey vessel navigation and trackline control were accomplished using the Trimble RTK GPS receiver interfaced with HYPACK MAX software. Latitude, longitude, and elevation values were output from the GPS to data logging computer. HYPACK MAX then computed the position of the vessel within the project horizontal grid system.

The OSI system incorporates a portable personal computer supporting multiple input/output ports and color display monitors. Position information is received from the mobile RTK GPS

receiver and logged to computer disk. Prior to the survey, tracklines were prepared and graphically displayed on the computer video monitor. While surveying, the current position of the survey vessel is superimposed on this display, augmented by a text display of parameters such as vessel speed, heading, course to steer, distance off line, event, time, etc. The combination of a graphic display, supported by numerical values, provides real-time navigation and depth data to the operator as the vessel is maneuvered along the intended survey trackline.

The 3-dimensional precision positioning capability provided the field team with the ability to navigate the vessel precisely along pre-plotted survey tracklines throughout the SLPSA as well as the ability to navigate to, and accurately record the position of SPI deployments. The vertical accuracy of the navigation system allowed the field team to adjust soundings in real-time for fluctuations in water level. During survey operations the vertical and horizontal accuracy of the positioning system was verified daily by comparing the observed position of the navigation system antenna with the known coordinates of a BB&L-provided control point and/or additional temporary points established by OSI.

Sediment Profile Imaging

Sediment profile images were collected using a sediment profile camera system developed and provided by Dr. Robert J. Diaz. The Diaz Sediment Profile Imaging System (SPI) is comprised of a 5.2-megapixel Minolta Dimage-7i camera and strobe, fresh water filled housing with prism, and a sturdy aluminum frame. The camera is mounted on the top of the water-filled prism assembly and aimed down at a mirror oriented 45° relative to the camera lens and the prism's plexiglass face plate. The images are recorded by manually triggering the shutter release by remote control. The strobe illuminates the sediment allowing for operation in complete darkness. The video output of the camera was monitored remotely to ensure prism penetration and orientation at each SPI location.

The OSI field team prepared the camera system for deployment at each station by first manually firing the camera on the deck to both document the proper operation of the strobe and camera and to record an image with the station number. In operation the survey vessel was navigated to a given SPI location and the vessel position stabilized as much as practical given the prevailing wind. The camera frame assembly was then lowered and a position fix recorded once the camera prism made contact with the lakebed. During penetration the camera was triggered multiple times in order to record the entire sediment profile during penetration. Once maximum penetration was achieved the camera frame assembly was retrieved by means of an electric winch mounted on a custom lifting apparatus. A variety of weight combinations were employed in order to achieve the desired prism penetration at each location.

Multibeam Hydrographic Survey

Before commencement of multibeam sounding operations, the sound velocity profile of the local water mass was determined by means of a conductivity-temperature-depth cast (CTD) of the water column. In addition to developing sound velocity profile information, real-time monitoring of sound velocity at the transducer face was accomplished by means of the velocity sensor affixed directly to the multibeam transducer.

A sensor alignment test or "patch test" was performed prior to survey operations. Initially, the precise vertical and horizontal offsets between multibeam system components (echo sounder transducer, position-orientation system) were physically measured. Once the physical offsets were stored in the data collection platform the required patch test data were obtained and analyzed to determine system roll, pitch, and heading biases along with any navigation timing errors. The angular and timing values, along with water level (discussed below) and water column sound velocity profile information were subsequently used during data processing to determine the final depth and position of each sounding.

Upon determination of all physical, angular, and timing offsets by means of the various methods described above, a "QA Performance Test" was carried out per specifications in the U.S. Army Corps of Engineers (ACOE) Hydrographic Surveying manual "EM 1110-2-1003". Per the ACOE manual, "The performance test is used to evaluate the quality and confidence of multibeam data being collected. This test typically compares overlapping data sets from two different multibeam surveys, performed by either the same or different vessels".

The test consists of two phases. First, a "performance surface" is created by means of executing a small survey run over an extremely flat area. A performance surface is developed from a set of overlapping multibeam data (400% coverage) taken along a series of survey transects within the designated test area. The performance surface data are cleaned and bin-averaged into 1 ft by 1ft cells resulting in an accurate, dense XYZ data set describing lakebed elevations. Next, a series of "multibeam check lines" is run over the performance surface. These data are input to the HYPACK MAX Beam Angle Test program, which compares multibeam check lines to the performance surface and estimates the depth accuracy of the multibeam system at different beam angle limits. The estimated accuracy is used to determine if the multibeam system meets project requirements.

In addition to the calibration and QA steps described above the field crew performed a QC step unique to this project. Prior to the Phase I survey, a group of three "acoustic targets" were installed adjacent to the SLPSA. These targets were deployed to provide "acoustic bench marks" near the study area. The intention of the acoustic target approach was to maximize the relative accuracy of the repetitive surveys by normalizing the multibeam surfaces to one another based on comparison between the acoustic target surveys. The intent of the acoustic target surveys was to reduce the potential influence of minor variations in water column characteristics along with small-scale water level and sensor offset values as a source of depth error.

The targets are comprised of a approximate one-foot square aluminum plate welded to the end of a 10-foot section of 3" aluminum tubing. During Phase I, the survey vessel was anchored securely over each of the intended acoustic target locations. At each location the target assembly was lowered to the lakebed and pushed and/or vibrated into the lakebed until the target plate was approximately two feet above the lakebed and parallel to the water surface. Once the targets were installed and the calibration and QA checks performed for the Phase I survey, a multibeam dataset was collected over the acoustic targets. At this point the acoustic target data was archived and the remainder of the Phase I project tasks accomplished.

During Phase III the acoustic targets were resurveyed and the elevation data compared to the Phase I results. Comparative analysis revealed that one of the targets had been significantly

disturbed. It is assumed that the target was disturbed as a result of construction activity. The elevation of the undisturbed targets remained consistent between the Phase I and Phase III surveys. In fact, the undisturbed target elevations matched so well between surveys that no adjustments were made to the Phase III dataset.

As an additional data quality check, at the beginning and end of each multibeam survey day the depth measuring accuracy of the echosounder was confirmed by means of a "bar check". The bar check procedure consists of lowering an acoustical target on a graduated sounding line to the deepest practical depth. The target is then raised to successively shallower depths and the displayed digital depths noted. During the course of the survey the water column velocity profile was monitored by means of CTD casts and all observed changes in sound speed (as a result of changing temperature, etc.) recorded. During post processing, sound velocity profile data were applied to the multibeam soundings.

The HYPACK MAX software package allows the surveyor to record the vertical component of the vessel RTK GPS solution by placing this value in the project raw data file while bathymetric data are being recorded. Procedurally, a measured vertical offset (height of the antenna over the water surface) is applied to the RTK GPS solution during data collection. Thus the elevation of the water surface is derived based on the vessel's RTK GPS antenna height. The RTK water level values were continuously recorded at the location of the survey platform as the vessel was maneuvered along the survey transects. Soundings were reduced to the NGVD 29 vertical datum based on RTK GPS water levels made during the course of the survey.

Vessel RTK GPS water level values were compared to a physically measured water level value at least twice daily. Procedurally the vertical distance from the water surface to a temporary bench mark was measured and the water level calculated. The calculated water level value was compared to a simultaneously observed RTK GPS water level to confirm the accuracy of the RTK GPS-derived value.

Multibeam soundings were collected along a set of parallel tracklines oriented perpendicular to the long axis of the site. The trackline plan consisted of lines offset at intervals intended to result in over 100% ensonification of the lakebed. Additionally, near-shore shallow areas were mapped with the multibeam transducer oriented in a "side-looking" configuration.

Following completion of the field survey, raw data files and records were returned to OSI's headquarters in Old Saybrook, Connecticut where data processing tasks were completed. Procedurally, the raw multibeam data files for each trackline were sequentially loaded into the HYPACK MAX multibeam editor. Within the editor raw data files, consisting of multibeam range and beam information, water level, water column velocity profile, vessel position and attitude information, were edited to eliminate invalid sensor data or "fliers" using automated and manual editing tools. After the sensor data were cleaned datum-corrected X, Y, Z data points were computed.

Sounding X, Y, Z data points were contoured using "Quicksurf" Version 5.1 operating within AutoDesk AutoCAD Version 2000. Lakebed elevation contours were developed from 0.5 foot by 0.5 foot binned data with the average depth within each bin posted in the center of the bin. OSI "06ES064 Drawing 1", delivered following the conclusion of the Phase I survey depicts the

SLPSA preconstruction elevation conditions. Following the conclusion of Phase III, two additional multibeam data presentations have been prepared. OSI "06ES064 Drawing 2", similar in scale and presentation to Drawing 1, is a plan view representation of lakebed elevations within the SLPSA based on Phase III data. OSI "06ES064 Drawing 3" is a contour plot depicting the difference between the Phase I and Phase III lakebed surfaces. The difference values contoured in the drawing are equal to the elevation of the Phase III (December 2006) survey minus the elevation of the Phase I (September 2006) survey.

A review of Drawing 3, which depicts changes in lakebed elevation between pre and post capping in the SLPSA shows elevation changes ranging from minimal on the western end of the site to approximately two feet near the shoreline. However, in general, a large portion of the site shows elevation changes on the order of 0.25 feet to 0.5 feet.

Subbottom Profile Survey

Subbottom profiling was conducted in the SLPSA during Phases I and III to test the effectiveness of the subbottom system in mapping layers below the lakebed and to evaluate the thickness of the constructed sediment cap. Subbottom data were acquired utilizing an Edgetech Chirp subbottom profiling system equipped with an SB424 tow vehicle operating in the frequency range of 4-24 kHz.

Operationally the Chirp tow vehicle was deployed over the side of the survey vessel, just below the water surface and directly under the navigation system antenna. Hardcopy subbottom profile records generated throughout the course of the survey were annotated with relevant supporting information, field observations, line number, run number, navigation event marks and numbers to aid in post processing /interpretation and correlation with vessel position information.

During the Phase I survey, subbottom data were acquired along a total of 14 survey lines. Eight of the survey lines were oriented parallel to the long axis of the SLPSA and spaced approximately 20-feet apart. The remaining six survey "tie" lines were oriented perpendicular to the primary lines and varied in spacing with the majority of these tracklines concentrated near the shore. During the Phase III survey, 12 subbottom survey lines were investigated as two of the near shore lines investigated during Phase I were inaccessible due to depth limitations resulting from the recently placed cap material. Figure 1 provides an overview of the subbottom survey line layout followed during Phase I and III.

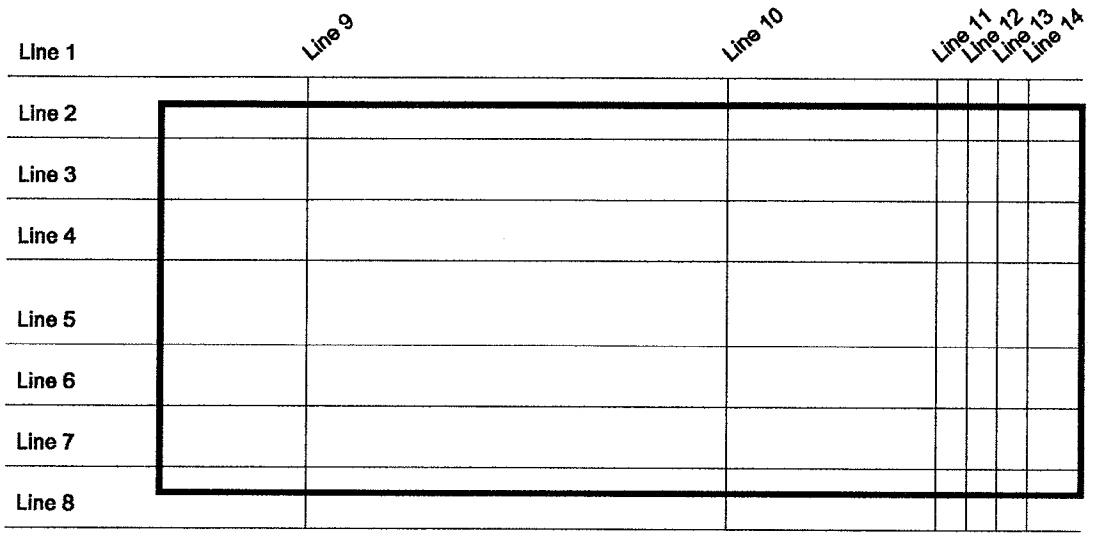


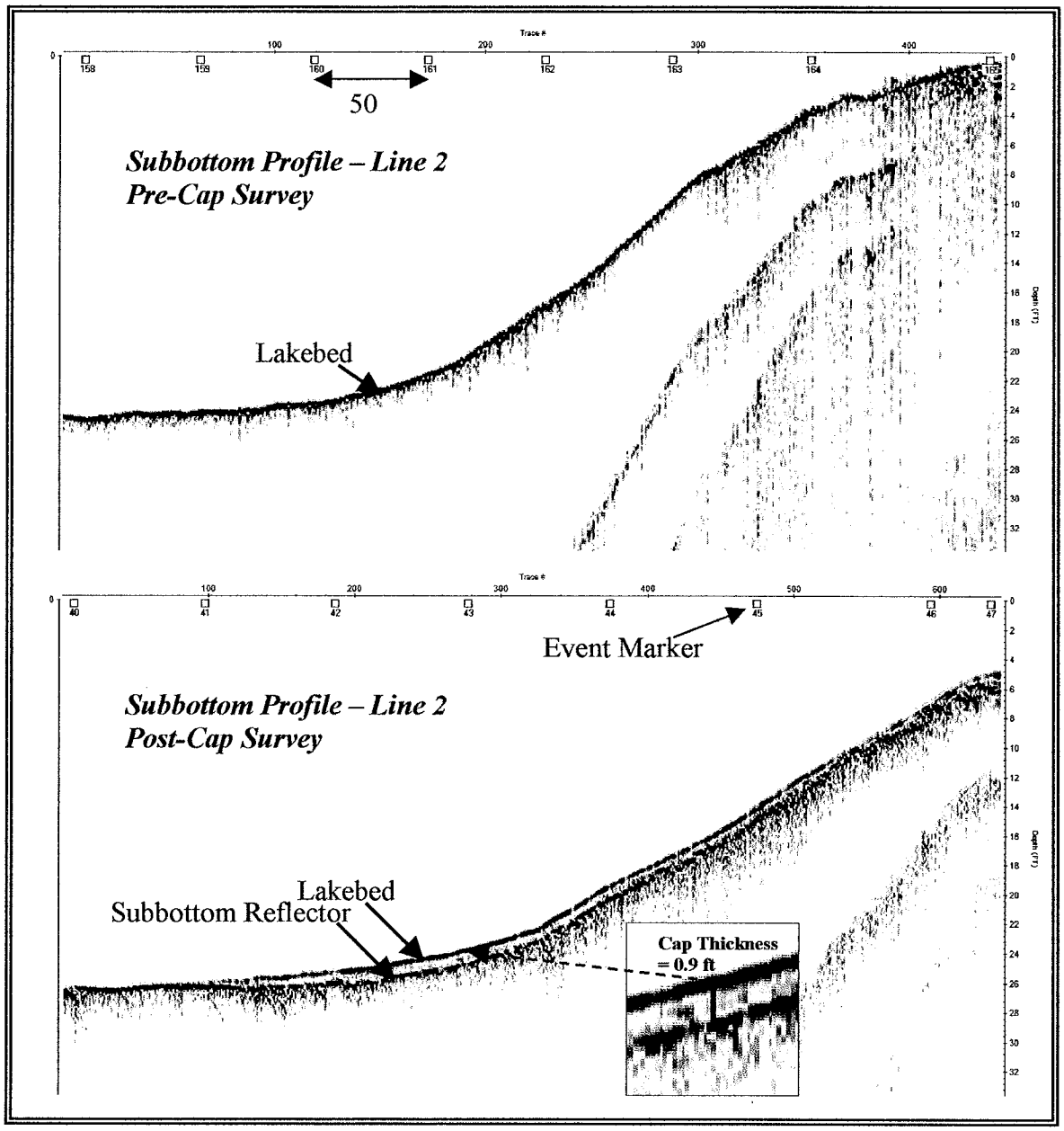
Figure 1: Subbottom survey line layout, blue boundary represents the limits of SLPSA.

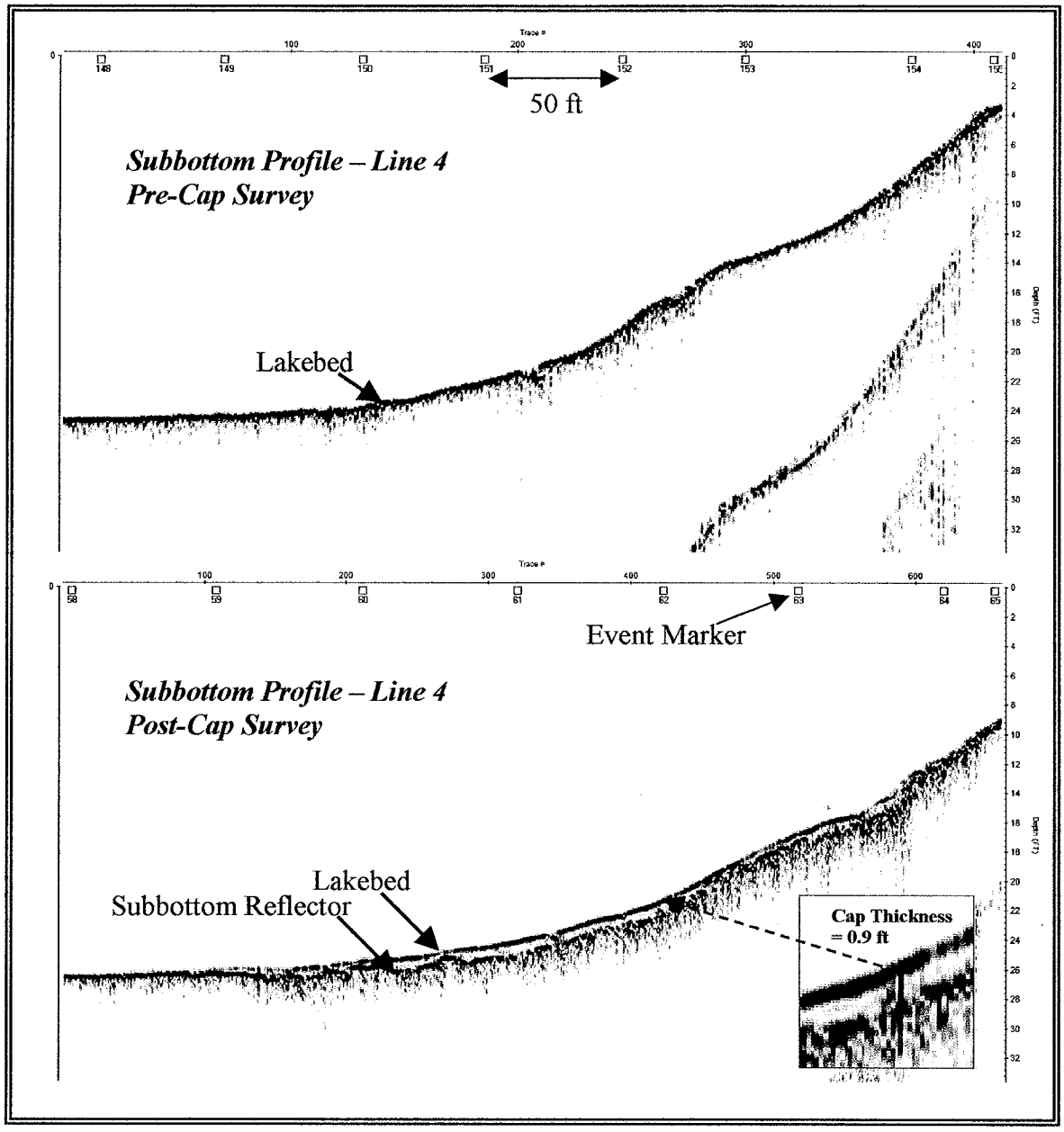
Subbottom profiling data acquired during Phase I was restricted, as it showed no penetration of the lakebed and/or resolution of subbottom reflectors at depth. The lack of penetration is likely attributable to the presence of organic gas contained in the near surface sediments. This gas typically accumulates from the breakdown of organic material in the sediments and act as a curtain or an acoustic barrier, inhibiting subbottom signal propagation. During the installation of the multibeam targets in Phase I it was observed that the lakebed, in many places, consisted of a mat of decaying leaf matter. This decaying leaf matter most likely contributed to the presence of organic derived gas in the sediment and subsequent lack of subbottom penetration in the lake. Furthermore, during the Phase I SPI work, bubbles were noted in the water column and sediment escaping from the lakebed as the camera frame contacted the bottom.

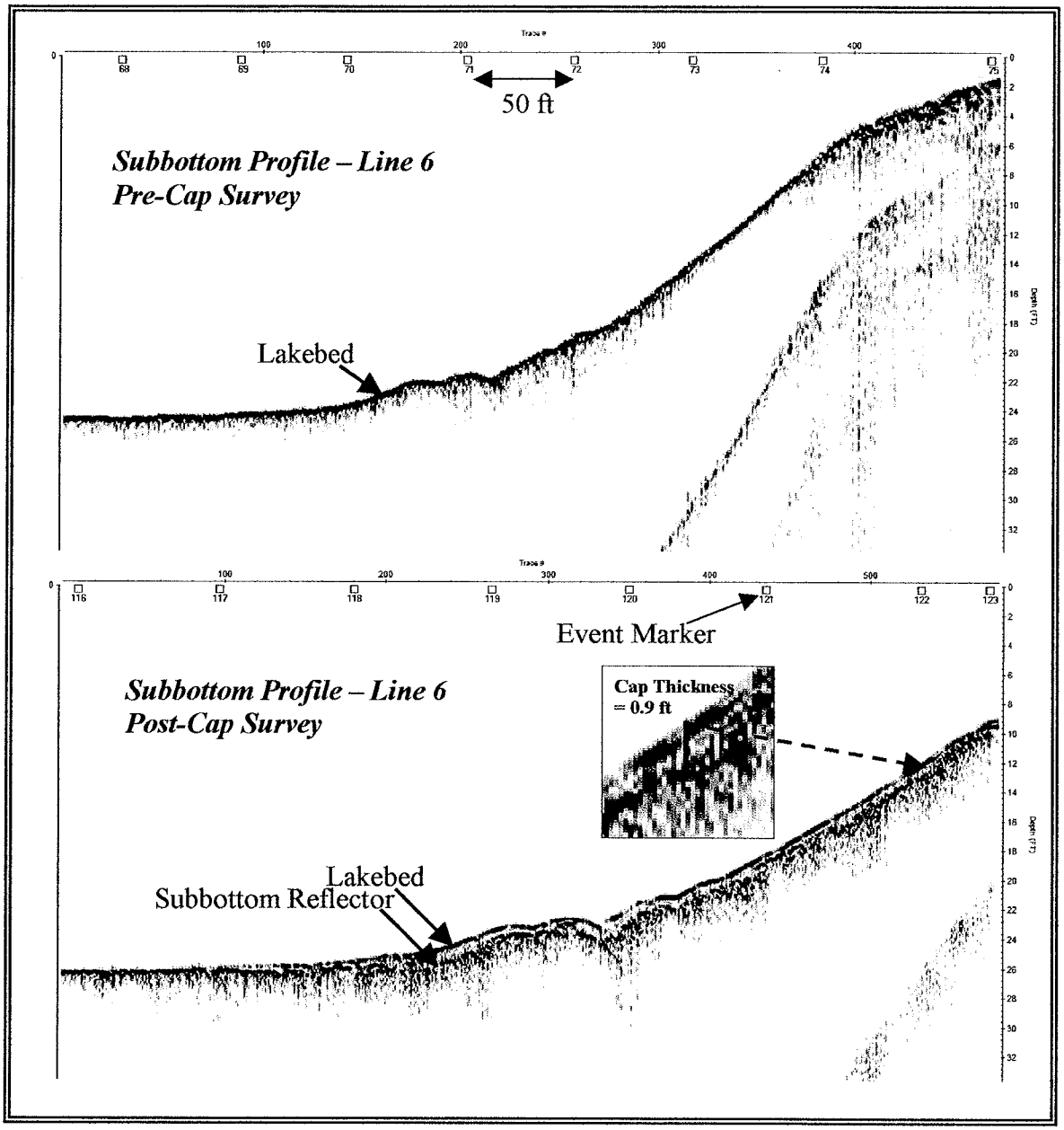
Subbottom profile data acquired during Phase III showed limited subbottom penetration and resolved a subbottom reflector just below the lakebed within the SLPSA. The reflector resolved is interpreted as the pre-cap lakebed surface. To estimate the thickness of sediment overlying this reflector (interpreted cap thickness), subbottom data were processed and reviewed employing Sandmeier's Reflex-Win Version 4.0 (2005) data processing software. Since all recorded subbottom data are based on time, a time to depth conversion was applied to each profile using an average acoustic velocity of 4800 feet/second for the overlying sediment (cap sediment). Subbottom profiles have been constructed for the eight primary survey lines investigated during Phase III, which showed subbottom penetration. These profiles are included in an attachment along with a plan view index map showing the location of the subbottom profiles and associated vessel tracklines.

To best illustrate the results of the Phase I (pre-cap) and III (post cap) subbottom profiling surveys, three sets of representative figures have been constructed. Pre and post-cap profiles are presented for comparison for survey lines 2, 4 and 6. Note the lack of penetration below the lakebed on the pre-cap survey profiles and the clear subbottom reflector resolved on the post-cap survey profiles. Several points were selected along the post cap profiles for an interpreted cap thickness measurement. Overall, as illustrated in the following profiles and those attached to this

report, the cap material seems to be fairly uniform in its distribution across the SLPSA, ranging in thickness between 0.8 and 1.0 feet.




50 ft
Subbottom Profile – Line 4
Pre-Cap Survey
Lakebed
Event Marker
Subbottom Profile – Line 4
Post-Cap Survey
Lakebed
Subbottom Reflector
Cap Thickness
= 0.9 ft



Data Discussion

The multibeam difference map depicts elevation changes in the SLPSA ranging from minimal on the western end of the site to up to two feet of near the shoreline but generally on the order of 0.25 feet to 0.5 feet. This elevation difference is less than expected, given that the sediment cap installed was intended to be approximately 1 foot thick. Comparison of the pre and post construction subbottom profile data indicates an average cap thickness of 0.9 feet, close to the expected value. Based on the observed differences between the two methods it is possible that

the difference between expected and measured lakebed elevation changes may be related to sediment compaction during the installation process.

Further investigations may provide more insight into the mechanisms of the capping process including possible compaction. It may be possible to directly measure the sediment cap thickness by acquiring cores from the study area, however this may not be practical if the intent is to not disturb the underlying sediments. Modeling and engineering calculations of the cap material and compressibility of the underlying sediments may also provide further insight into the degree of compaction to be expected during the sediment capping process.

OSI appreciates the opportunity to support BBL on this project and we look forward to continuing this working relationship in the future. If you have any questions regarding any aspect of this survey, or we can be of service on other survey efforts, please do not hesitate to contact me.

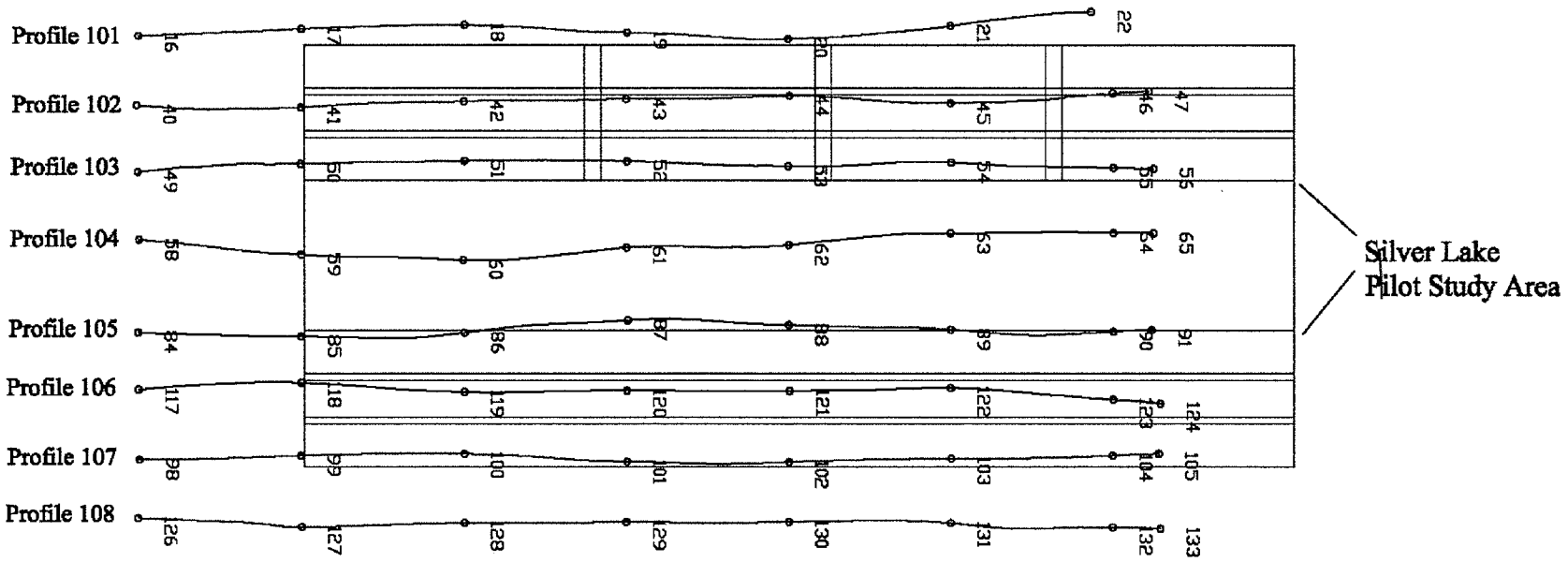
Sincerely,

R M. Wallace II

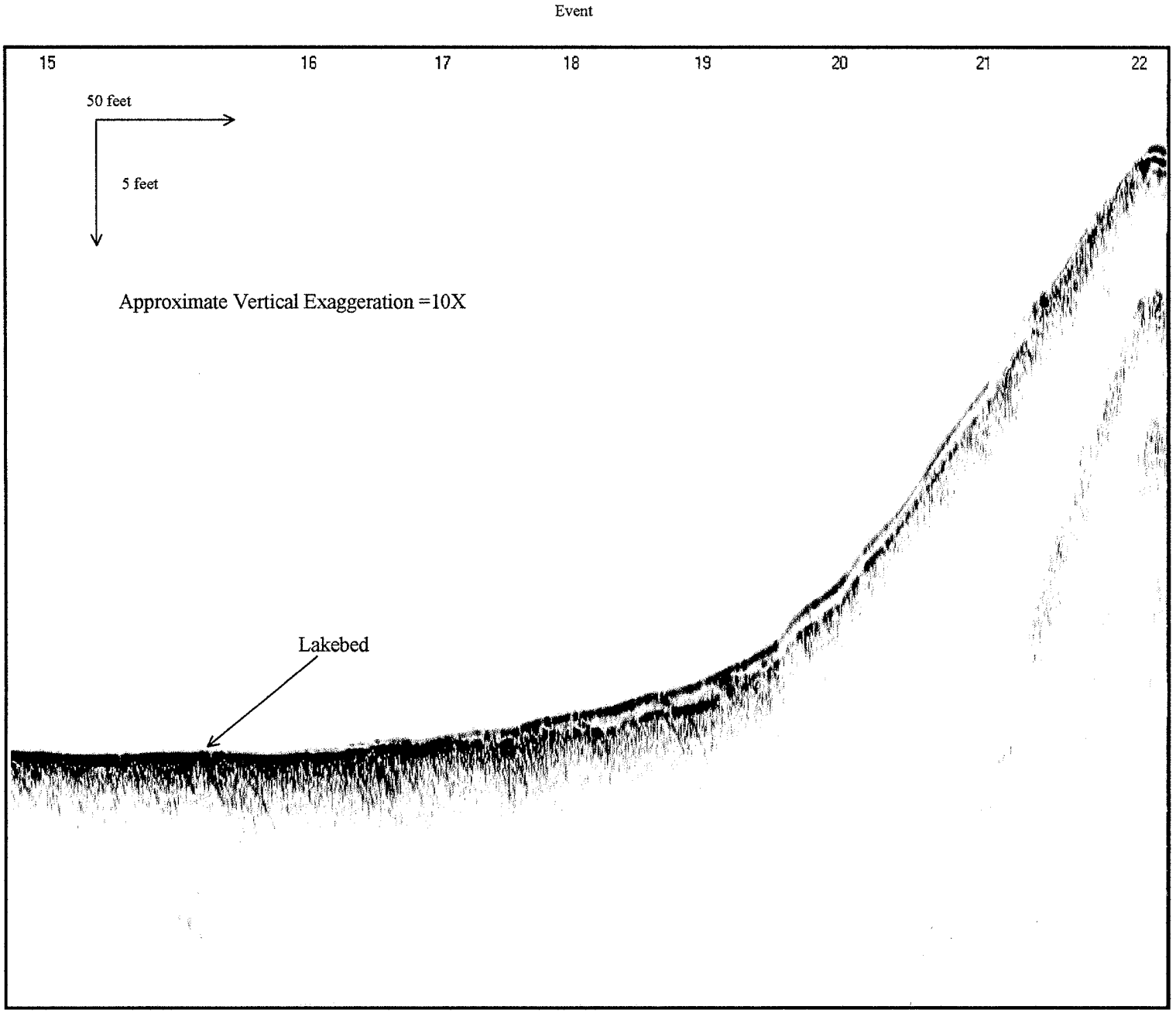
Robert Wallace
Hydrographic Project Manager
Ocean Surveys, Inc.

Attachment

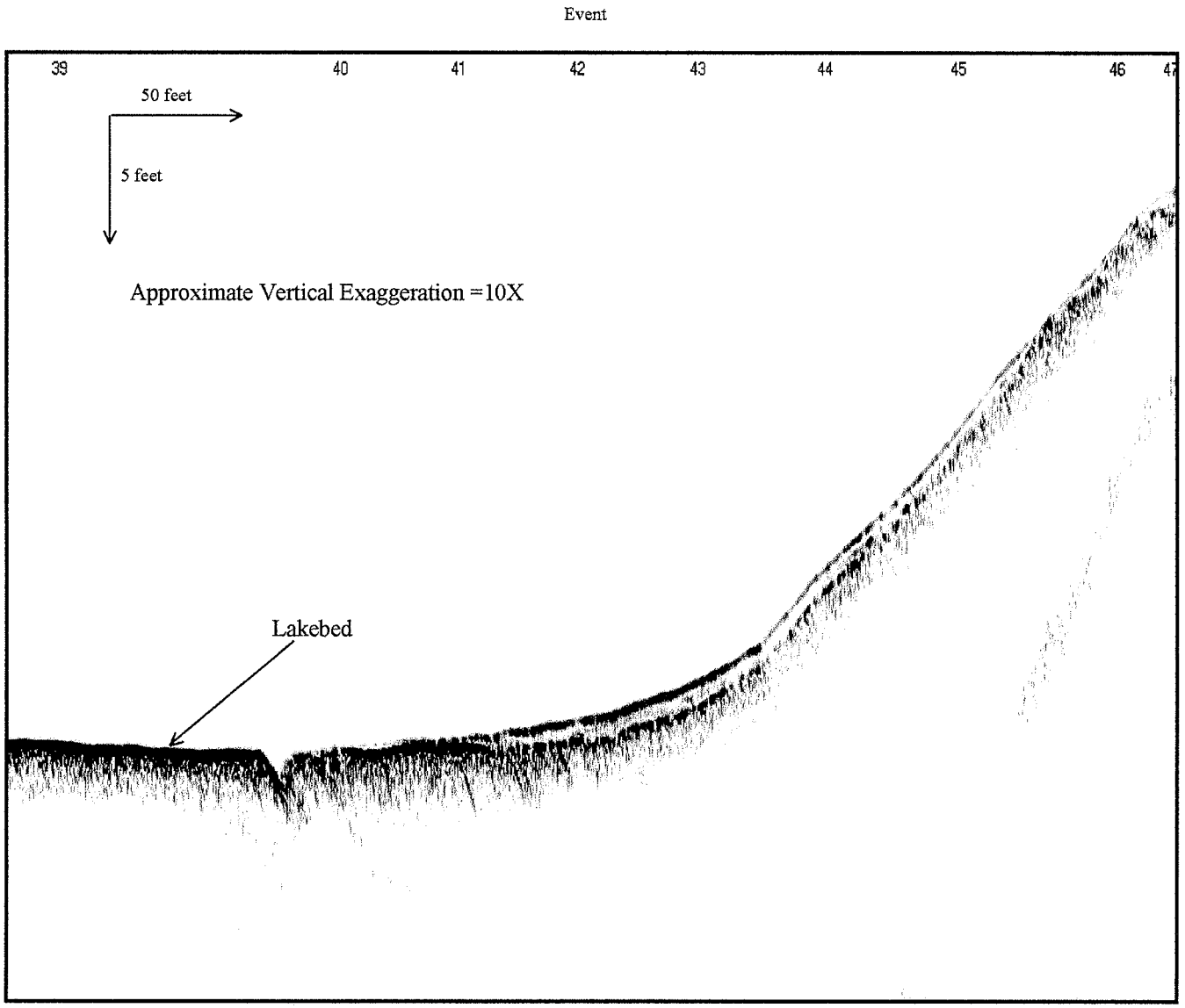
Plan View Index Map Showing Location of Subbottom Profiles



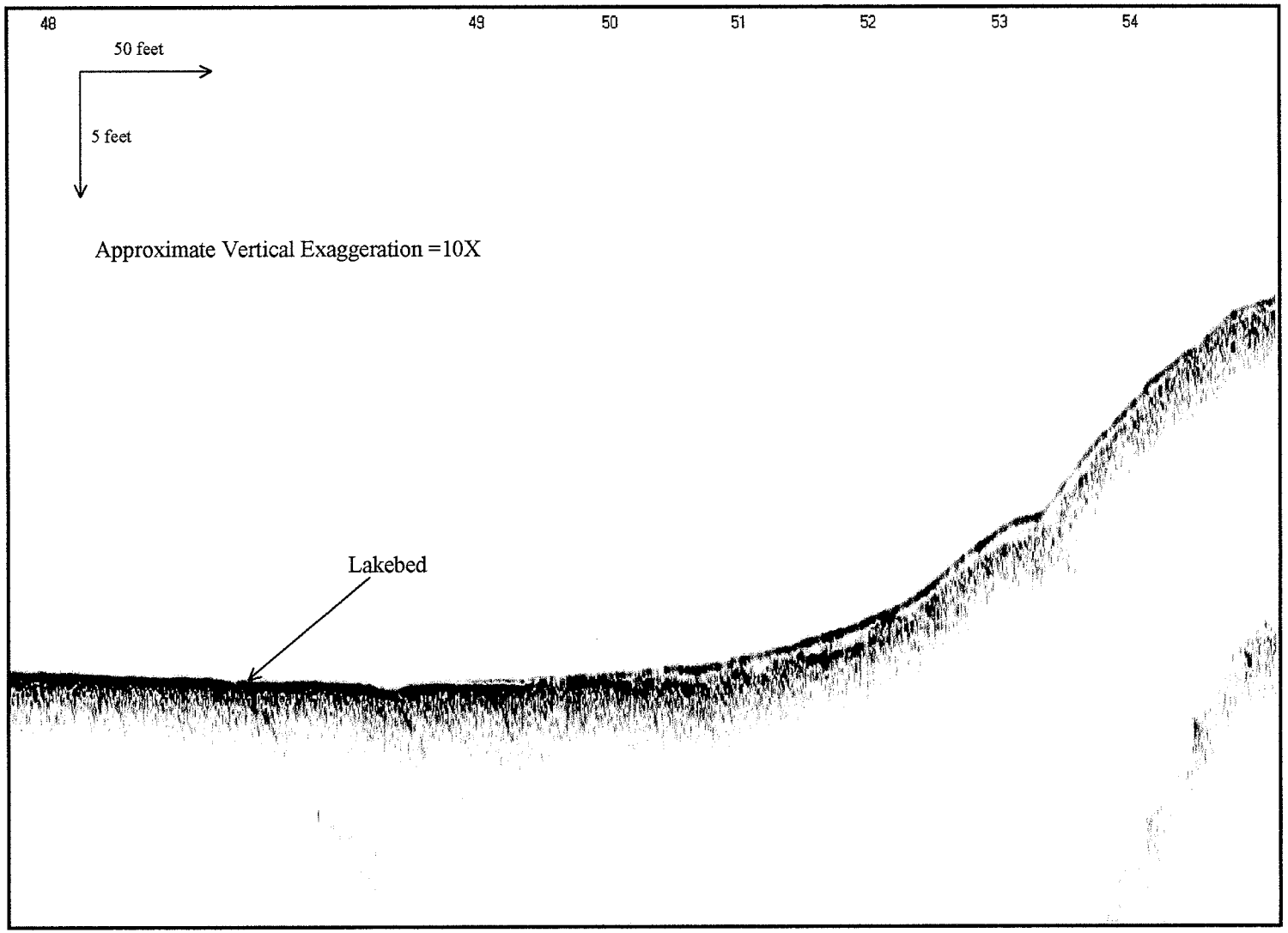
Profile 101


Event
15
16
17
18
19
20
21
22
50 feet
5 feet
Approximate Vertical Exaggeration =10X
Lakebed
Depth (feet)

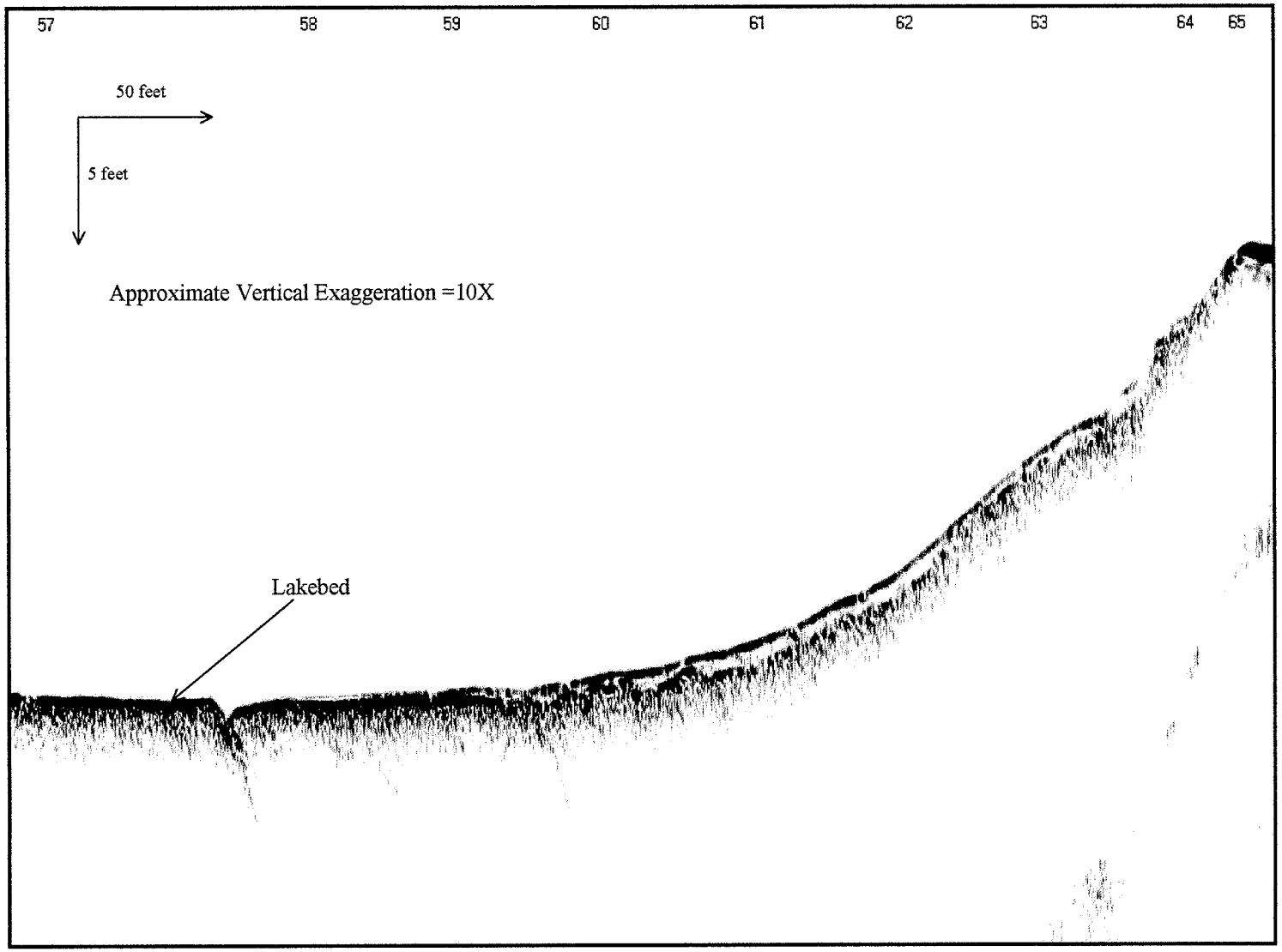
Profile 102


Event
39
40
41
42
43
44
45
46
47
50 feet
5 feet
Approximate Vertical Exaggeration =10X
Lakebed
Depth (feet)

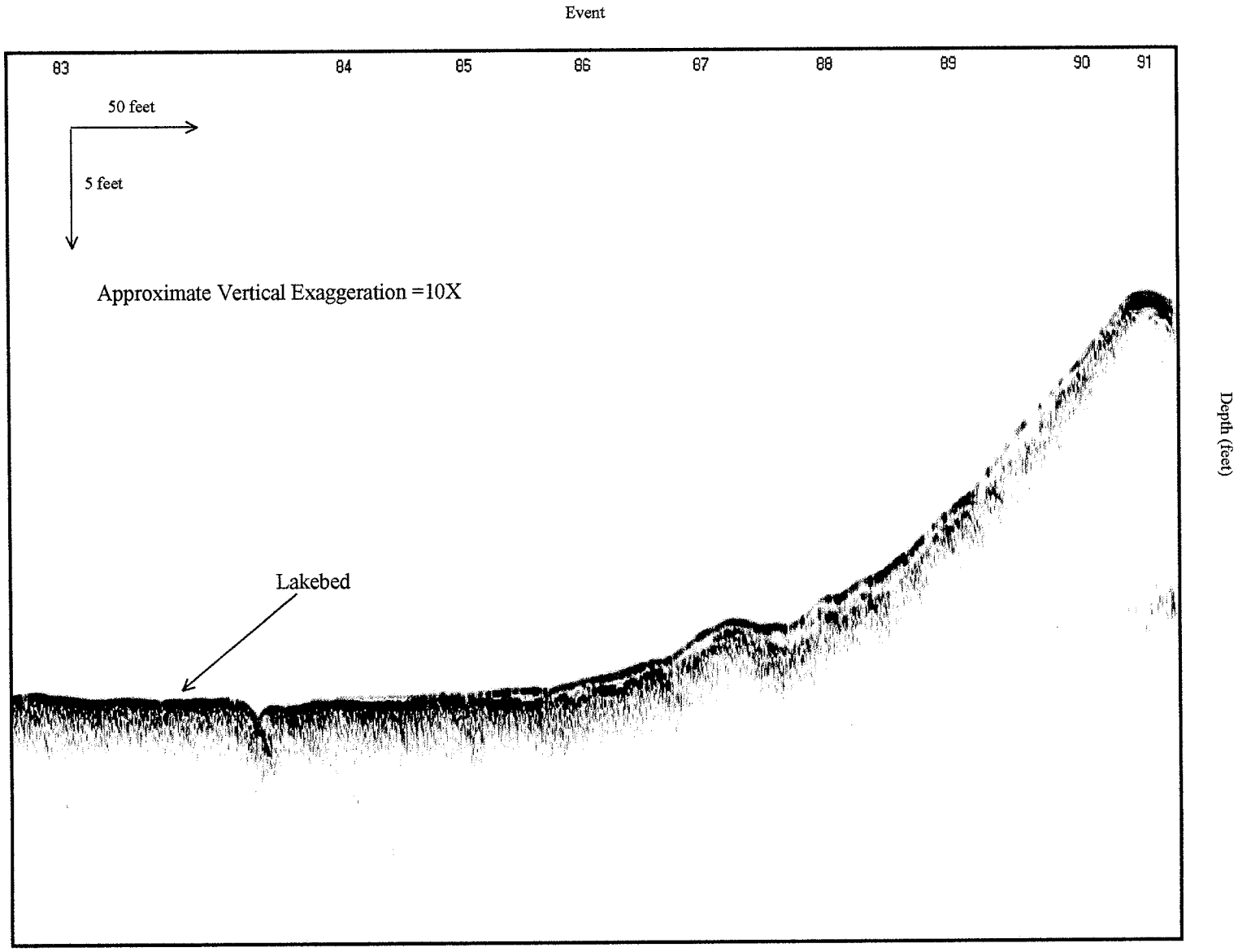
Profile 103


Event
48
49
50
51
52
53
54
50 feet
5 feet
Approximate Vertical Exaggeration =10X
Lakebed
Depth (feet)

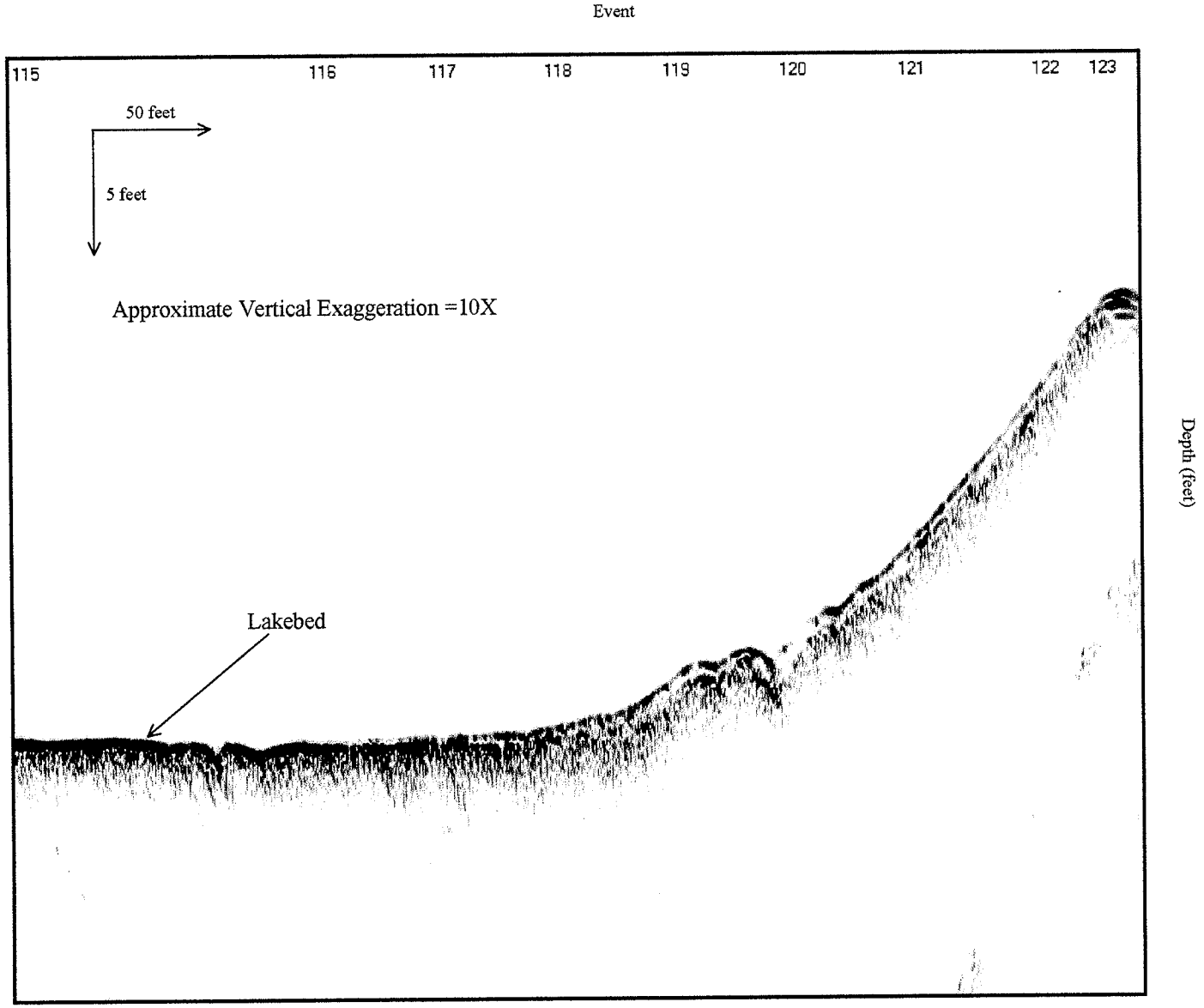
Profile 104


Event
57
58
59
60
61
62
63
64
65
50 feet
5 feet
Approximate Vertical Exaggeration =10X
Lakebed
Depth (feet)

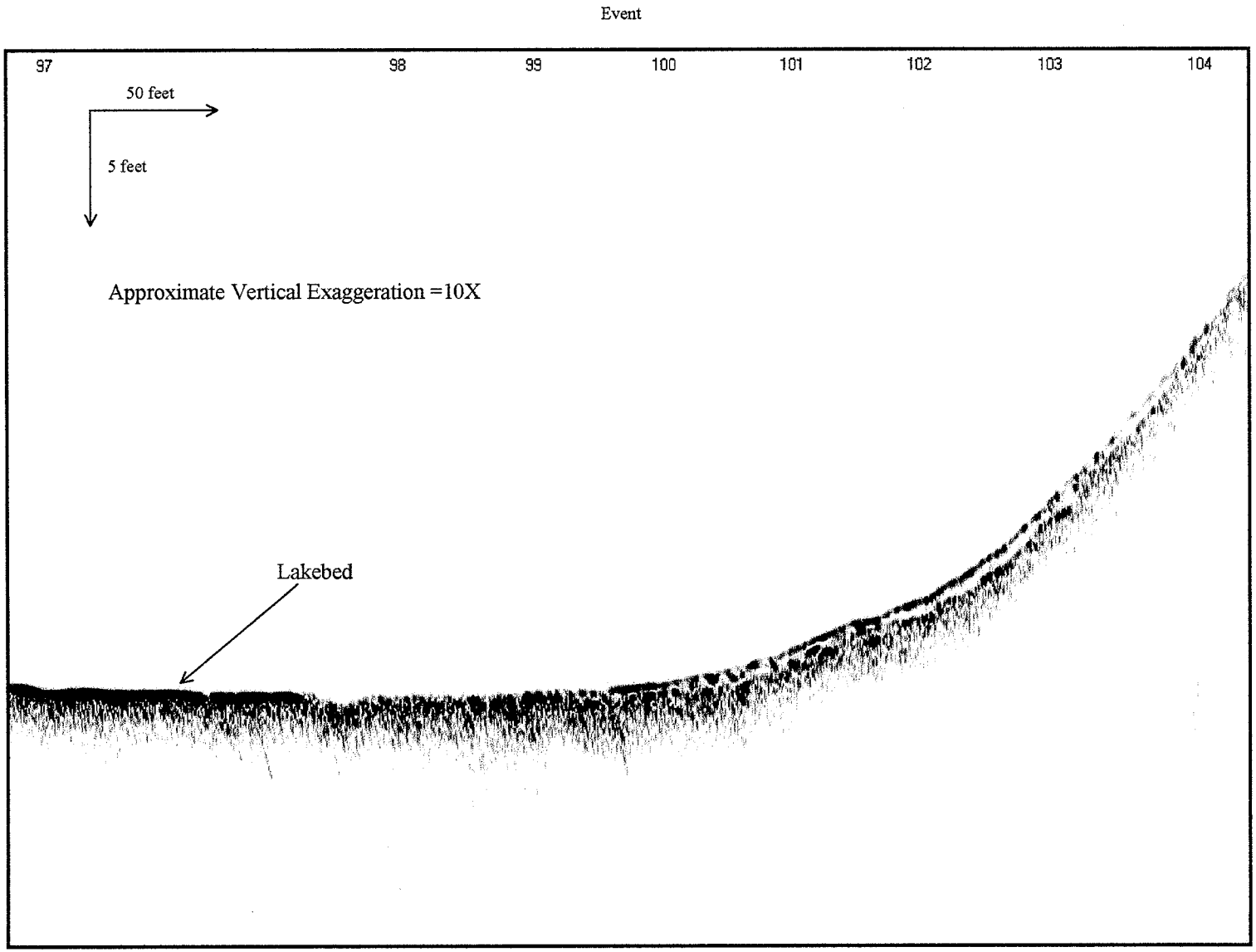
Profile 105


Event
83
84
85
86
87
88
89
90
91
50 feet
5 feet
Approximate Vertical Exaggeration =10X
Lakebed
Depth (feet)

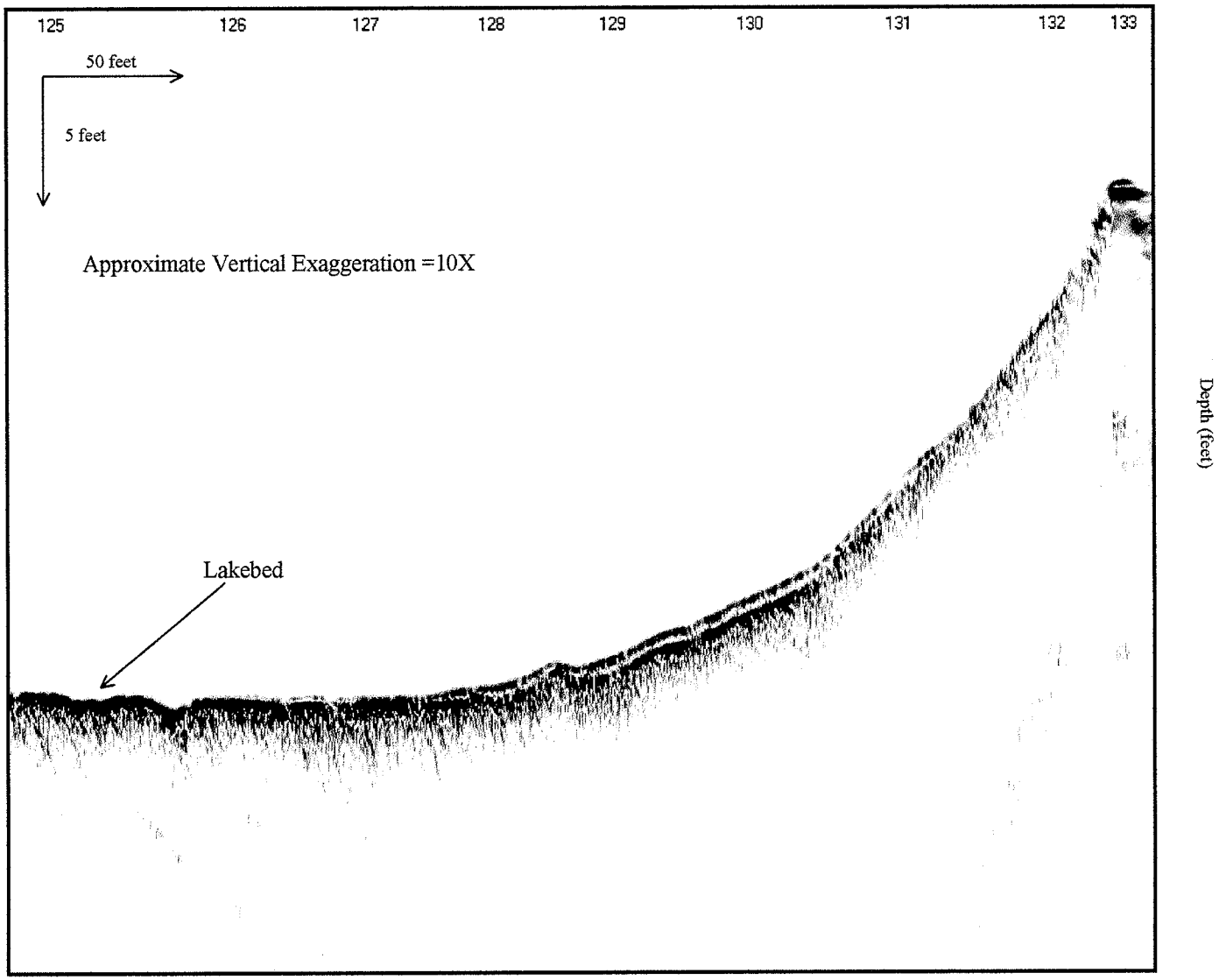
Profile 106

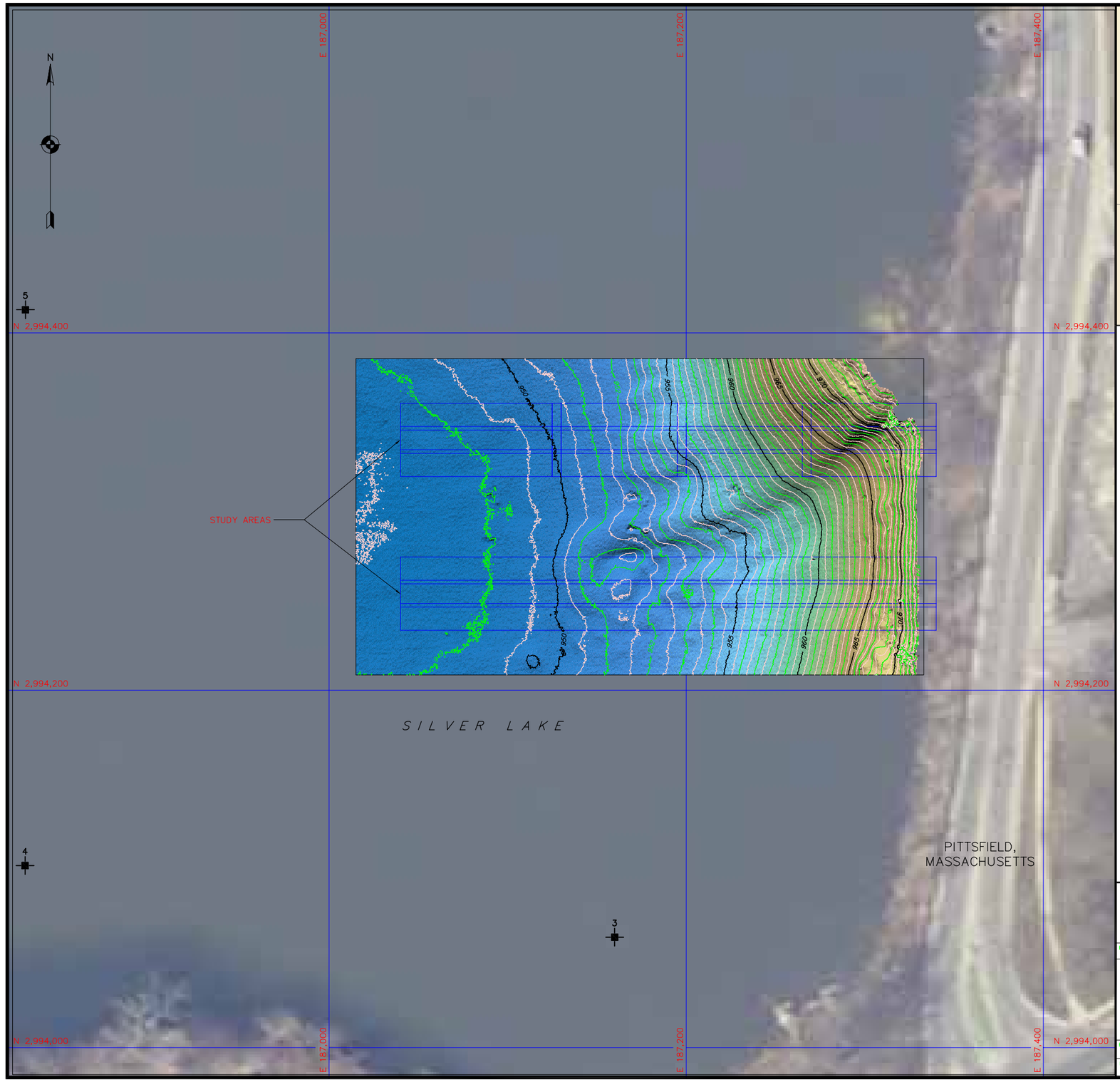

Event
115
116
117
118
119
120
121
122
123
50 feet
5 feet
Approximate Vertical Exaggeration =10X
Lakebed
Depth (feet)

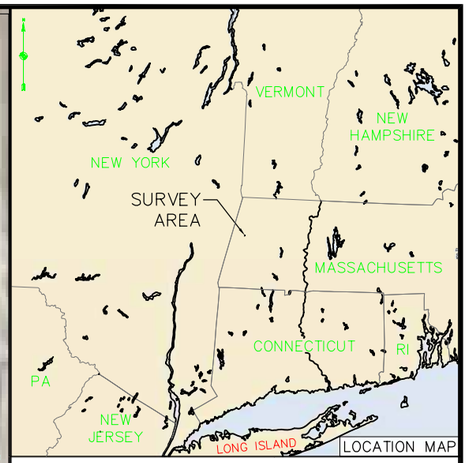
Profile 107


Event
97
98
99
100
101
102
103
104
50 feet
5 feet
Approximate Vertical Exaggeration =10X
Lakebed
Depth (feet)

Profile 108


Event
125
126
127
128
129
130
131
132
133
50 feet
5 feet
Approximate Vertical Exaggeration =10X
Lakebed
Depth (feet)





LEGEND:

3 — CALIBRATION TARGET

970 — MAJOR CONTOUR

969 — MINOR CONTOUR

969.5

NOTES:

1. GRID SYSTEM IS IN FEET AND IS THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM, NAD83.
2. ELEVATIONS ARE IN FEET AND ARE REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD 29) BASED ON BENCHMARK "SL-03" HAVING AN ELEVATION OF 978.81 FEET NGVD 29 AS PROVIDED BY BB&L.
3. CONTOURS ARE IN FEET AND WERE COMPUTER GENERATED USING "QUICKSURF" VERSION 5.1 (SCHREIBER INSTRUMENTS, INC.) OPERATING WITHIN "AUTODESK" AUTOCAD VERSION 2000 BASED ON THE AVERAGE SOUNDING IN A 0.5 FOOT BY 0.5 FOOT BIN.
4. SHORELINE AND ONSHORE FEATURES ARE APPROXIMATE AND WERE TAKEN FROM DIGITAL ORTHOPHOTO QUADRANGLES FLOWN IN APRIL 2005 AND OBTAINED FROM THE MASSACHUSETTS GEOGRAPHIC INFORMATION SYSTEM (MASSGIS).
5. THE INFORMATION PRESENTED ON THIS CHART REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY OCEAN SURVEYS, INC. ON 8-10 SEPTEMBER 2006 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO OSI.

SCALE: 1"=40'

40 0 40 80 120

CHECK GRAPHIC SCALE BEFORE USING

OCEAN SURVEYS, INC.

OLD SAYBROOK, CONNECTICUT

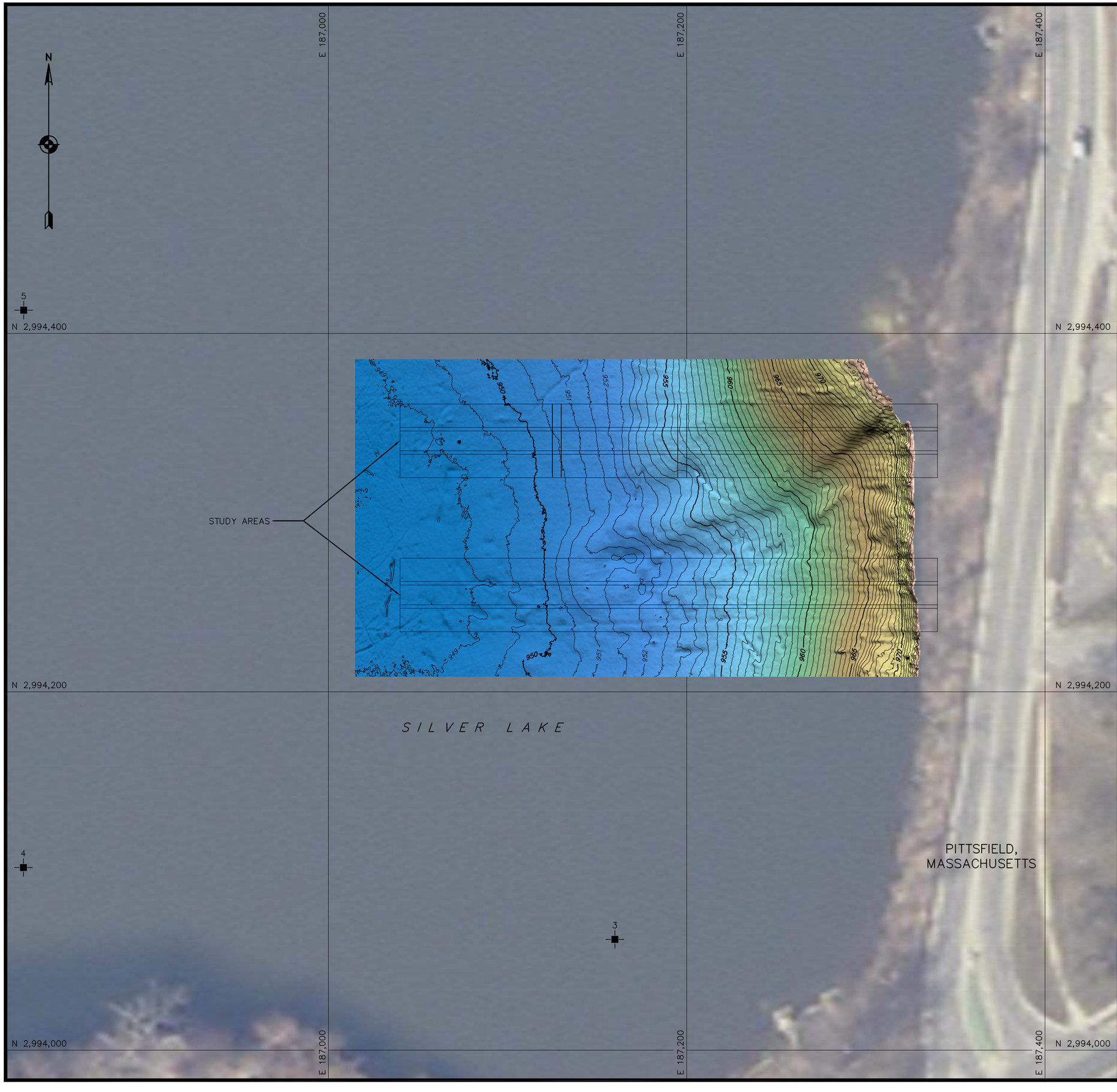
(860) 388-4631

www.oceansurveys.com

PREPARED FOR: BB&L

PRE-CONSTRUCTION MULTIBEAM PILOT STUDY AREA SILVER LAKE PITTSFIELD, MASSACHUSETTS

PROJECT MANAGER:	SURVEY DATE:	PROJECT NUMBER:	
R.M. WALLACE	8-10 SEPTEMBER 2006	06ES064	
DRAFTED BY:	DATE:	DRAWING:	SHEET:
A.M. RIZZO	11 OCTOBER 2006	1	1 OF 1



LEGEND:

3 — CALIBRATION TARGET

970 — MAJOR CONTOUR

969 / 969.5 — MINOR CONTOUR

NOTES:

1. GRID SYSTEM IS IN FEET AND IS THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM, NAD83.
2. ELEVATIONS ARE IN FEET AND ARE REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD 29) BASED ON BENCHMARK "SL-03" HAVING AN ELEVATION OF 978.81 FEET NGVD 29 AS PROVIDED BY BB&L.
3. CONTOURS ARE IN FEET AND WERE COMPUTER GENERATED USING "QUICKSURF" VERSION 5.1 (SCHREIBER INSTRUMENTS, INC.) OPERATING WITHIN "AUTODESK" AUTOCAD VERSION 2000 BASED ON THE AVERAGE SOUNDING IN A 0.5 FOOT BY 0.5 FOOT BIN.
4. SHORELINE AND ONSHORE FEATURES ARE APPROXIMATE AND WERE TAKEN FROM DIGITAL ORTHOPHOTO QUADRANGLES FLOWN IN APRIL 2005 AND OBTAINED FROM THE MASSACHUSETTS GEOGRAPHIC INFORMATION SYSTEM (MASSGIS).
5. ADDITIONAL INFORMATION REGARDING THE DATA PRESENTED CAN BE FOUND IN OSI REPORT NO. 06ES064.2.
6. THE INFORMATION PRESENTED ON THIS CHART REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY OCEAN SURVEYS, INC. ON 6 DECEMBER 2006 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO OSI.

SCALE: 1"=40'

40 0 40 80 120

CHECK GRAPHIC SCALE BEFORE USING

OCEAN SURVEYS, INC.
OLD SAYBROOK, CONNECTICUT
(860) 388-4631
www.oceansurveys.com

PREPARED FOR: BLASLAND, BOUCK & LEE

POST-CONSTRUCTION MULTIBEAM PILOT STUDY AREA SILVER LAKE PITTSFIELD, MASSACHUSETTS

PROJECT MANAGER:	SURVEY DATE:	PROJECT NUMBER:	
R.S. WATSON	6 DECEMBER 2006	06ES064	
DRAFTED BY:	DATE:	DRAWING:	SHEET:
D.T. SOMERS	3 JANUARY 2007	2	1 OF 1

ARCADIS BBL

Ocean Surveys, Inc.
Bathymetric Survey Report
(26 June 2007)

OCEAN SURVEYS, INC.

MARINE AND FRESHWATER
SURVEY SERVICES

91 SHEFFIELD STREET
OLD SAYBROOK CT 06475

TEL. (860) 388-4631 FAX (860) 388-5879
www.oceansurveys.com

26 June 2007

Mr. Joe Denkenberger
ARCADIS of New York
6723 Towpath Road
Syracuse, NY 13214

SUBJECT: ADDENDUM TO OSI REPORT NO. 06ES064, 6-MONTH POST-CAP MONITORING, SILVER LAKE PILOT STUDY AREA, PITTSFIELD, MA

Dear Mr. Denkenberger:

During the period 30-31 May 2007, an Ocean Surveys, Inc. (OSI) field team conducted the final phase of a multidisciplinary investigation of Silver Lake located in Pittsfield, MA. The investigations, conducted for ARCADIS of New York, were accomplished to provide input data to evaluate sediment-capping techniques in an area within the lake designated as the Silver Lake Pilot Study Area (SLPSA). Phase I conducted on 8-10 September 2006, prior to installation of a sediment cap in the SLPSA, consisted of the acquisition of multibeam soundings, subbottom profiling data and Sediment Profile Camera Imaging (SPI). Phase II, completed during the period 8-9 November 2006, was performed during installation of the sediment cap to provide real-time SPI. After installation, two Phase III placement condition surveys were performed in the SLPSA (6-8 December 2006 and the current investigation). Similar to Phase I, the Phase III surveys consisted of the acquisition of multibeam soundings and subbottom profiling data. The first Phase III survey was intended to provide ARCADIS with documentation of post-cap placement conditions and a means to make a comparative analysis with pre-cap conditions (as documented during Phase I) one month after cap placement. The current Phase III survey was conducted approximately six months after cap placement. OSI letter report No. 06ES064, dated 25 January 2007, outlines the procedures employed during all phases of the investigation and presents the results and a comparative analysis of the Phase I and first Phase III surveys. This letter report, an addendum to the January 2007 submittal, presents the results of the six-month Phase III post-cap survey and review.

Multibeam Survey Data

Following the conclusion of the current survey investigation, two multibeam data presentations were prepared. OSI "Drawing 4," similar in scale and presentation to Drawings 1, 2, and 3 (submitted following the first Phase III investigation) is a plan view representation of lakebed elevations within the SLPSA based on the most current data set (May 2007) data. OSI "Drawing 5" is a contour plot depicting the difference of lakebed elevation observed between the first and second post cap surveys. The difference values contoured in this drawing are equal to the elevation of the May 2007 survey minus the elevation of the December 2006 survey.

A review of Drawing 5, which depicts changes in lakebed elevation over a six-month period, documents minimal elevation change in the SLPSA. In general, it appears that the surface of the SLPSA has remained constant or, in some locations, compressed on the order of 0.25-0.5 feet. Evidence of compaction was also evident during review of the first Phase III investigation (See OSI Report No. 06ES064).

Subbottom Profile Survey Data

Subbottom profiling data (Chirp 4-24 kHz.) were acquired along a similar set of survey lines established in the SLPSA during the Phase III 6-month post-cap survey (May 2007) and the 1-month post-cap survey (December 2006). Figure 1 provides an overview of the location of these survey lines. During the 1-month post-cap survey, subbottom data were acquired along all fourteen survey lines. During the current post-cap survey, lines 113 and 114 were inaccessible to the survey vessel due to a decrease of water level in the lake at the time of the survey.

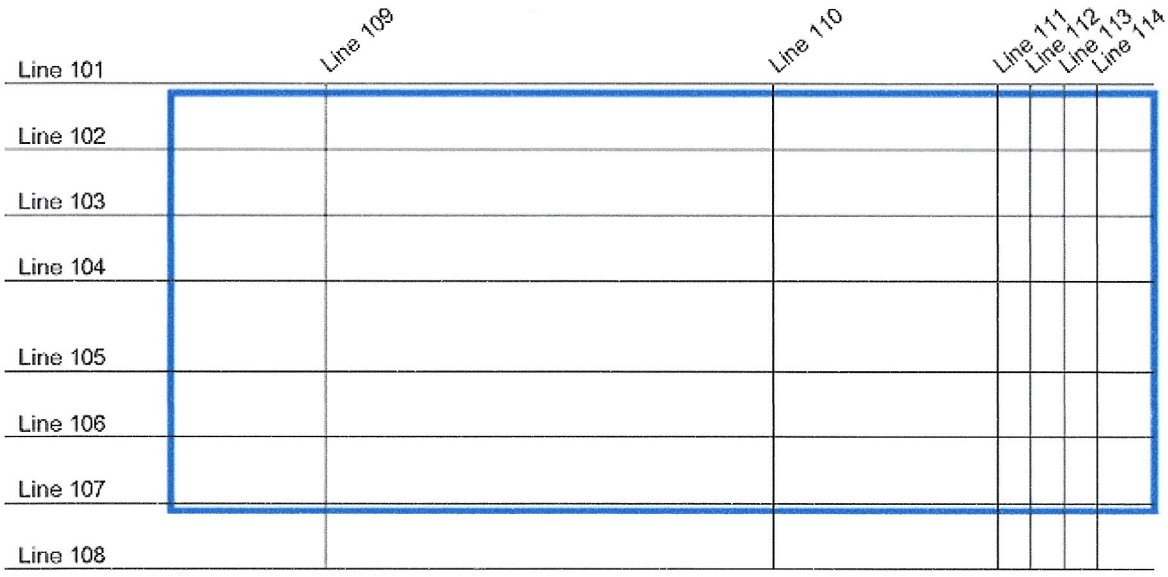


Figure 1. Subbottom survey line layout, SLPSA boundary indicated with blue line.

Subbottom profiles have been constructed for the eight primary survey lines. All of these profiles are included in Attachment A of this report along with a plan view index map showing the location of the subbottom profiles and associated vessel tracklines.

Subbottom profile data showed similar penetration to the prior post-cap survey and resolved a shallow subbottom reflector just below the lakebed. This subbottom reflector is interpreted as the pre-cap lakebed surface.

To illustrate and compare the subbottom findings between the Phase I (September 2006) and the two Phase III post-cap surveys (Dec 2006 and May 2007), six representative figures of three of the primary survey line profiles were constructed (Lines 102, 104 and 106). Several points were selected along the post-cap profiles for an interpreted cap thickness measurement.

Overall, after 1-month of cap emplacement (December 2006), the cap material appeared to be fairly uniform in its distribution across the SLPSA, ranging in thickness between 0.8 and 1.0 feet except on the western edge of the SLPSA, where thickness appeared to taper down to less than 0.5 feet. The December 2006 multibeam dataset illustrates virtually no elevation change on the western end of the site when compared to the pre-cap lakebed surface. On the eastern end of the site, near the shore where the lakebed slope is steepest (see Profile 106 – May 2007), no subbottom penetration could be achieved and the reflector previously visible during the 1-month post-cap survey is absent (could not be resolved). The reason for the loss of subbottom penetration and detection of the subbottom reflector previously observed on the eastern end of the site is unclear. Possible reasons may include movement of cap material and/or sediment compaction with upward migration of organic gasses in the underlying sediments (a common phenomena resulting from the decomposition of organics in the sediment and often responsible for inhibiting subbottom penetration). Apart from the area along the eastern shore of the SLPSA, the sediment cap appears to have remained fairly uniform in thickness and generally appears to be between 0.8 and 1.0 feet thick in the SLPSA (based on a review of subbottom data).

Summary

Review of the elevation difference map (OSI Drawing 5) constructed for the current survey suggests that some sediment compaction is occurring throughout the SLPSA, as the lakebed elevation has dropped, in some areas, around 0.25 feet (ranging between 0 – 0.5 feet). This change occurred between the December 2006 and May 2007 surveys. Despite the compaction, cap thickness appears to have remained relatively uniform (0.8 – 1.0 feet) throughout most of the SLPSA based on the subbottom profile data. This suggests that the compaction may be occurring in the sediments underlying the cap material rather than in the cap itself. Along the eastern shore of the SLPSA, subbottom penetration could not be achieved and cap thickness could not be measured (based on subbottom profile data). It is unclear in this area if sediment compaction is occurring in the cap or underlying sediments supporting the cap.

Further investigations and techniques may provide more insight into the mechanisms of the capping process, including possible compaction. It is possible to directly measure the sediment cap thickness by acquiring cores from the study area; however, this may not be practical if the intent is to not disturb the underlying sediments. Modeling and engineering calculations of the cap material, stability and compressibility of the underlying sediments may also provide further insight into the degree of compaction to be expected during the sediment capping process.

OSI appreciates the opportunity to support ARCADIS on this project and we look forward to continuing this working relationship in the future. If you have any questions regarding any aspect of this survey or data interpretation, please do not hesitate to contact me.

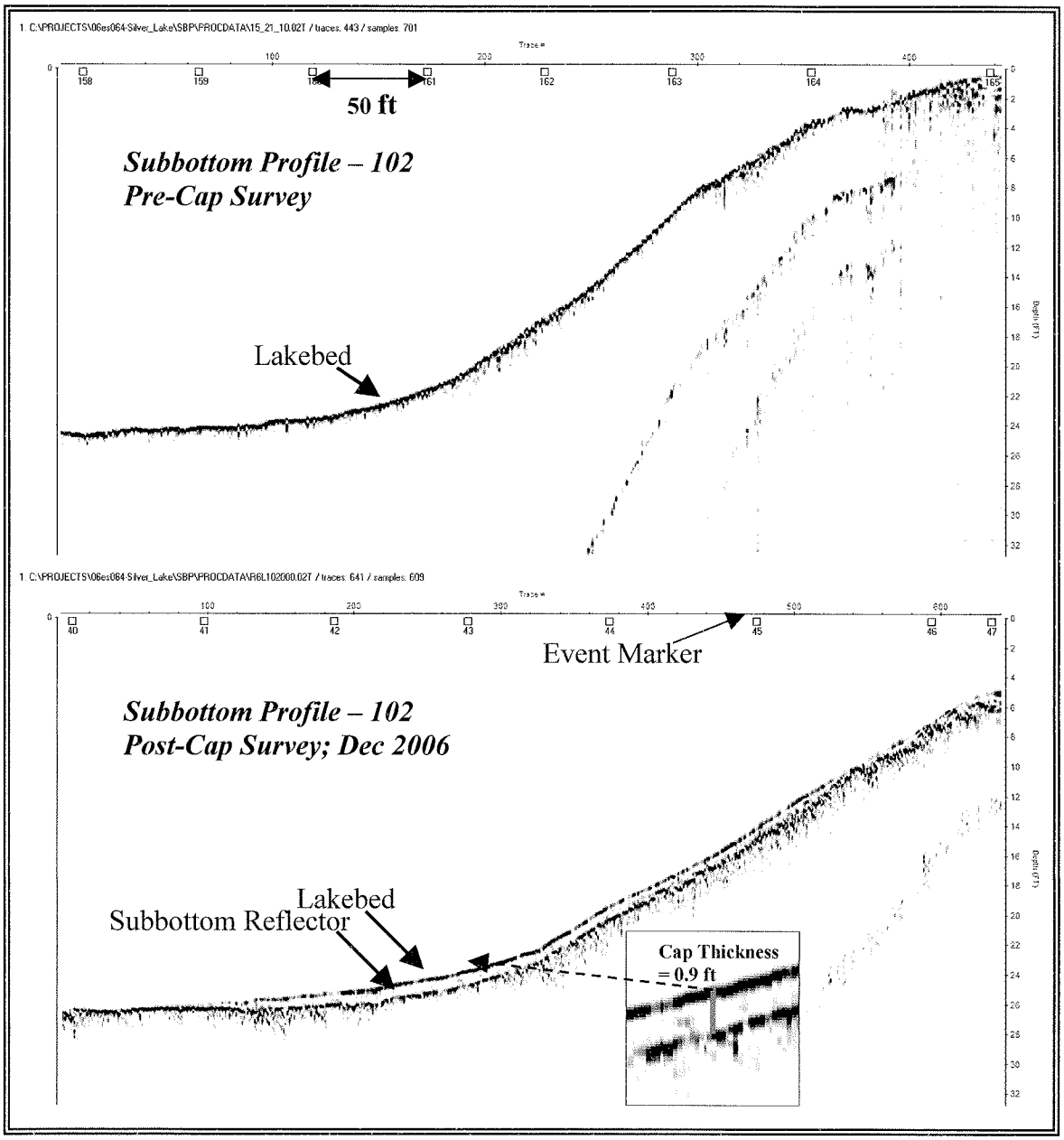
Sincerely,

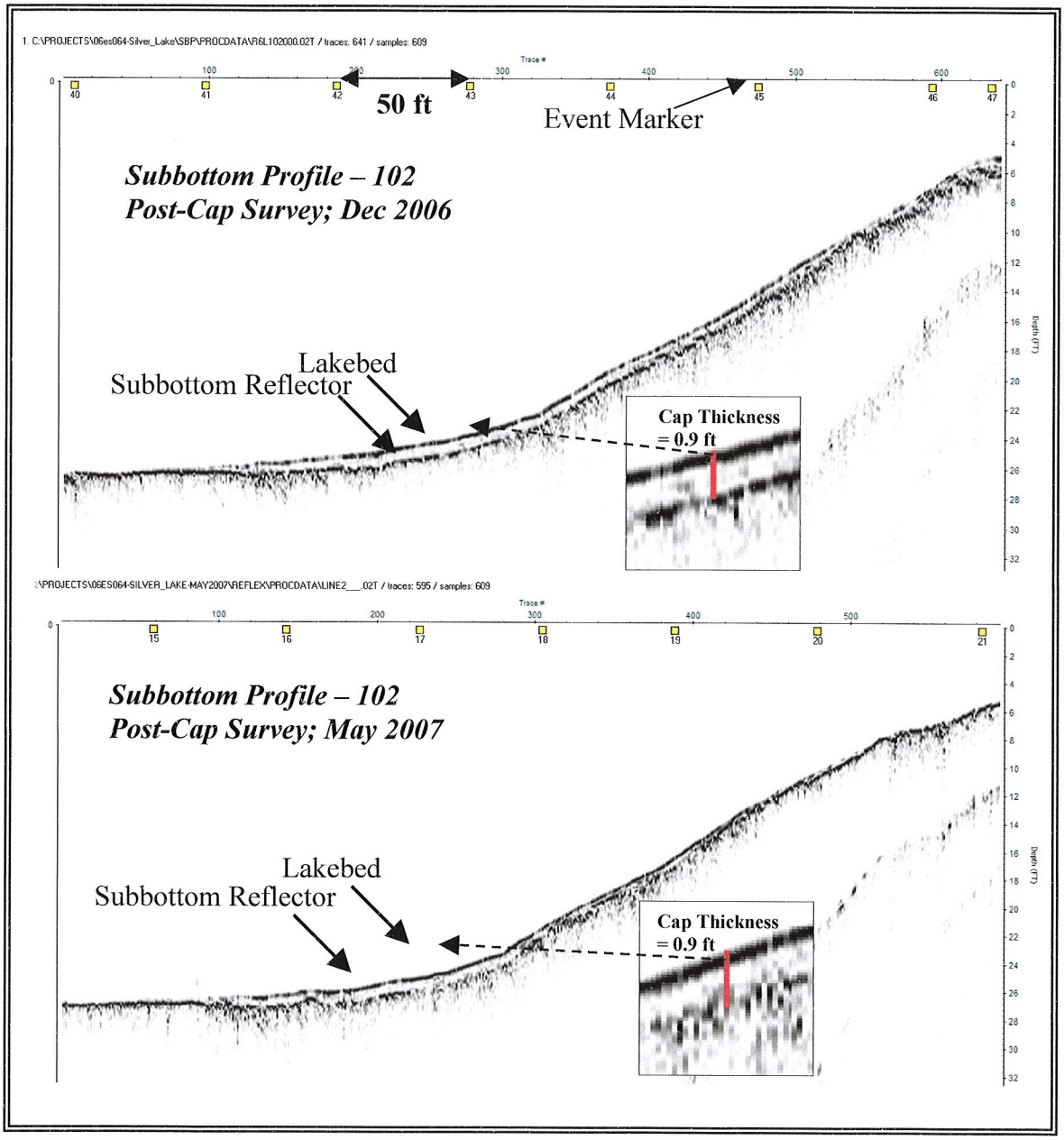
OCEAN SURVEYS, INC.

Robert M. Wallace

Robert Wallace
Hydrographic Project Manager

RMW/lf
Attachments


50 ft
Subbottom Profile – 102
Pre-Cap Survey
Lakebed
Event Marker
Subbottom Profile – 102
Post-Cap Survey; Dec 2006
Lakebed
Subbottom Reflector
Cap Thickness
= 0.9 ft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Trace #
50 ft
Event Marker
Subbottom Profile – 102
Post-Cap Survey; Dec 2006
Lakebed
Subbottom Reflector
Cap Thickness
= 0.9 ft
Depth (FT)
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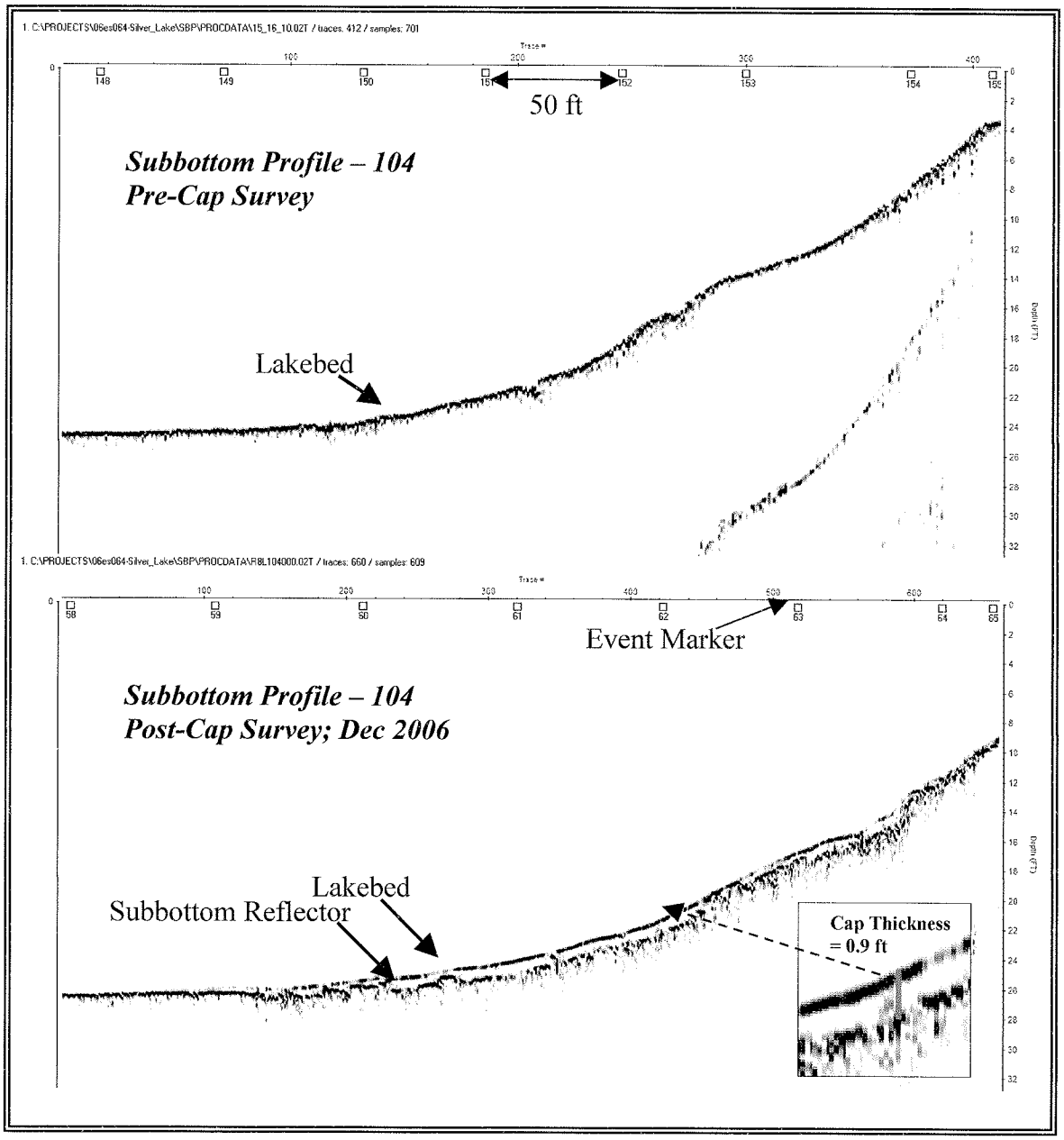
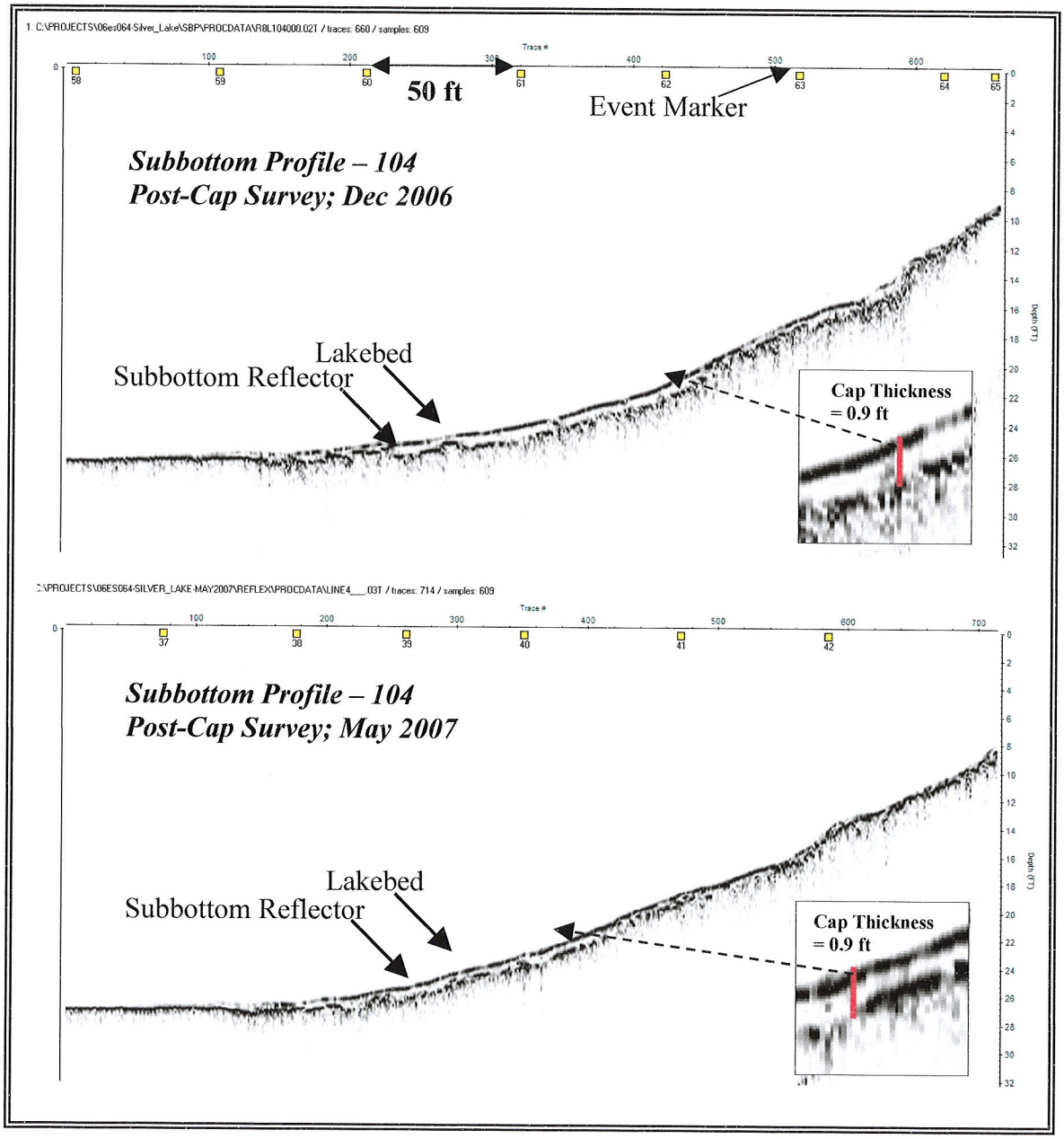
Trace #
Subbottom Profile – 102
Post-Cap Survey; May 2007
Lakebed
Subbottom Reflector
Cap Thickness
= 0.9 ft
Depth (FT)


50 ft
Subbottom Profile – 104
Pre-Cap Survey
Lakebed
Event Marker
Subbottom Profile – 104
Post-Cap Survey; Dec 2006
Lakebed
Subbottom Reflector
Cap Thickness
= 0.9 ft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50 ft
Event Marker
Subbottom Profile – 104
Post-Cap Survey; Dec 2006
Lakebed
Subbottom Reflector
Cap Thickness
= 0.9 ft
Depth (FT)
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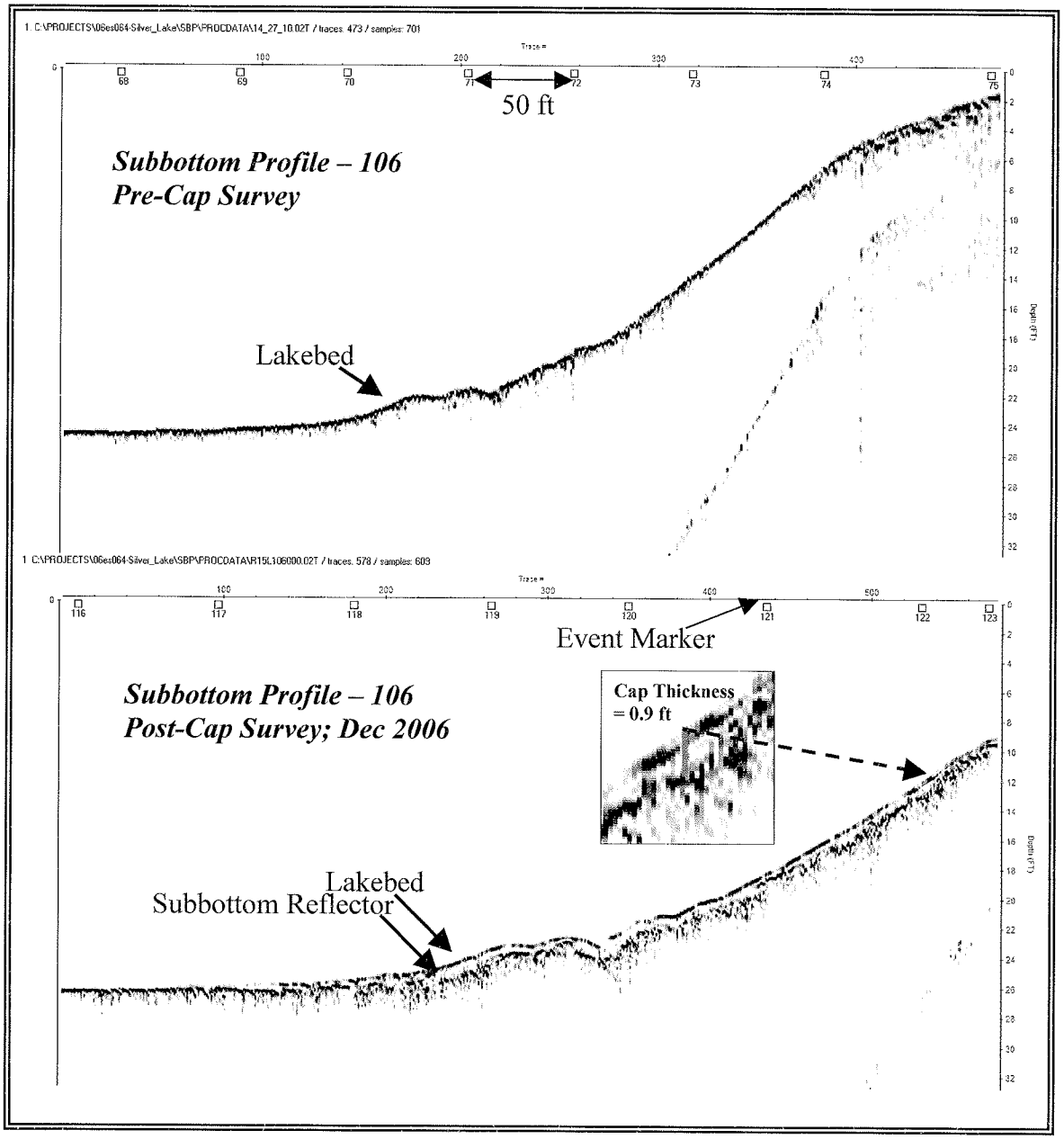
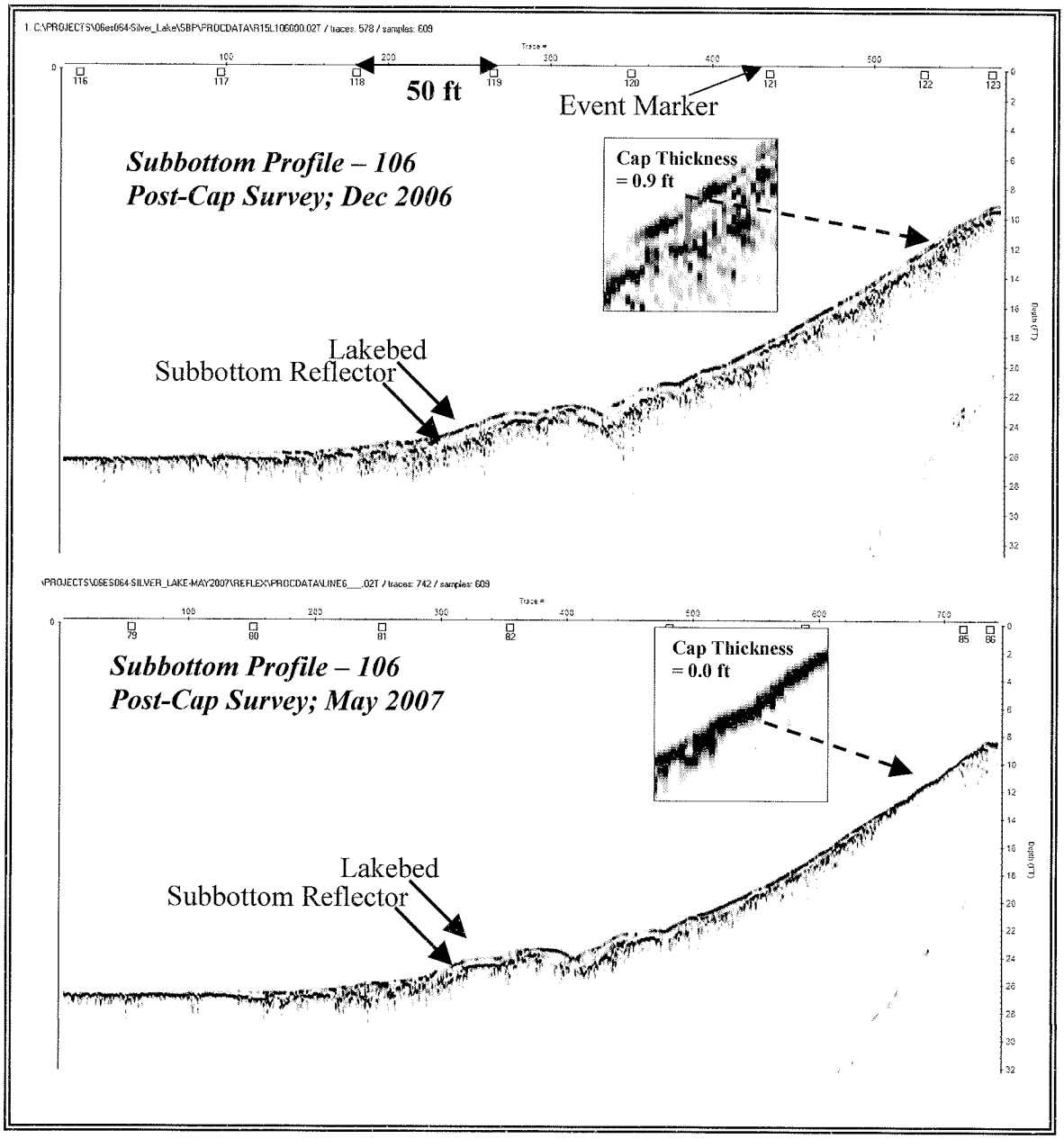
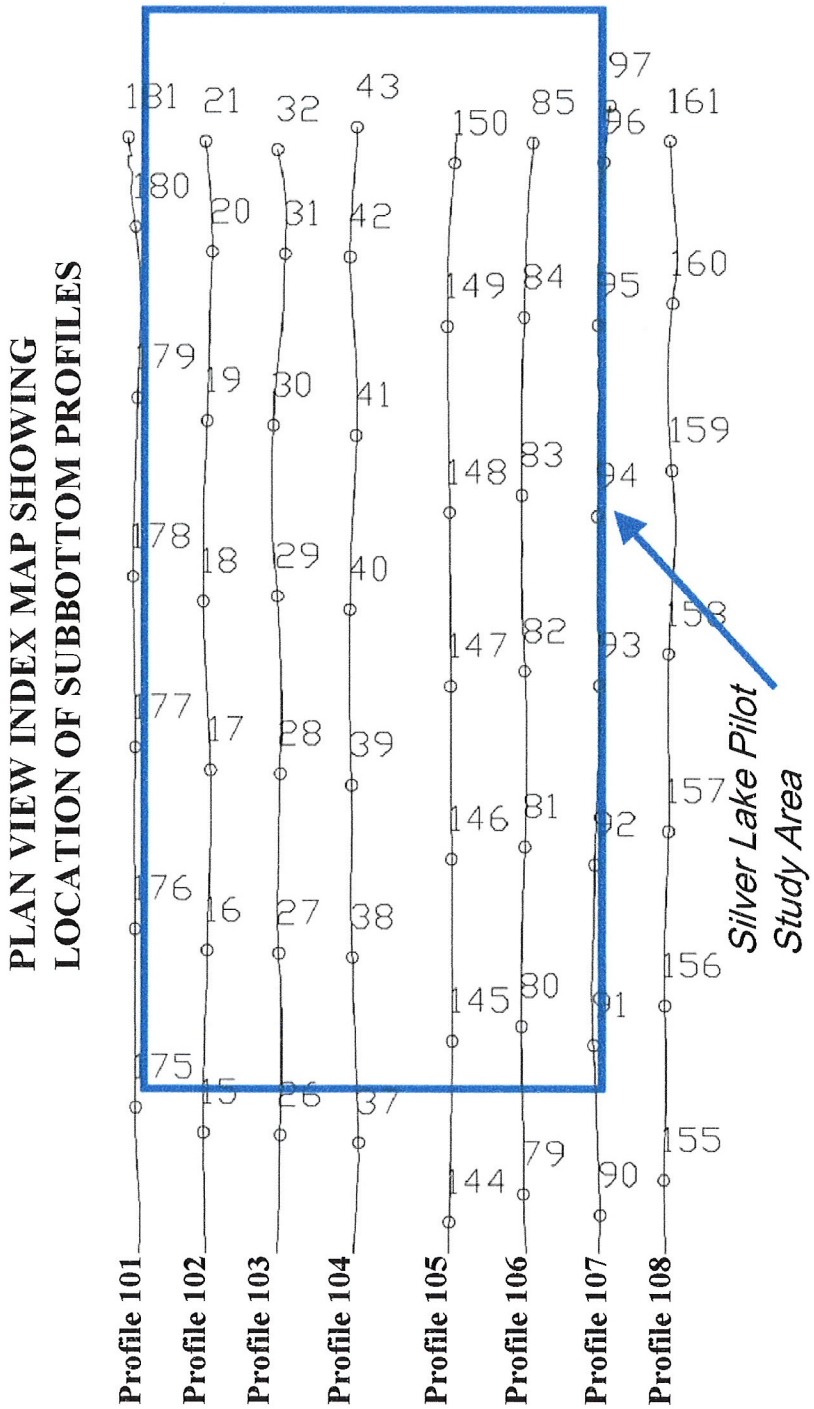
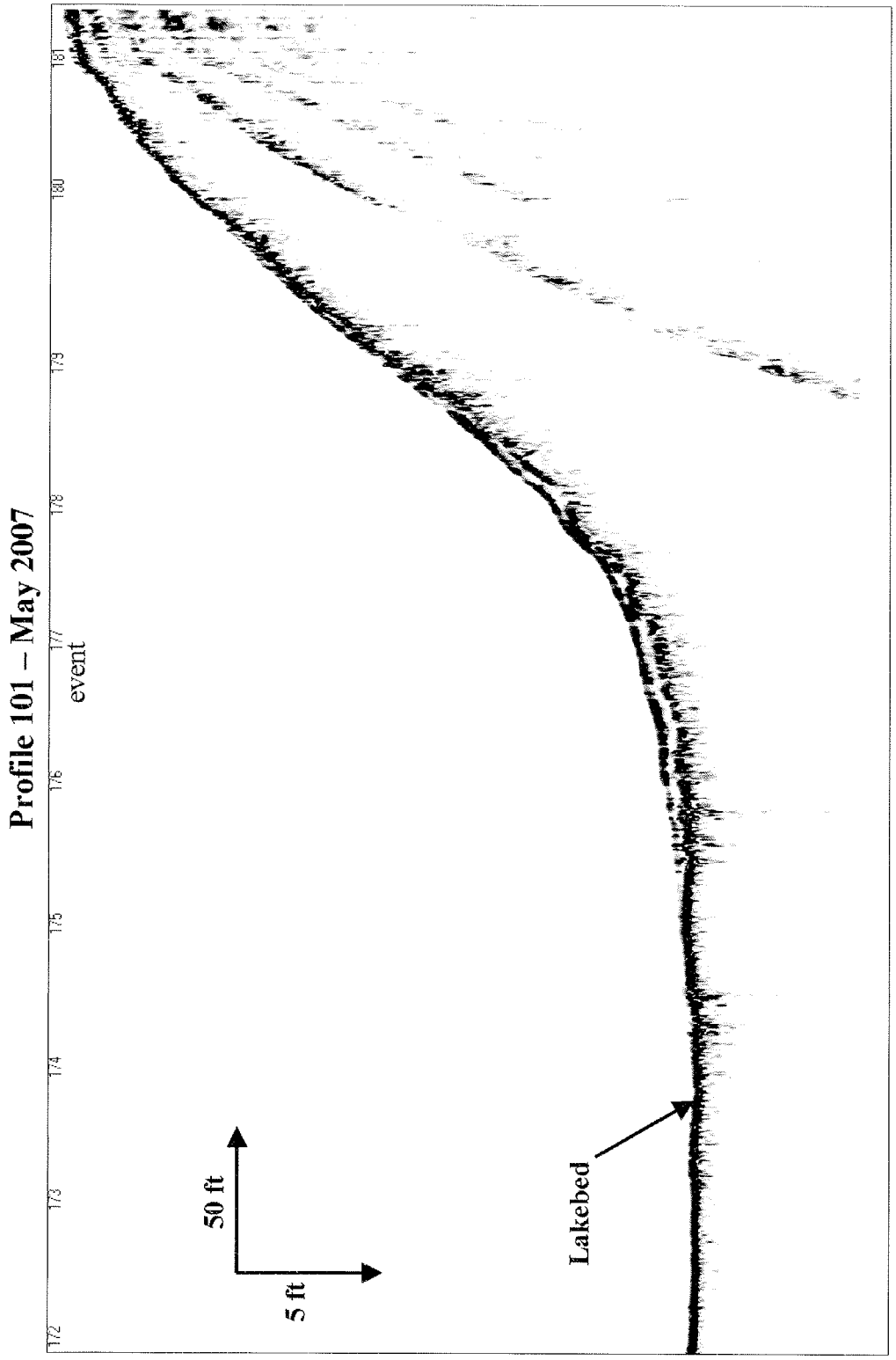
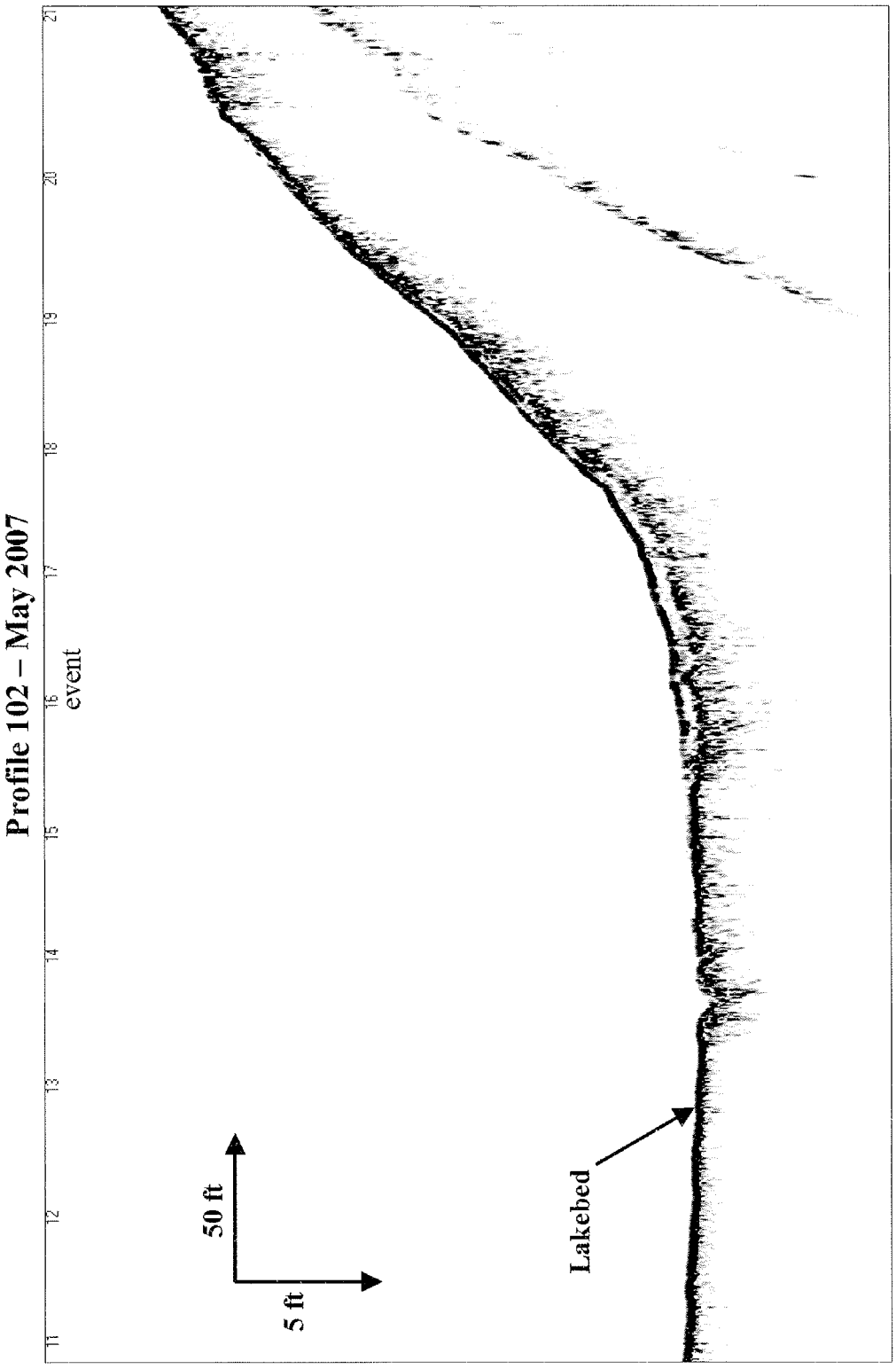
Trace #
Subbottom Profile – 104
Post-Cap Survey; May 2007
Lakebed
Subbottom Reflector
Cap Thickness
= 0.9 ft
Depth (FT)

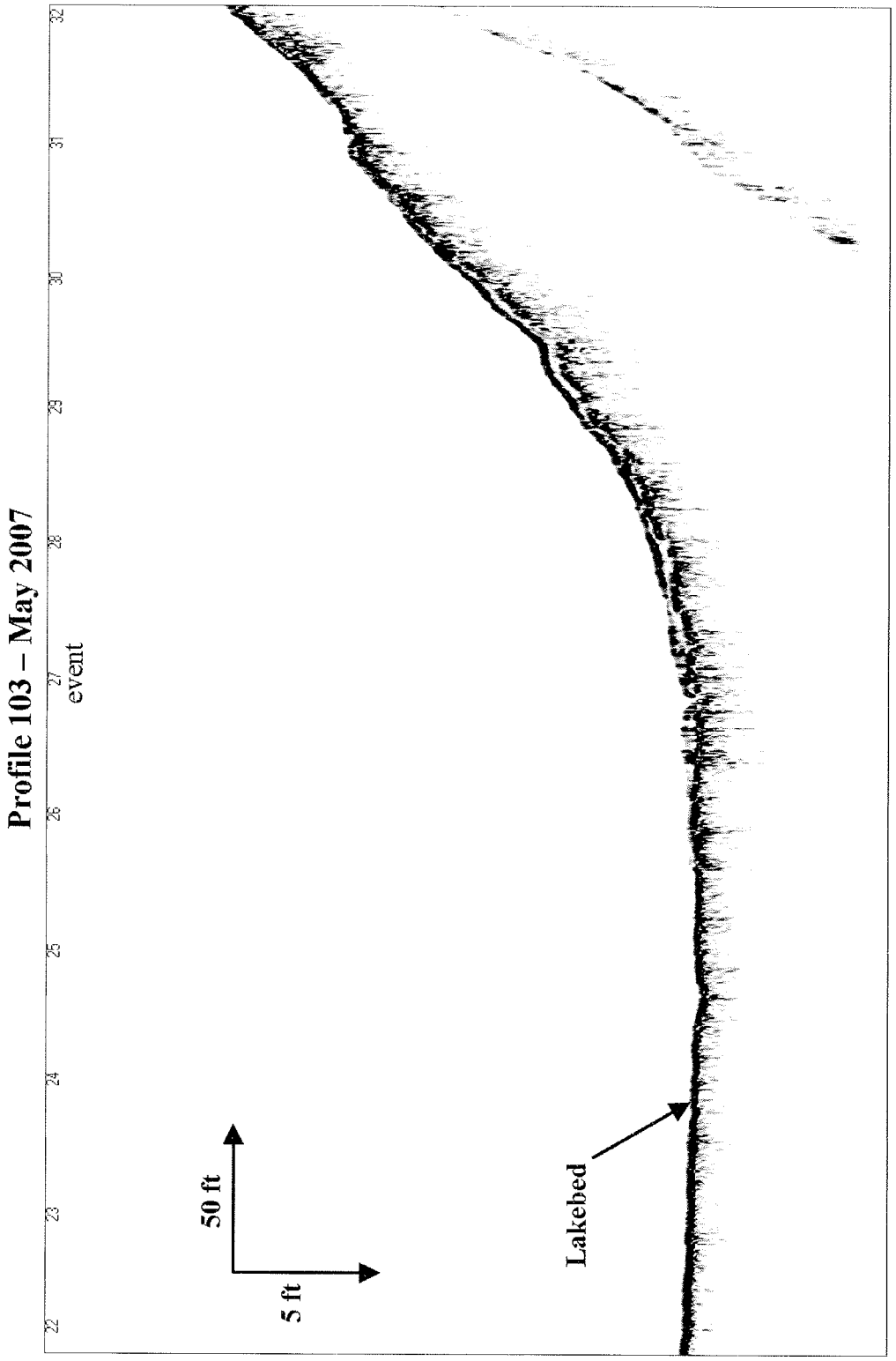

50 ft
Subbottom Profile – 106
Pre-Cap Survey
Lakebed
Event Marker
Subbottom Profile – 106
Post-Cap Survey; Dec 2006
Cap Thickness
= 0.9 ft
Lakebed
Subbottom Reflector

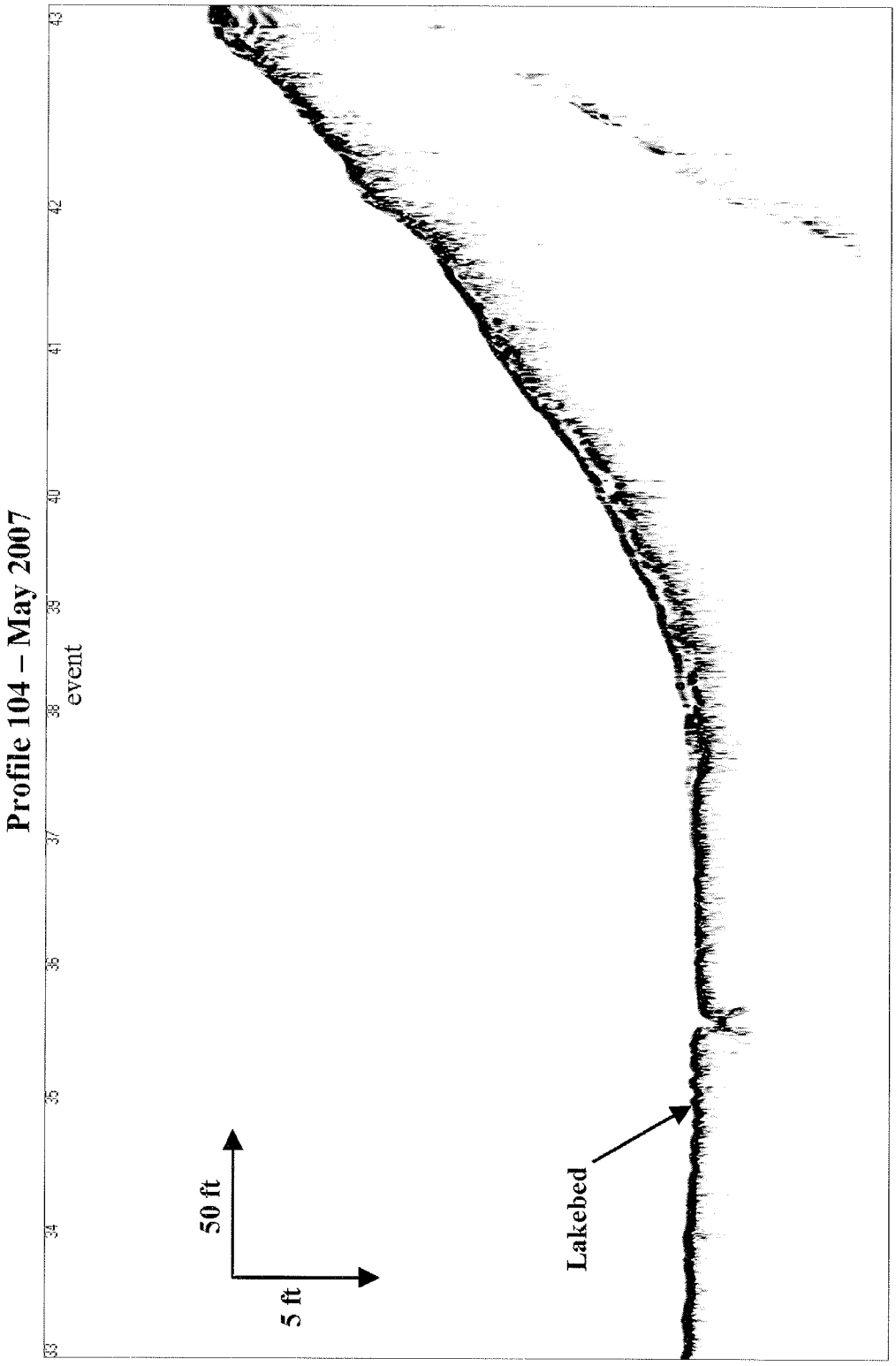

50 ft
Event Marker
Subbottom Profile – 106
Post-Cap Survey; Dec 2006
Cap Thickness
= 0.9 ft
Lakebed
Subbottom Reflector
Subbottom Profile – 106
Post-Cap Survey; May 2007
Cap Thickness
= 0.0 ft
Lakebed
Subbottom Reflector

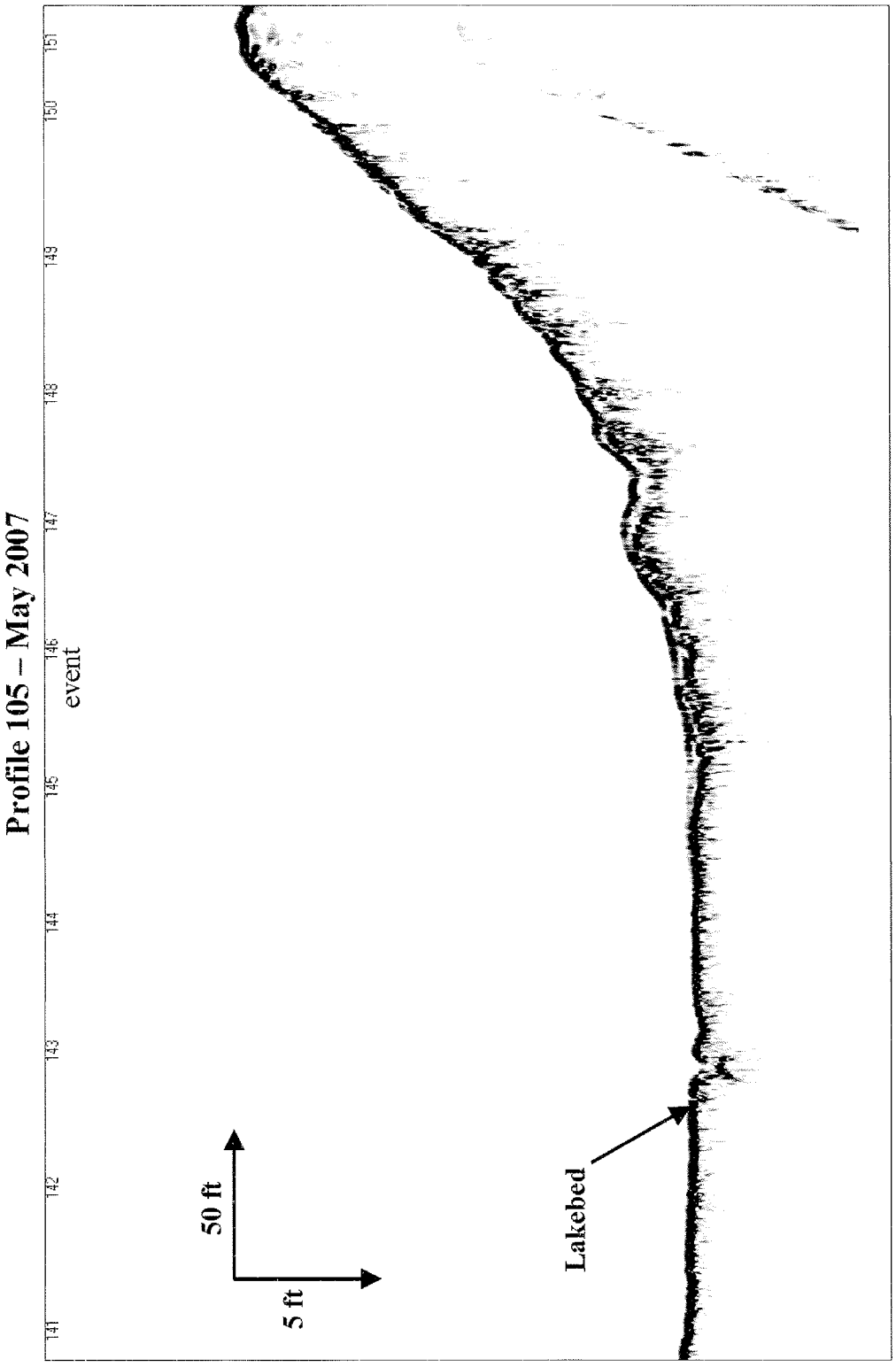

PLAN VIEW INDEX MAP SHOWING
LOCATION OF SUBBOTTOM PROFILES
Silver Lake Pilot
Study Area
Profile 101
Profile 102
Profile 103
Profile 104
Profile 105
Profile 106
Profile 107
Profile 108


Profile 101 – May 2007
event
50 ft
5 ft
Lakebed
172
173
174
175
176
177
178
179
180
181


Profile 102 – May 2007
event
11
12
13
14
15
16
17
18
19
20
21
50 ft
5 ft
Lakebed


Profile 103 – May 2007
event
50 ft
5 ft
Lakebed


Profile 104 – May 2007
event
50 ft
5 ft
Lakebed
43
42
41
40
39
38
37
36
35
34
33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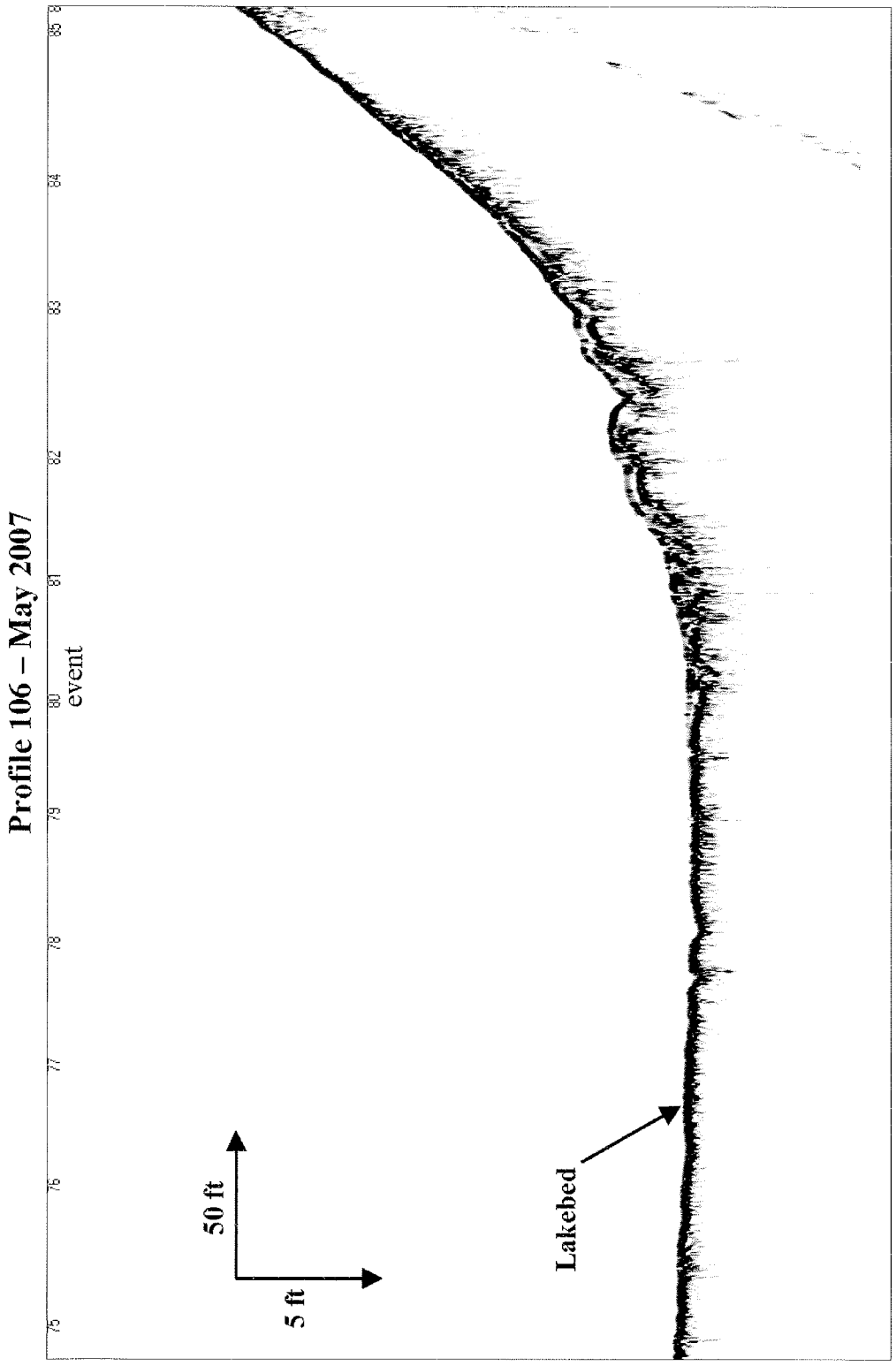
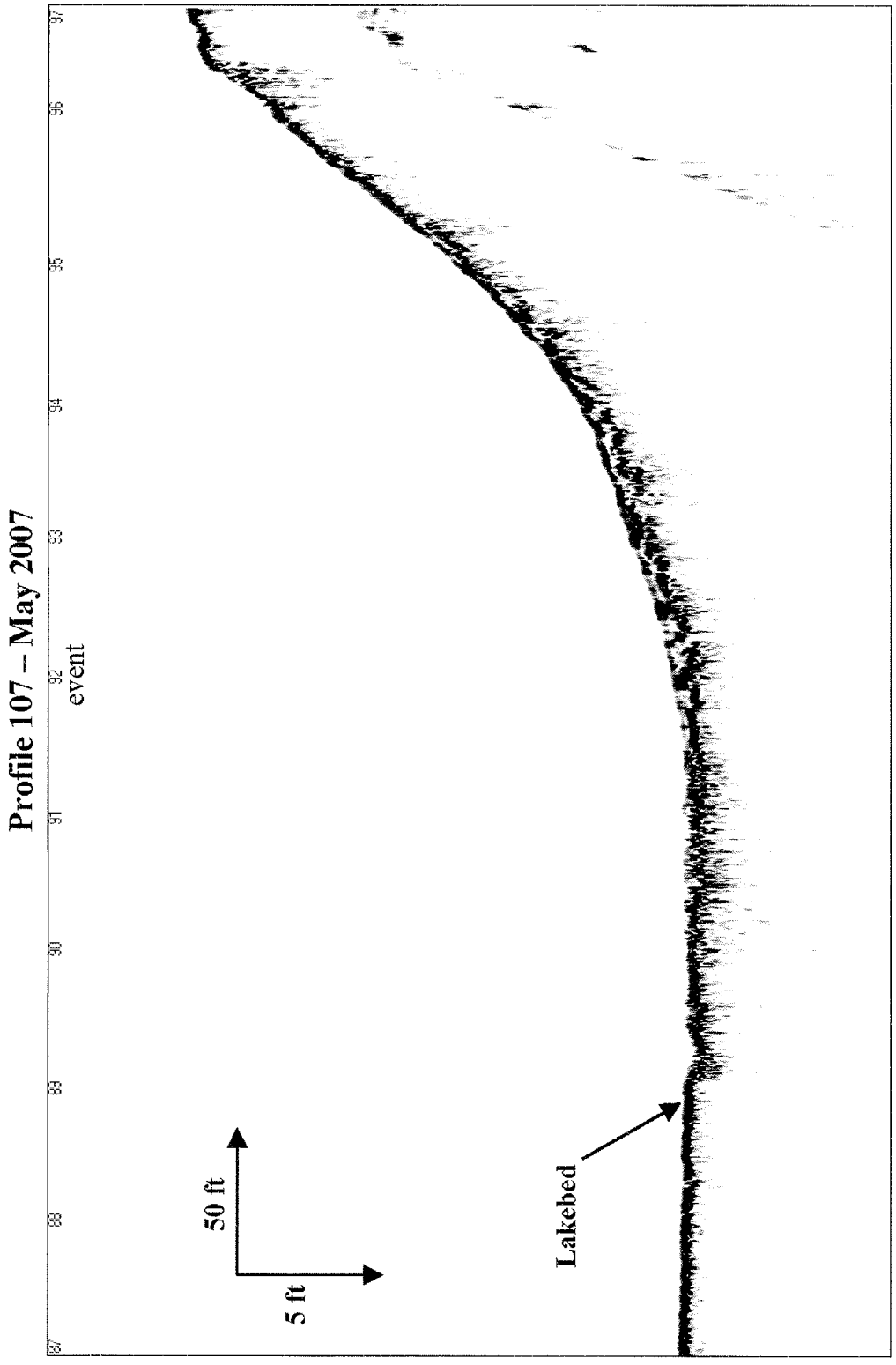
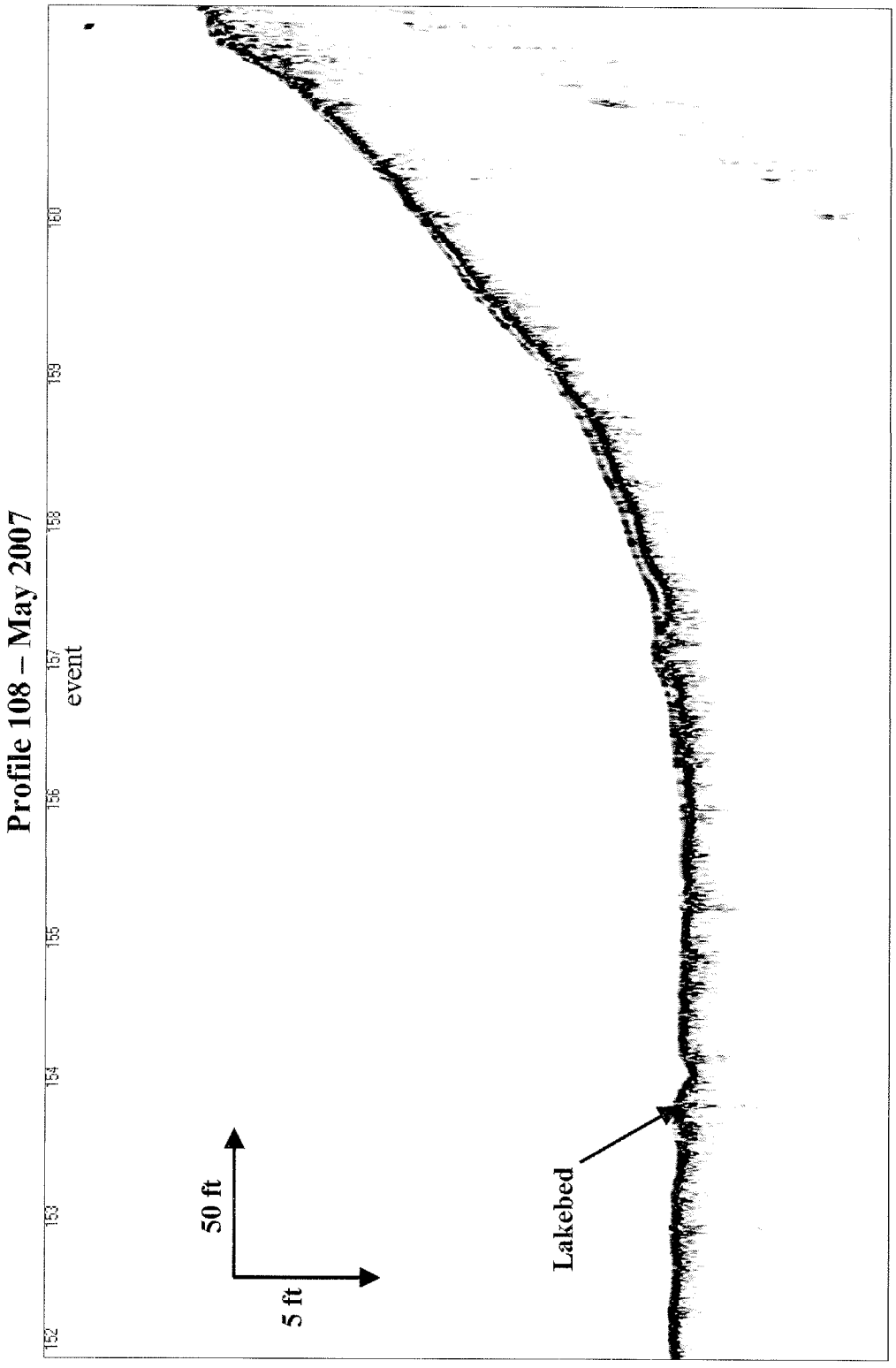
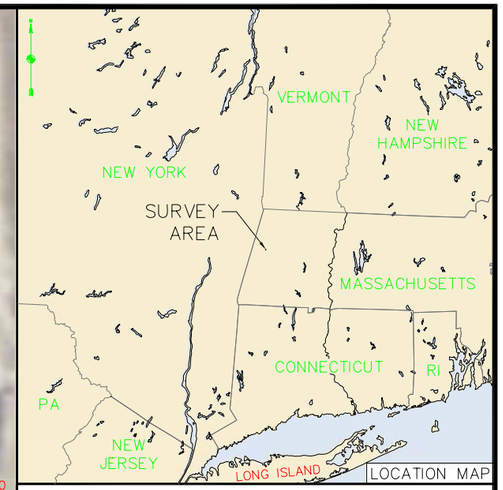
event
141
142
143
144
145
146
147
148
149
150
151
50 ft
5 ft
Lakebed


Profile 106 – May 2007
event
50 ft
5 ft
Lakebed

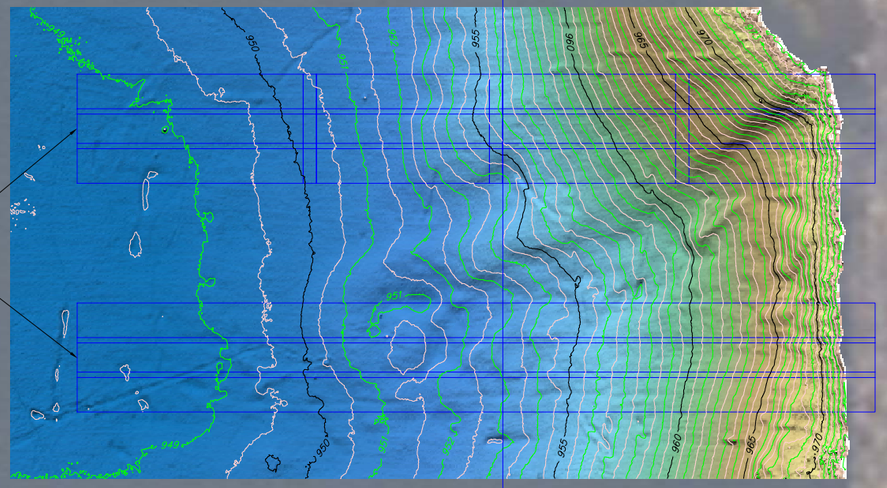

Profile 107 – May 2007
event
97
96
95
94
93
92
91
90
89
88
87
50 ft
5 ft
Lakebed


Profile 108 – May 2007
event
152
153
154
155
156
157
158
159
160
50 ft
5 ft
Lakebed

E 187,000
E 187,200
E 187,400
N 2,994,400
N 2,994,200
N 2,994,000



LOCATION MAP



STUDY AREAS

SILVER LAKE

PITTSFIELD, MASSACHUSETTS

LEGEND:

CALIBRATION TARGET

970 MAJOR CONTOUR

969 / 969.5 MINOR CONTOUR

NOTES:

1. GRID SYSTEM IS IN FEET AND IS THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM, NAD83.
2. ELEVATIONS ARE IN FEET AND ARE REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD 29) BASED ON BENCHMARK "SL-03" HAVING AN ELEVATION OF 978.81 FEET NGVD 29 AS PROVIDED BY BB&L.
3. CONTOURS ARE IN FEET AND WERE COMPUTER GENERATED USING "QUICKSURF" VERSION 5.1 (SCHREIBER INSTRUMENTS, INC.) OPERATING WITHIN "AUTODESK" AUTOCAD VERSION 2004 BASED ON THE AVERAGE SOUNDING IN A 0.5 FOOT BY 0.5 FOOT BIN.
4. SHORELINE AND ONSHORE FEATURES ARE APPROXIMATE AND WERE TAKEN FROM DIGITAL ORTHOPHOTO QUADRANGLES FLOWN IN APRIL 2005 AND OBTAINED FROM THE MASSACHUSETTS GEOGRAPHIC INFORMATION SYSTEM (MASSGIS).
5. ADDITIONAL INFORMATION REGARDING THE DATA PRESENTED CAN BE FOUND IN OSI REPORT NO. 06ES064.
6. THE INFORMATION PRESENTED ON THIS CHART REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY OCEAN SURVEYS, INC. ON 30-31 MAY 2007 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO OSI.

SCALE: 1"=40'

40 0 40 80 120

CHECK GRAPHIC SCALE BEFORE USING

OCEAN SURVEYS, INC.
OLD SAYBROOK, CONNECTICUT
(860) 388-4631
www.oceansurveys.com

PREPARED FOR: BLASLAND, BOUCK & LEE

POST-CONSTRUCTION MULTIBEAM PILOT STUDY AREA SILVER LAKE PITTSFIELD, MASSACHUSETTS

PROJECT MANAGER:	SURVEY DATE:	PROJECT NUMBER:	
R.M. WALLACE	30-31 MAY 2007	06ES064	
DRAFTED BY:	DATE:	DRAWING:	SHEET:
A.M. RIZZO	14 JUNE 2007	4	1 OF 1

ARCADIS BBL

Appendix E

Immediate Post-Construction
Grain Size Analysis

WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-A-122706-0-2
Lab ID	2007-255-01-01	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	604	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	263.00	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	245.52	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	87.16	Weight of Tare (gm)	NA
Weight of Water (gm)	17.48	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	158.36	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**11.0**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	158.36
Dry Weight - 3/4" Sample (gm)	138.2	Weight of minus #200 material (gm)	20.21
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	138.15
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	4.51	2.85	2.85	97.15	**97.15**
3/8"	9.50	5.59	3.53	6.38	93.62	**93.62**
#4	4.75	14.92	9.42	15.80	84.20	**84.20**
#10	2.00	13.69	8.64	24.44	75.56	**75.56**
#20	0.850	11.94	7.54	31.98	68.02	**68.02**
#40	0.425	15.76	9.95	41.94	58.06	**58.06**
#60	0.250	15.69	9.91	51.84	48.16	**48.16**
#140	0.106	43.22	27.29	79.14	20.86	**20.86**
#200	0.075	12.83	8.10	87.24	12.76	**12.76**
Pan	-	20.21	12.76	100.00	-	**-**

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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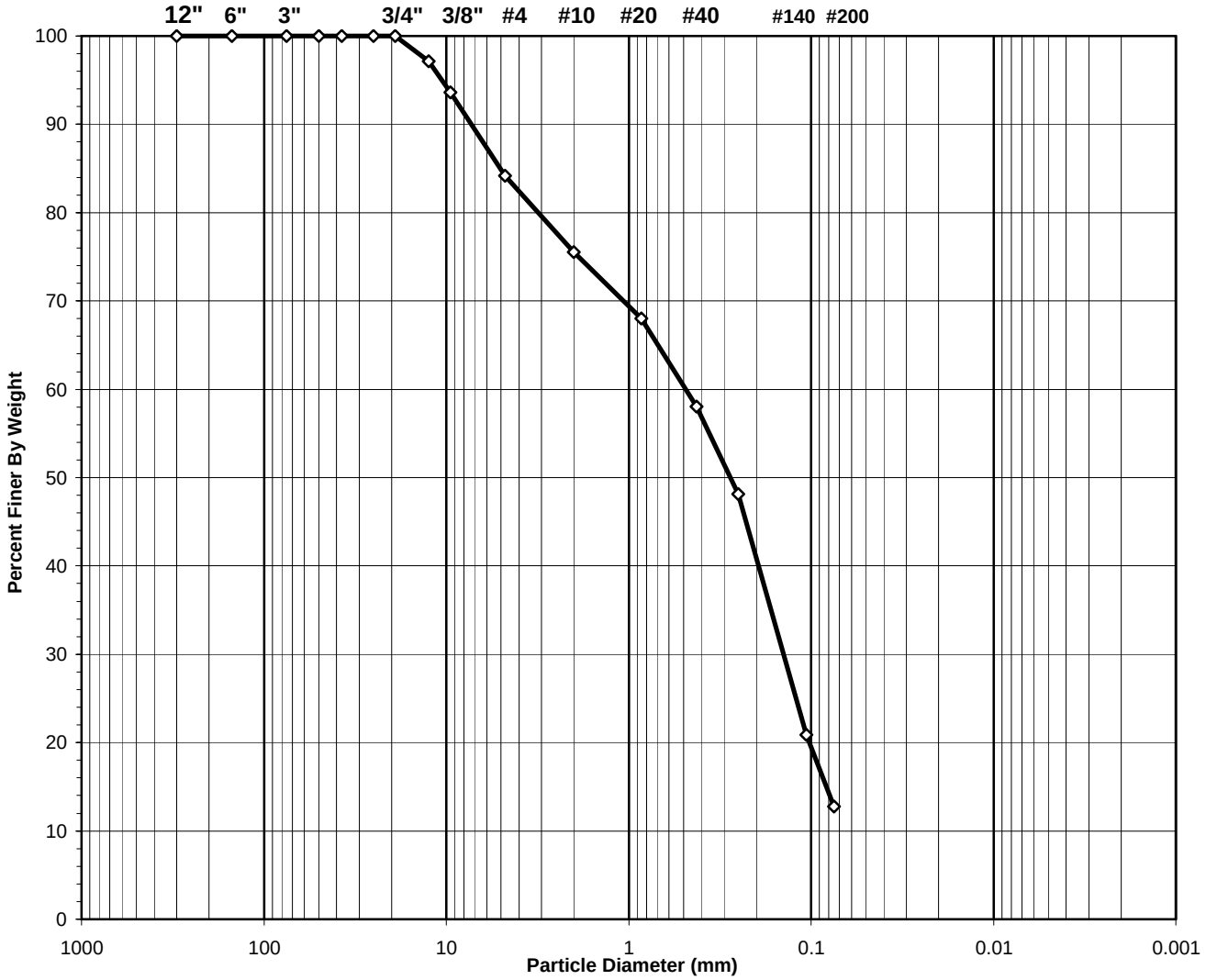
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-A-122706-0-2
Lab ID	2007-255-01-01	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND WITH GRAVEL***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

C:\MSOFFICE\Excel\PrintQ\[E809.XLS]Sheet1

WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-A-122706-2-4
Lab ID	2007-255-01-02	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	580	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	273.21	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	259.70	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	84.42	Weight of Tare (gm)	NA
Weight of Water (gm)	13.51	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	175.28	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**7.7**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	175.28
Dry Weight - 3/4" Sample (gm)	161.3	Weight of minus #200 material (gm)	14.02
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	161.26
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	5.25	3.00	3.00	97.00	**97.00**
3/8"	9.50	16.75	9.56	12.55	87.45	**87.45**
#4	4.75	27.13	15.48	28.03	71.97	**71.97**
#10	2.00	23.00	13.12	41.15	58.85	**58.85**
#20	0.850	19.81	11.30	52.45	47.55	**47.55**
#40	0.425	15.39	8.78	61.23	38.77	**38.77**
#60	0.250	12.89	7.35	68.59	31.41	**31.41**
#140	0.106	30.95	17.66	86.24	13.76	**13.76**
#200	0.075	10.09	5.76	92.00	8.00	**8.00**
Pan	-	14.02	8.00	100.00	-	**-**

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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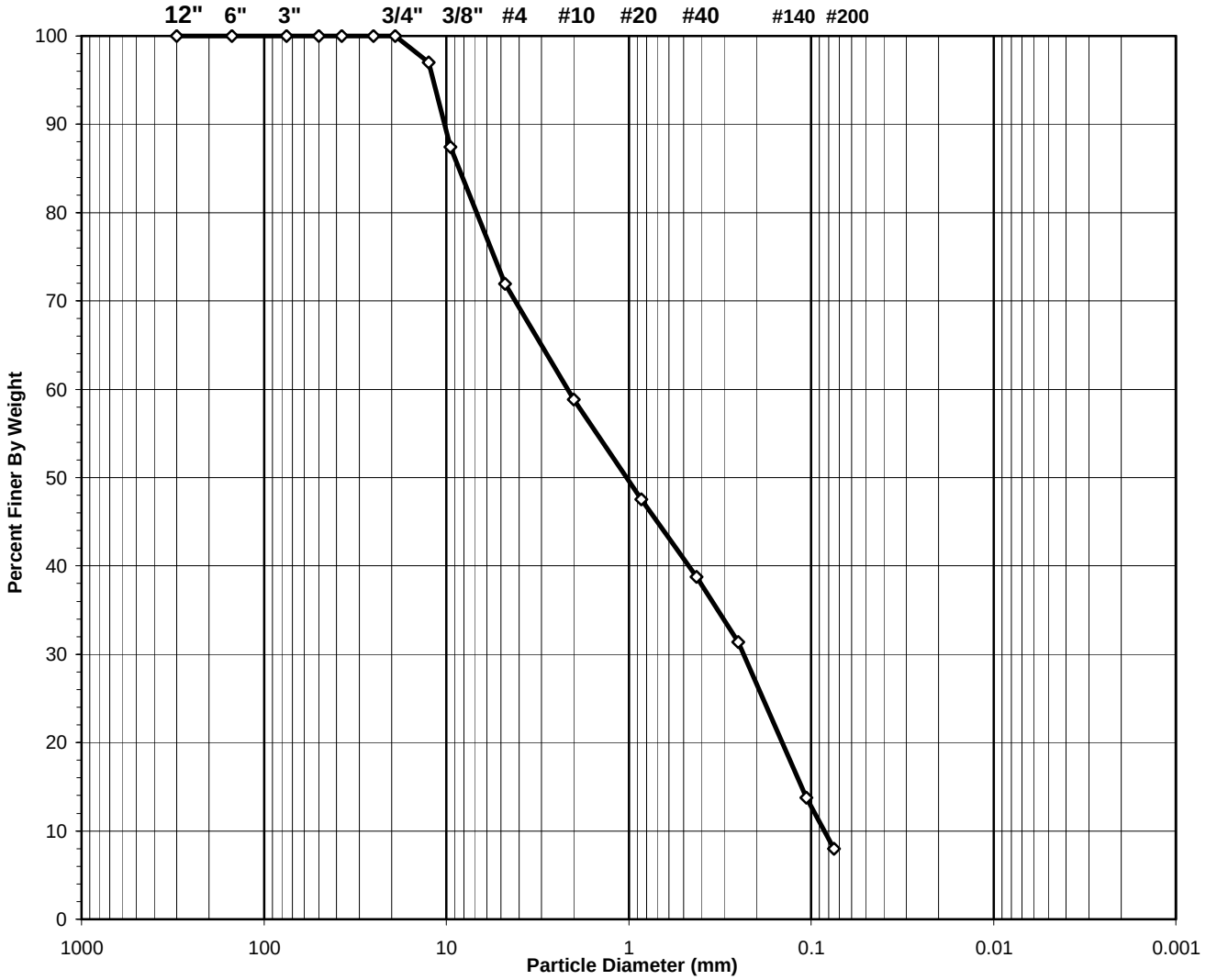
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-A-122706-2-4
Lab ID	2007-255-01-02	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol	***sp-sm, ASSUMED***	**D60 =**	**2.2**	**CC =**	**0.3**
USCS Classification	***POORLY GRADED SAND WITH SILT AND GRAVEL***	**D30 =**	**0.2**	**CU =**	**25.5**
UNABLE TO RUN HYDROMETER		**D10 =**	**0.1**		

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-A-122706-4-6
Lab ID	2007-255-01-03	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	870	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	309.42	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	281.38	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	109.92	Weight of Tare (gm)	NA
Weight of Water (gm)	28.04	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	171.46	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**16.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	171.46
Dry Weight - 3/4" Sample (gm)	162.7	Weight of minus #200 material (gm)	8.81
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	162.65
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	1.93	1.13	1.13	98.87	**98.87**
#10	2.00	3.07	1.79	2.92	97.08	**97.08**
#20	0.850	7.61	4.44	7.35	92.65	**92.65**
#40	0.425	24.77	14.45	21.80	78.20	**78.20**
#60	0.250	34.33	20.02	41.82	58.18	**58.18**
#140	0.106	79.50	46.37	88.19	11.81	**11.81**
#200	0.075	11.44	6.67	94.86	5.14	**5.14**
Pan	-	8.81	5.14	100.00	-	**-**

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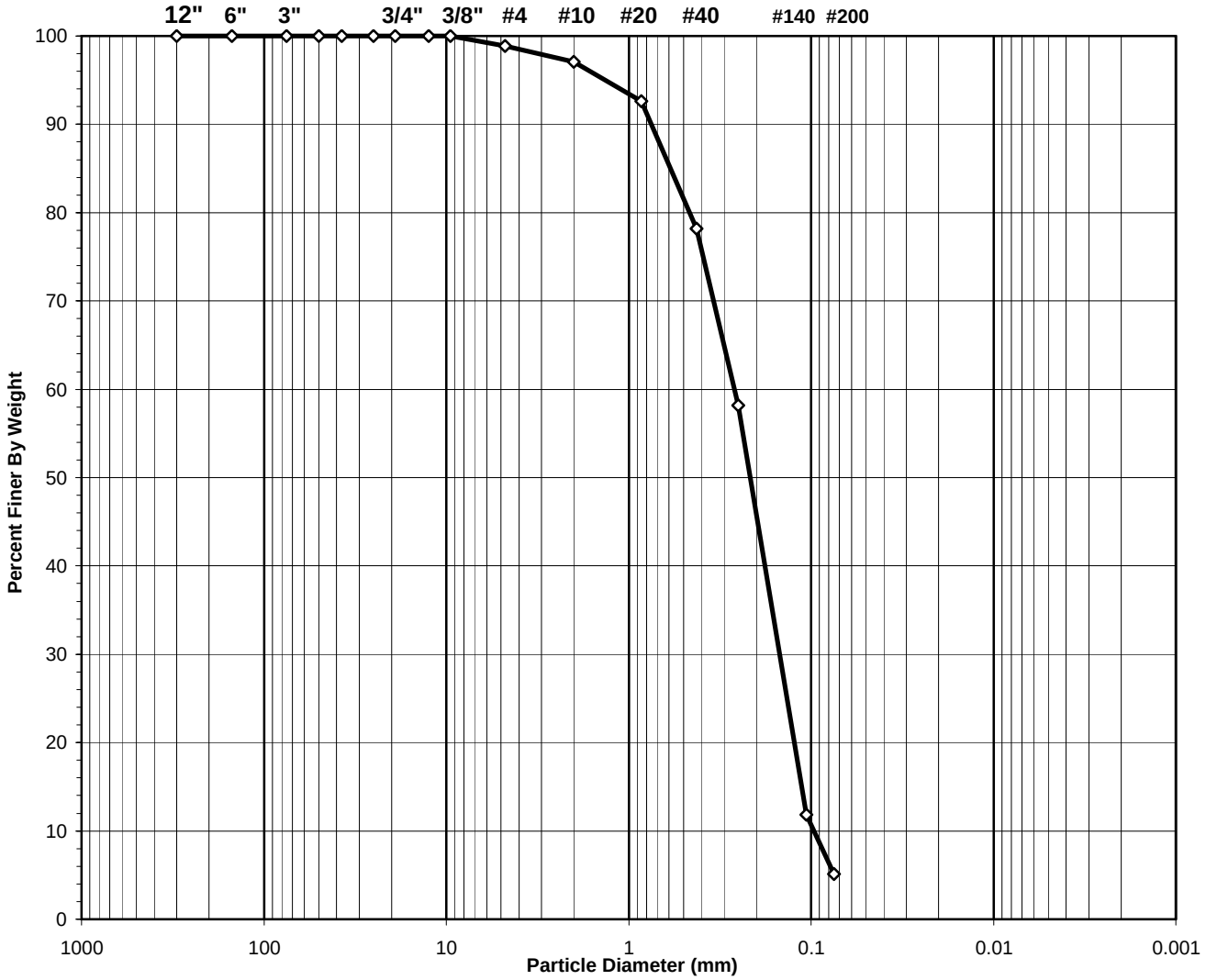
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-A-122706-4-6
Lab ID	2007-255-01-03	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sp-sm, ASSUMED*** **D60 = 0.3** **CC = 0.9**

USCS Classification ***POORLY GRADED SAND WITH SILT*** **D30 = 0.1** **CU = 2.7**

UNABLE TO RUN HYDROMETER **D10 = 0.1**

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DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-A-122706-TOP
Lab ID	2007-255-01-04	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	555	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	223.23	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	192.69	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	81.90	Weight of Tare (gm)	NA
Weight of Water (gm)	30.54	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	110.79	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**27.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	110.79
Dry Weight - 3/4" Sample (gm)	67.5	Weight of minus #200 material (gm)	43.28
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	67.51
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	0.35	0.32	0.32	99.68	**99.68**
#10	2.00	0.15	0.14	0.45	99.55	**99.55**
#20	0.850	0.49	0.44	0.89	99.11	**99.11**
#40	0.425	1.12	1.01	1.90	98.10	**98.10**
#60	0.250	1.26	1.14	3.04	96.96	**96.96**
#140	0.106	36.89	33.30	36.34	63.66	**63.66**
#200	0.075	27.25	24.60	60.94	39.06	**39.06**
Pan	-	43.28	39.06	100.00	-	**-**

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

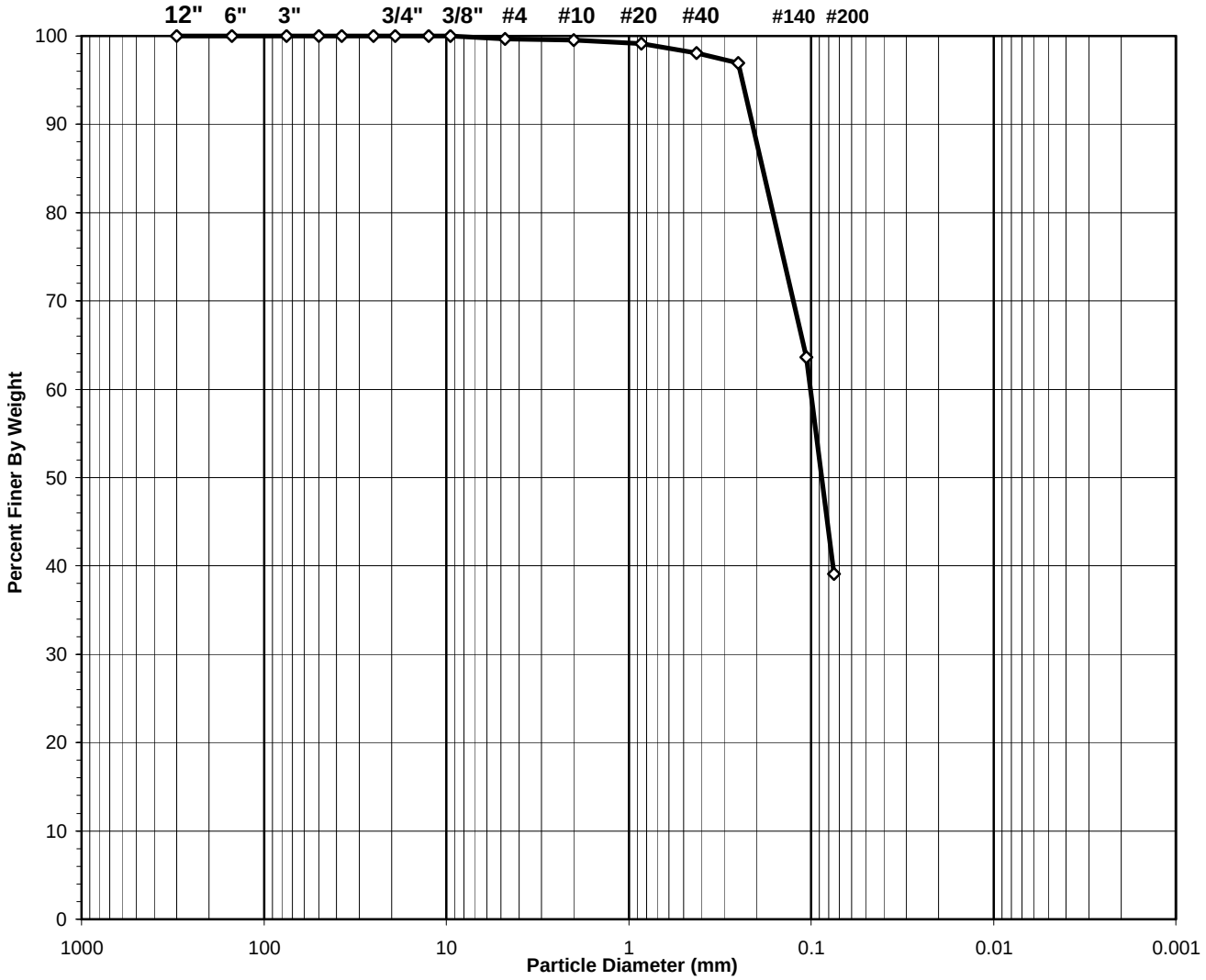
S:\EMAIL SENT\ARCADIS SILVER LAKE\[255-01-03.XLS]Sheet1

SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-A-122706-TOP
Lab ID	2007-255-01-04	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-B-122706-0-2
Lab ID	2007-255-01-05	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	586	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	277.81	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	252.59	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	82.31	Weight of Tare (gm)	NA
Weight of Water (gm)	25.22	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	170.28	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**14.8**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	170.28
Dry Weight - 3/4" Sample (gm)	139.6	Weight of minus #200 material (gm)	30.73
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	139.55
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	3.95	2.32	2.32	97.68	**97.68**
3/8"	9.50	6.80	3.99	6.31	93.69	**93.69**
#4	4.75	14.95	8.78	15.09	84.91	**84.91**
#10	2.00	9.01	5.29	20.38	79.62	**79.62**
#20	0.850	8.79	5.16	25.55	74.45	**74.45**
#40	0.425	9.99	5.87	31.41	68.59	**68.59**
#60	0.250	12.83	7.53	38.95	61.05	**61.05**
#140	0.106	51.15	30.04	68.99	31.01	**31.01**
#200	0.075	22.08	12.97	81.95	18.05	**18.05**
Pan	-	30.73	18.05	100.00	-	**-**

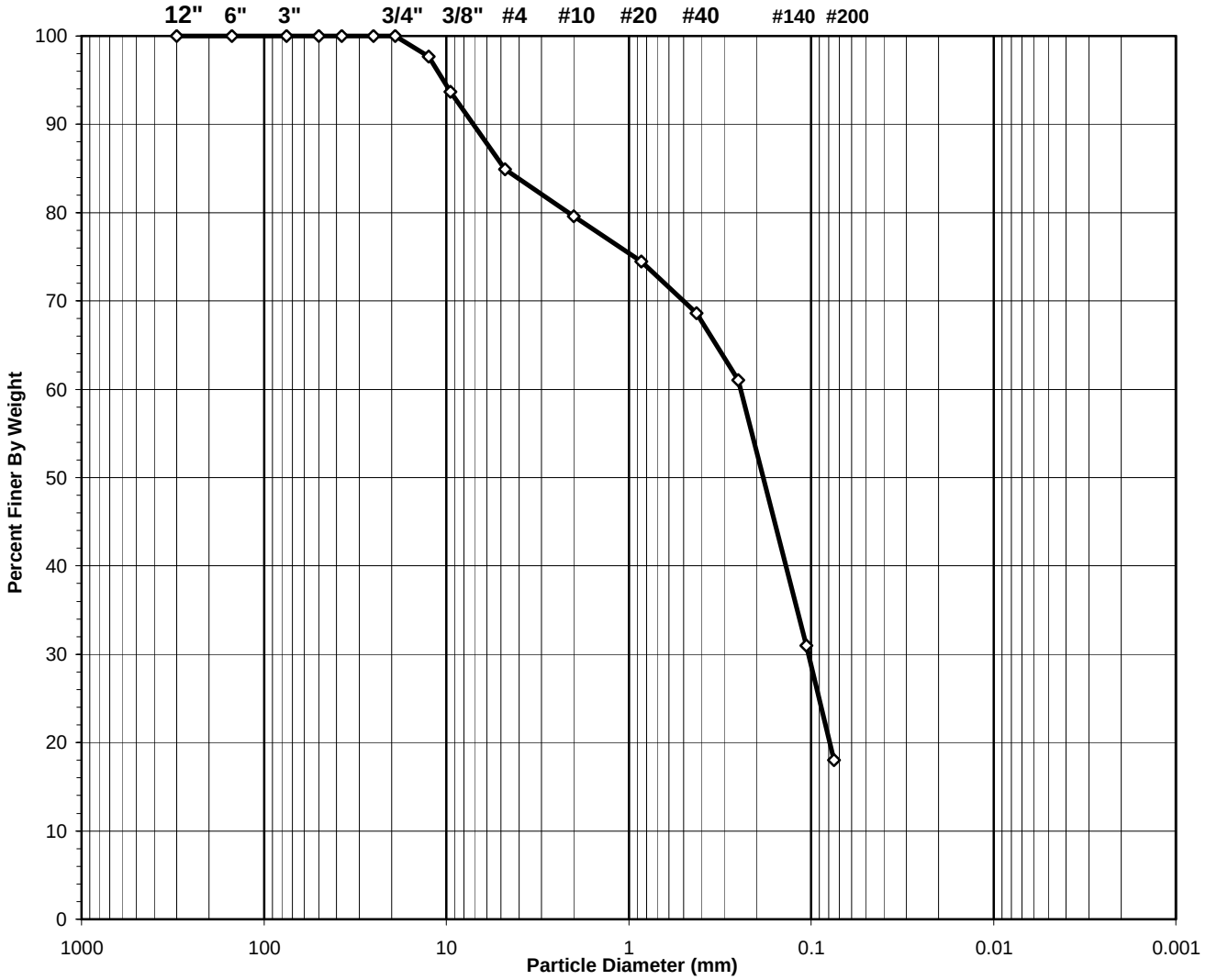
Tested By PC Date 7/10/2007 Checked By Date

SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-B-122706-0-2
Lab ID	2007-255-01-05	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND WITH GRAVEL***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-B-122706-2-4
Lab ID	2007-255-01-06	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	575	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	275.14	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	258.02	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	82.68	Weight of Tare (gm)	NA
Weight of Water (gm)	17.12	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	175.34	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**9.8**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	175.34
Dry Weight - 3/4" Sample (gm)	148.0	Weight of minus #200 material (gm)	27.32
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	148.02
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	3.62	2.06	2.06	97.94	**97.94**
3/8"	9.50	1.41	0.80	2.87	97.13	**97.13**
#4	4.75	18.32	10.45	13.32	86.68	**86.68**
#10	2.00	12.85	7.33	20.65	79.35	**79.35**
#20	0.850	12.40	7.07	27.72	72.28	**72.28**
#40	0.425	16.06	9.16	36.88	63.12	**63.12**
#60	0.250	16.29	9.29	46.17	53.83	**53.83**
#140	0.106	49.72	28.36	74.52	25.48	**25.48**
#200	0.075	17.35	9.90	84.42	15.58	**15.58**
Pan	-	27.32	15.58	100.00	-	**-**

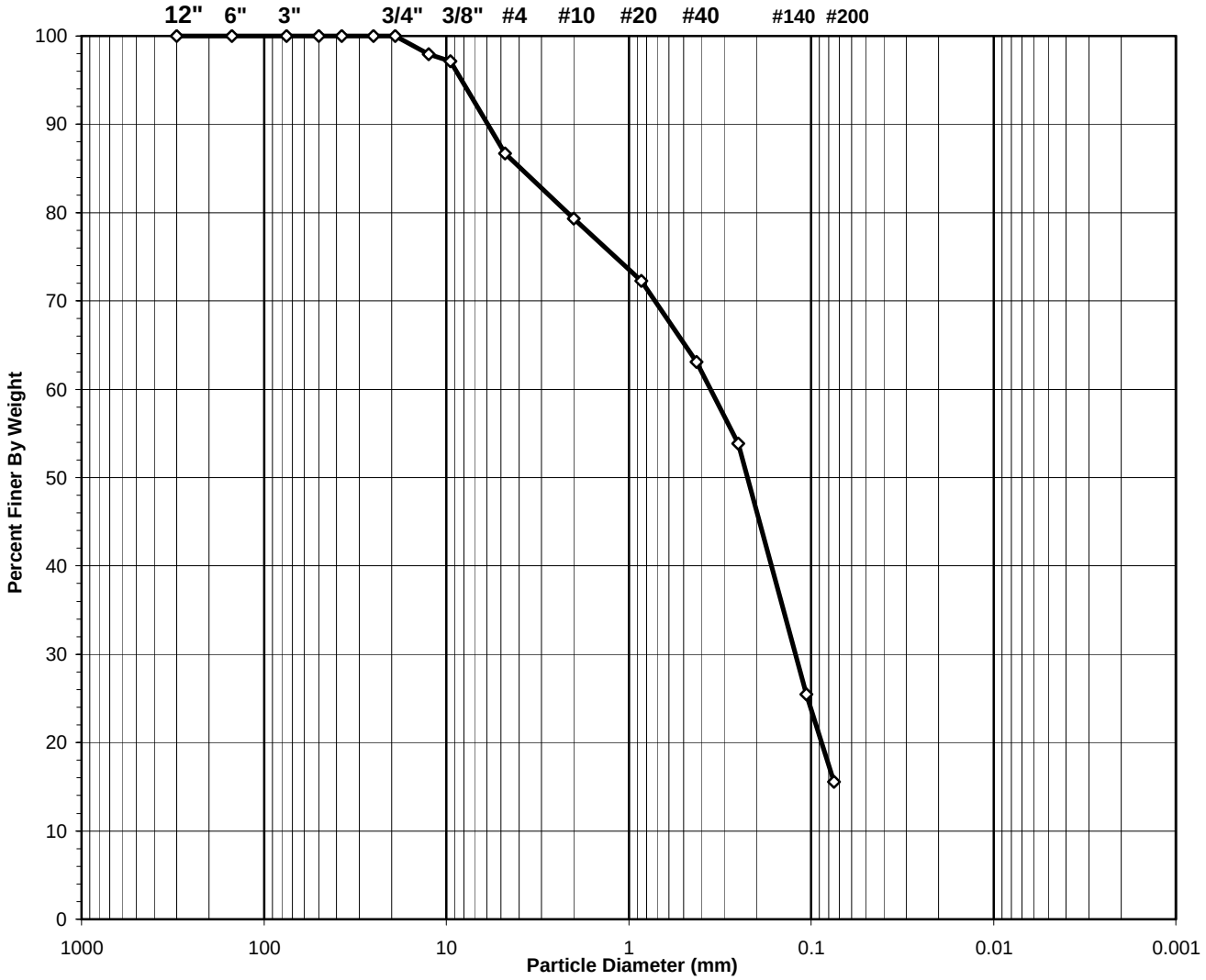
Tested By PC Date 7/10/2007 Checked By Date

SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-B-122706-2-4
Lab ID	2007-255-01-06	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-B-122706-4-6
Lab ID	2007-255-01-07	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	591	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	209.32	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	193.10	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	87.39	Weight of Tare (gm)	NA
Weight of Water (gm)	16.22	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	105.71	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**15.3**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	105.71
Dry Weight - 3/4" Sample (gm)	93.5	Weight of minus #200 material (gm)	12.18
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	93.53
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	0.20	0.19	0.19	99.81	**99.81**
#10	2.00	0.23	0.22	0.41	99.59	**99.59**
#20	0.850	1.63	1.54	1.95	98.05	**98.05**
#40	0.425	8.32	7.87	9.82	90.18	**90.18**
#60	0.250	18.33	17.34	27.16	72.84	**72.84**
#140	0.106	52.17	49.35	76.51	23.49	**23.49**
#200	0.075	12.65	11.97	88.48	11.52	**11.52**
Pan	-	12.18	11.52	100.00	-	**-**

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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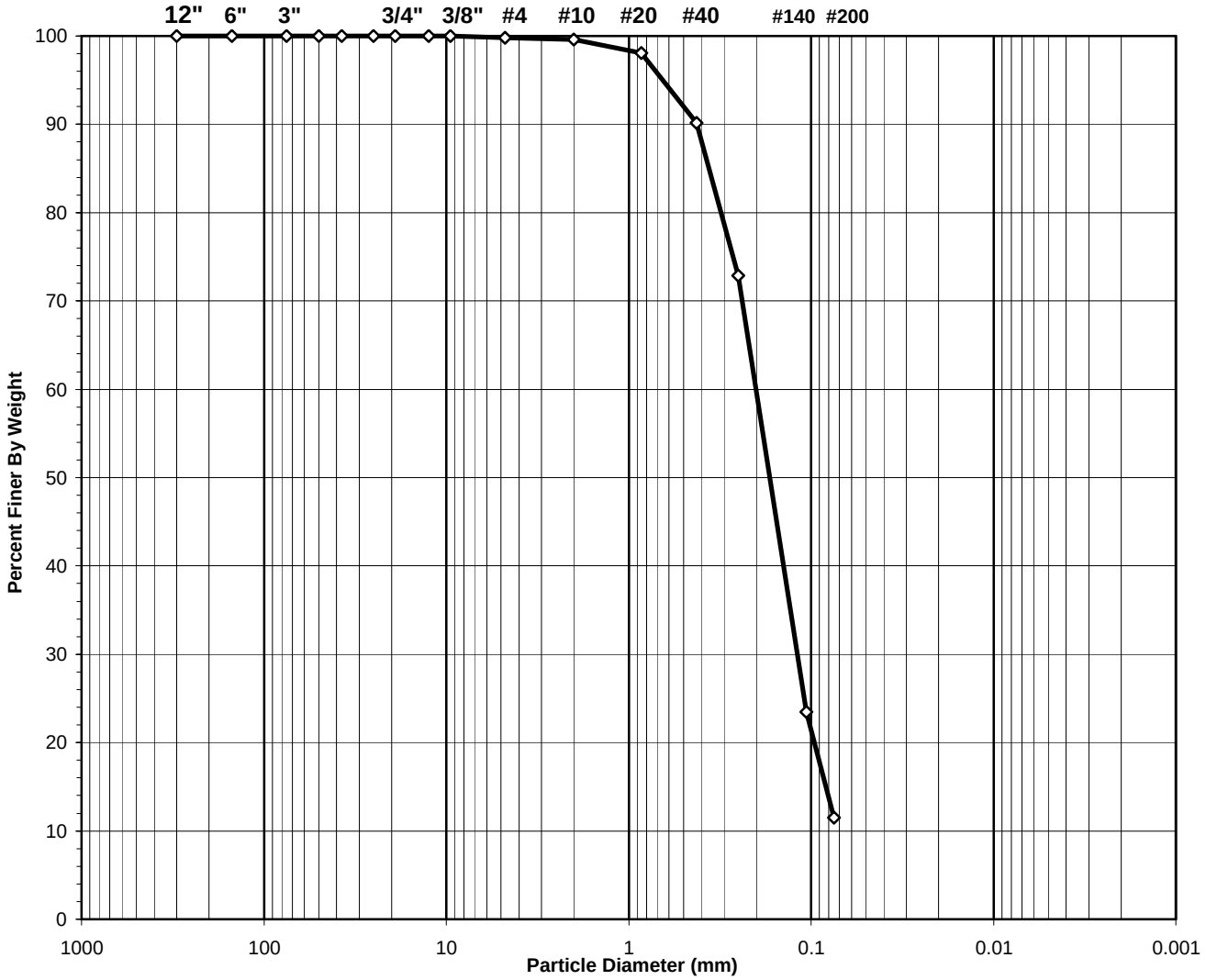
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-B-122706-4-6
Lab ID	2007-255-01-07	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sp-sm, ASSUMED***

USCS Classification ***POORLY GRADED SAND WITH SILT***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-B-122706-TOP
Lab ID	2007-255-01-08	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	574	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	284.90	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	239.49	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	83.57	Weight of Tare (gm)	NA
Weight of Water (gm)	45.41	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	155.92	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**29.1**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	155.92
Dry Weight - 3/4" Sample (gm)	85.4	Weight of minus #200 material (gm)	70.55
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	85.37
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	0.00	0.00	0.00	100.00	**100.00**
#10	2.00	0.26	0.17	0.17	99.83	**99.83**
#20	0.850	0.57	0.37	0.53	99.47	**99.47**
#40	0.425	1.34	0.86	1.39	98.61	**98.61**
#60	0.250	3.52	2.26	3.65	96.35	**96.35**
#140	0.106	46.21	29.64	33.29	66.71	**66.71**
#200	0.075	33.47	21.47	54.75	45.25	**45.25**
Pan	-	70.55	45.25	100.00	-	**-**

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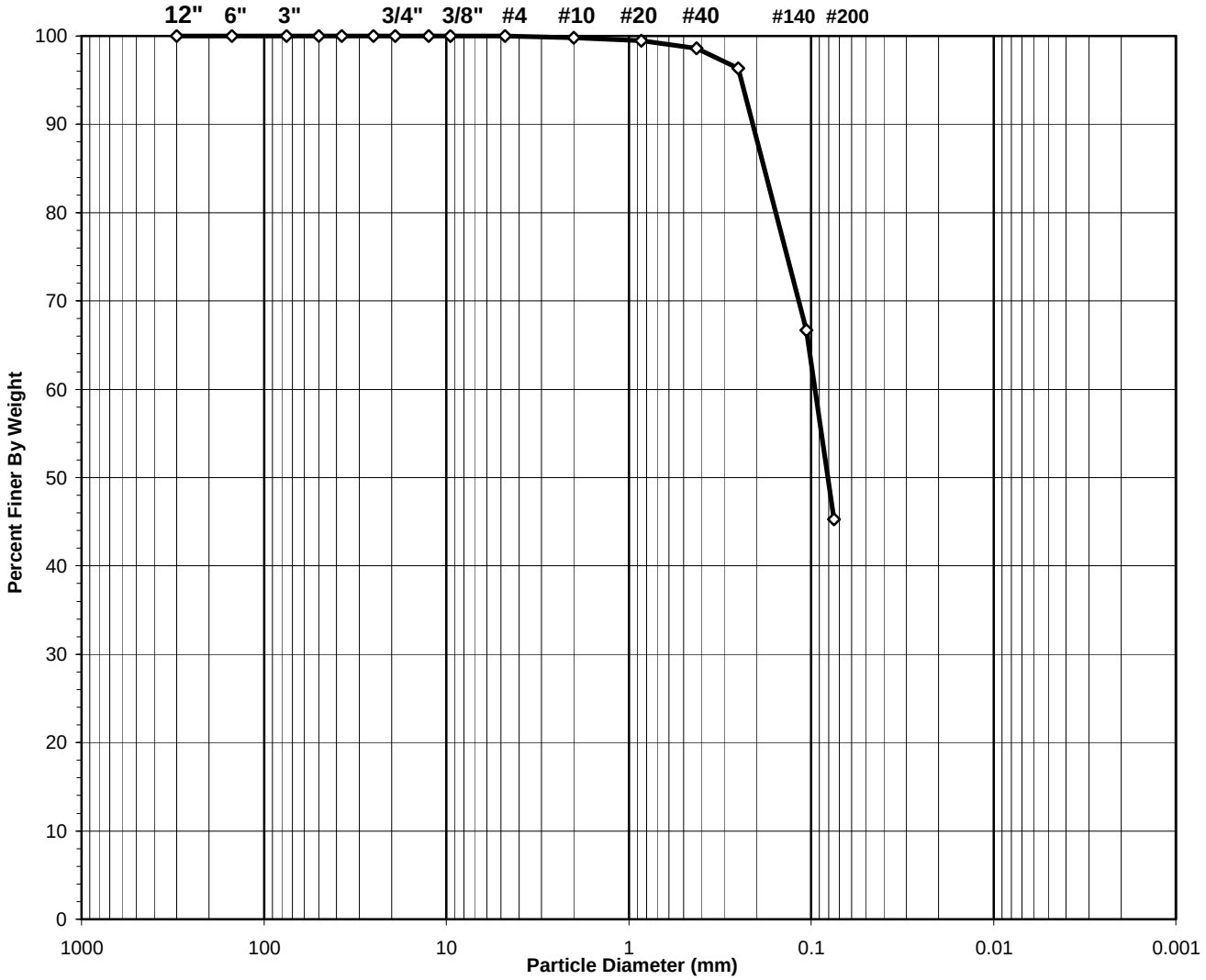
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-B-122706-TOP
Lab ID	2007-255-01-08	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-C-122706-0-2
Lab ID	2007-255-01-09	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1123	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	267.25	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	246.49	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	85.13	Weight of Tare (gm)	NA
Weight of Water (gm)	20.76	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	161.36	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**12.9**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	161.36
Dry Weight - 3/4" Sample (gm)	139.6	Weight of minus #200 material (gm)	21.77
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	139.59
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	10.95	6.79	6.79	93.21	**93.21**
3/8"	9.50	6.39	3.96	10.75	89.25	**89.25**
#4	4.75	16.42	10.18	20.92	79.08	**79.08**
#10	2.00	9.11	5.65	26.57	73.43	**73.43**
#20	0.850	9.01	5.58	32.15	67.85	**67.85**
#40	0.425	14.10	8.74	40.89	59.11	**59.11**
#60	0.250	14.02	8.69	49.58	50.42	**50.42**
#140	0.106	43.99	27.26	76.84	23.16	**23.16**
#200	0.075	15.60	9.67	86.51	13.49	**13.49**
Pan	-	21.77	13.49	100.00	-	**-**

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DCN: CT-S3C DATE 6-25-98 REVISION: 2

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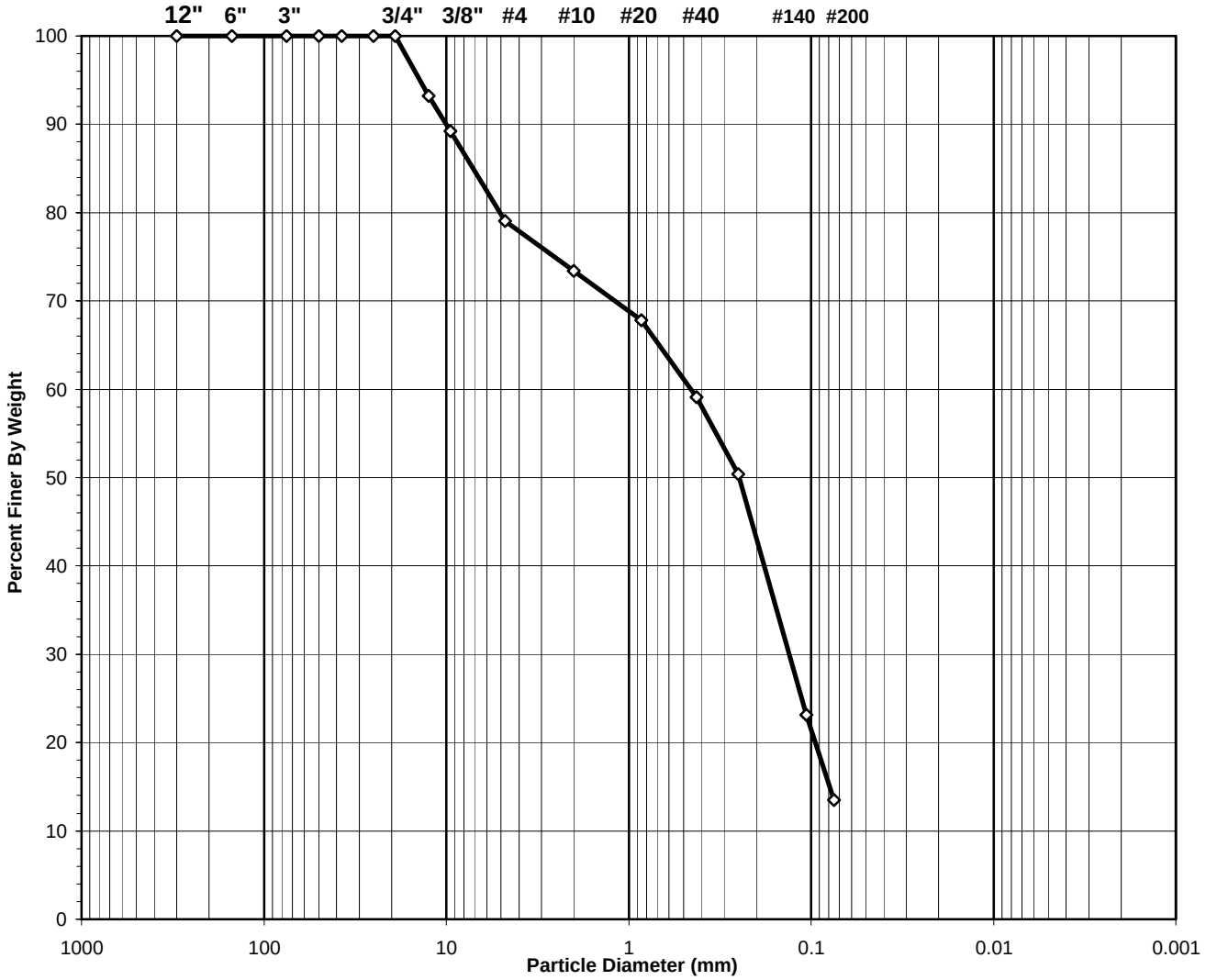
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-C-122706-0-2
Lab ID	2007-255-01-09	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND WITH GRAVEL***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-C-122706-4-6
Lab ID	2007-255-01-10	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	725	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	250.41	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	229.31	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	86.72	Weight of Tare (gm)	NA
Weight of Water (gm)	21.10	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	142.59	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**14.8**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	142.59
Dry Weight - 3/4" Sample (gm)	122.1	Weight of minus #200 material (gm)	20.46
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	122.13
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	3.83	2.69	2.69	97.31	**97.31**
3/8"	9.50	6.60	4.63	7.31	92.69	**92.69**
#4	4.75	7.24	5.08	12.39	87.61	**87.61**
#10	2.00	3.37	2.36	14.76	85.24	**85.24**
#20	0.850	5.73	4.02	18.77	81.23	**81.23**
#40	0.425	11.33	7.95	26.72	73.28	**73.28**
#60	0.250	17.18	12.05	38.77	61.23	**61.23**
#140	0.106	50.29	35.27	74.04	25.96	**25.96**
#200	0.075	16.56	11.61	85.65	14.35	**14.35**
Pan	-	20.46	14.35	100.00	-	**-**

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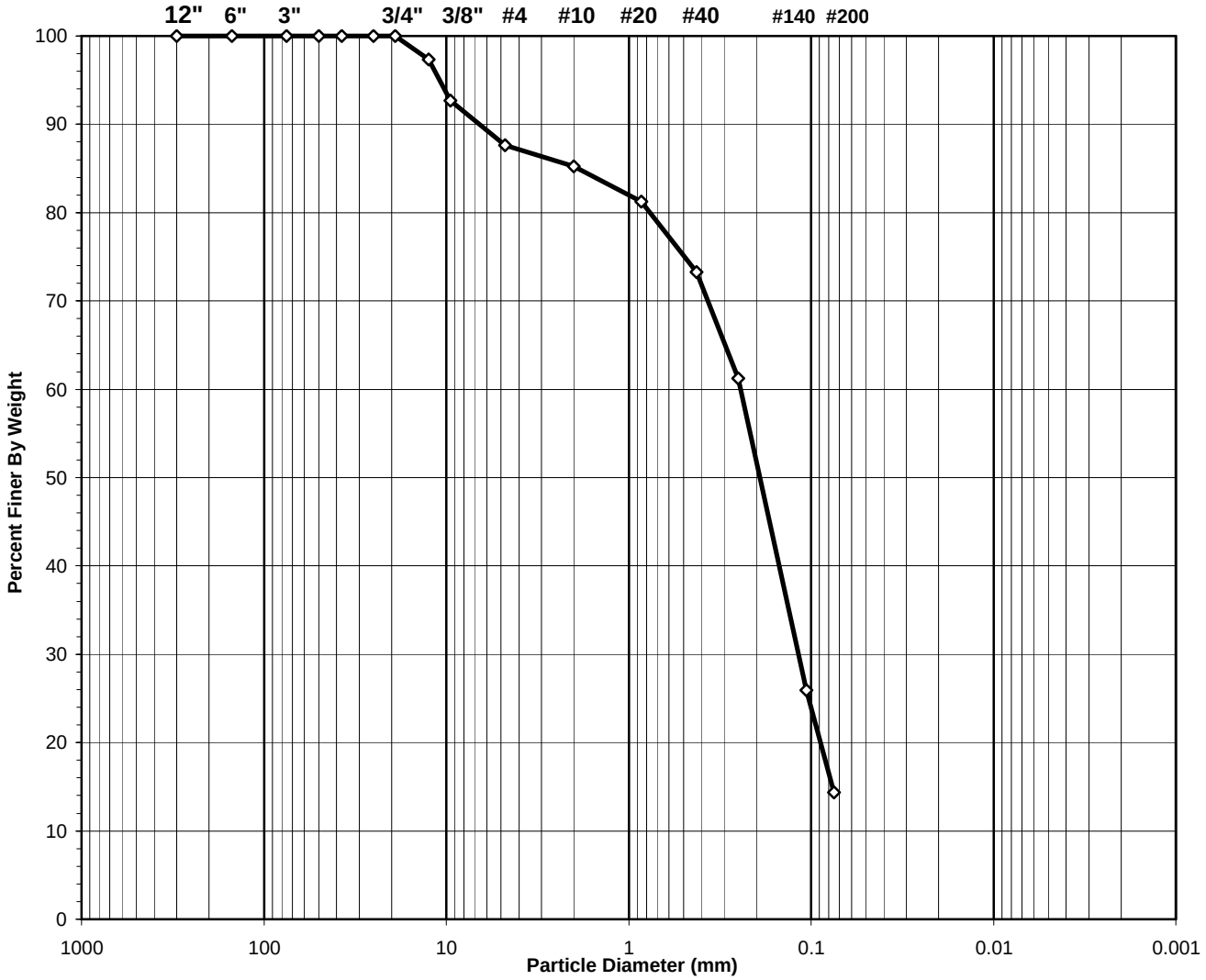
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-C-122706-4-6
Lab ID	2007-255-01-10	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-C-122706-REM
Lab ID	2007-255-01-11	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	558	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	207.72	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	193.87	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	81.38	Weight of Tare (gm)	NA
Weight of Water (gm)	13.85	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	112.49	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**12.3**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	112.49
Dry Weight - 3/4" Sample (gm)	96.5	Weight of minus #200 material (gm)	15.96
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	96.53
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	4.54	4.04	4.04	95.96	**95.96**
#4	4.75	12.88	11.45	15.49	84.51	**84.51**
#10	2.00	4.63	4.12	19.60	80.40	**80.40**
#20	0.850	4.19	3.72	23.33	76.67	**76.67**
#40	0.425	6.01	5.34	28.67	71.33	**71.33**
#60	0.250	10.76	9.57	38.23	61.77	**61.77**
#140	0.106	40.42	35.93	74.17	25.83	**25.83**
#200	0.075	13.10	11.65	85.81	14.19	**14.19**
Pan	-	15.96	14.19	100.00	-	**-**

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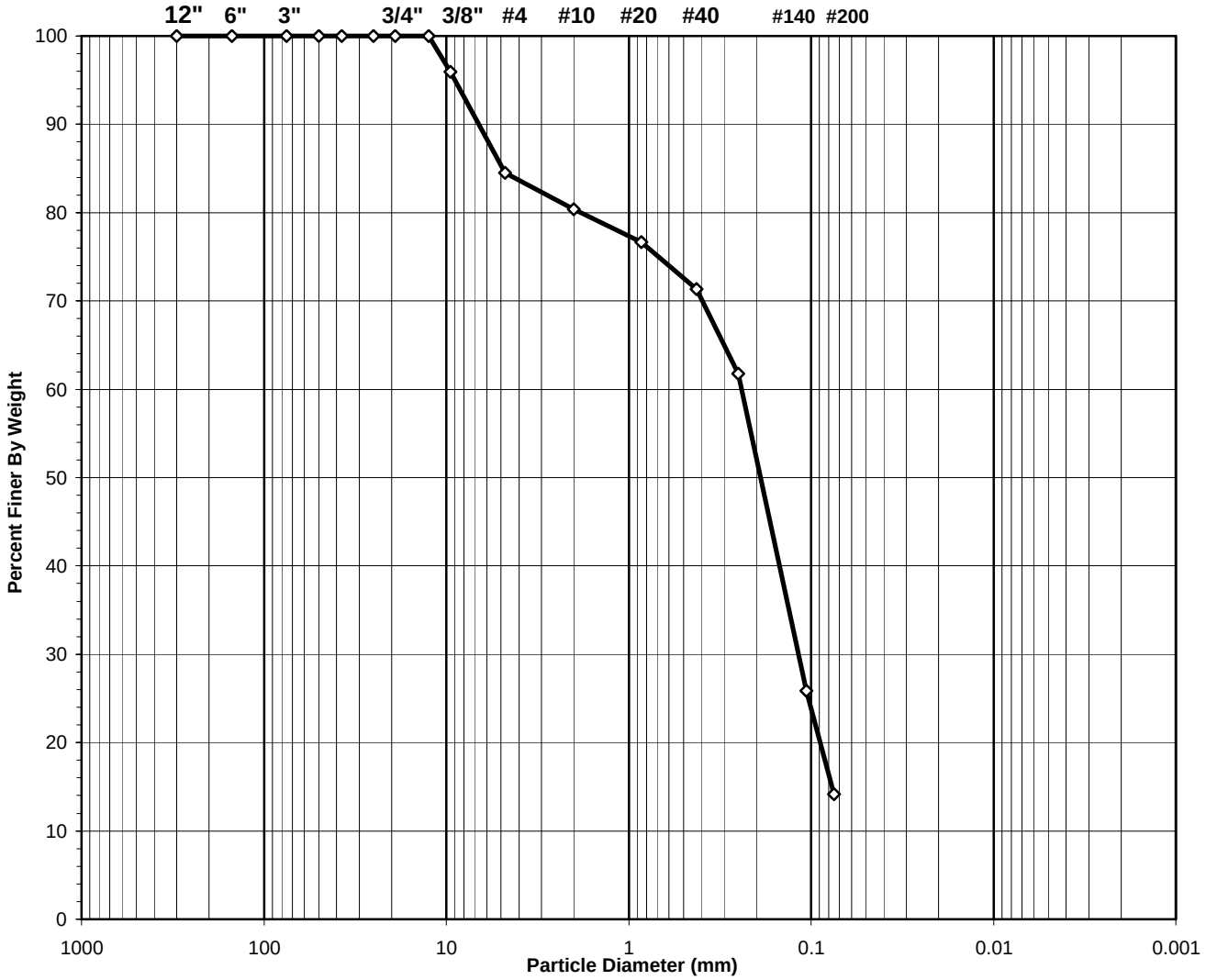
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-C-122706-REM
Lab ID	2007-255-01-11	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND WITH GRAVEL***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/9/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-C-122706-TOP
Lab ID	2007-255-01-12	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	630	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	266.81	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	234.52	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	82.32	Weight of Tare (gm)	NA
Weight of Water (gm)	32.29	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	152.20	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**21.2**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	152.20
Dry Weight - 3/4" Sample (gm)	112.9	Weight of minus #200 material (gm)	39.29
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	112.91
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	2.02	1.33	1.33	98.67	**98.67**
#10	2.00	0.50	0.33	1.66	98.34	**98.34**
#20	0.850	0.49	0.32	1.98	98.02	**98.02**
#40	0.425	1.48	0.97	2.95	97.05	**97.05**
#60	0.250	7.40	4.86	7.81	92.19	**92.19**
#140	0.106	64.83	42.60	50.41	49.59	**49.59**
#200	0.075	36.19	23.78	74.19	25.81	**25.81**
Pan	-	39.29	25.81	100.00	-	**-**

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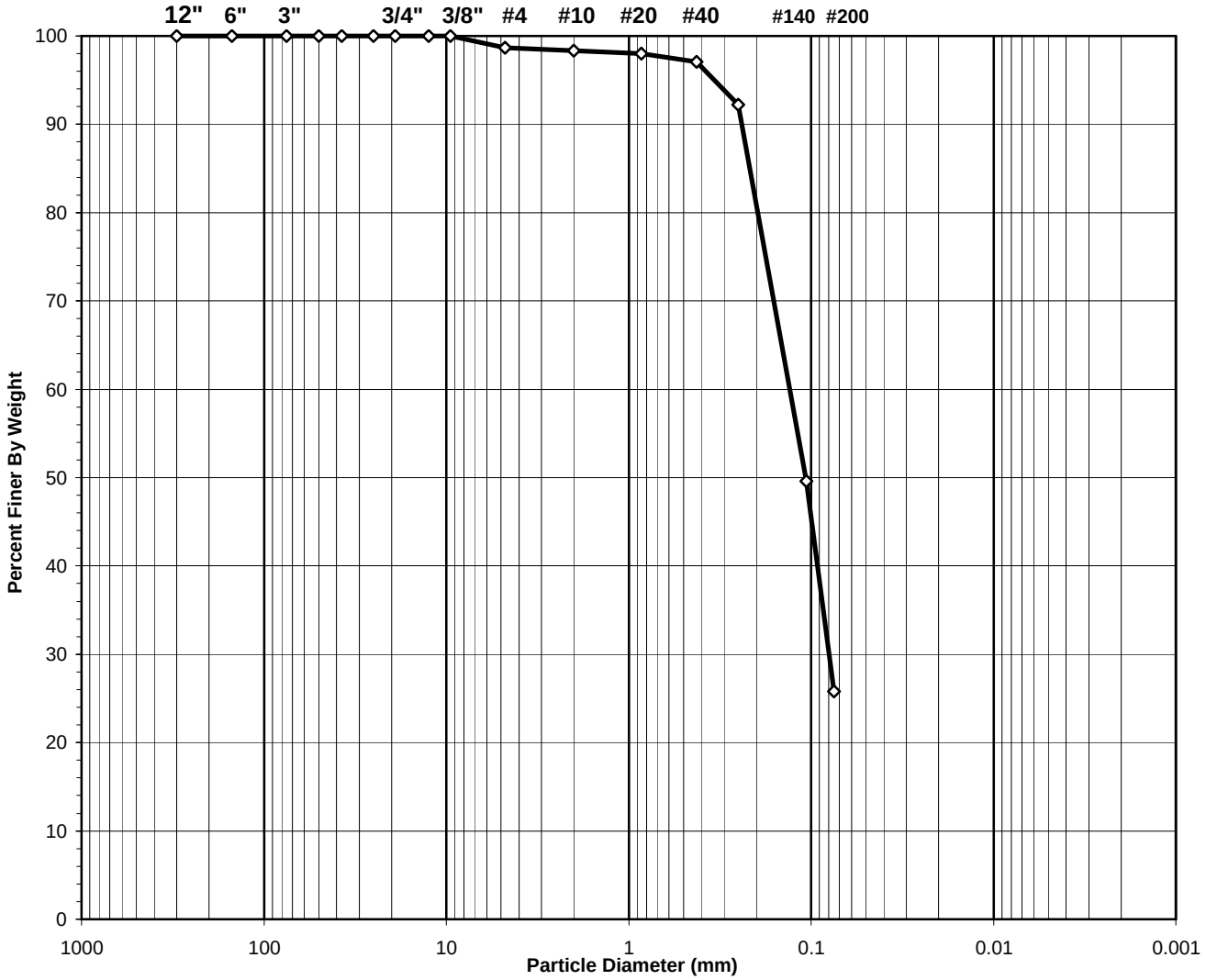
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-C-122706-TOP
Lab ID	2007-255-01-12	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/9/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-D-122706-0-2
Lab ID	2007-255-01-13	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1739	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	243.69	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	222.55	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	83.67	Weight of Tare (gm)	NA
Weight of Water (gm)	21.14	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	138.88	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**15.2**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	138.88
Dry Weight - 3/4" Sample (gm)	123.0	Weight of minus #200 material (gm)	15.91
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	122.97
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	8.40	6.05	6.05	93.95	**93.95**
#4	4.75	4.41	3.18	9.22	90.78	**90.78**
#10	2.00	7.14	5.14	14.36	85.64	**85.64**
#20	0.850	7.79	5.61	19.97	80.03	**80.03**
#40	0.425	10.89	7.84	27.82	72.18	**72.18**
#60	0.250	13.19	9.50	37.31	62.69	**62.69**
#140	0.106	54.85	39.49	76.81	23.19	**23.19**
#200	0.075	16.30	11.74	88.54	11.46	**11.46**
Pan	-	15.91	11.46	100.00	-	**-**

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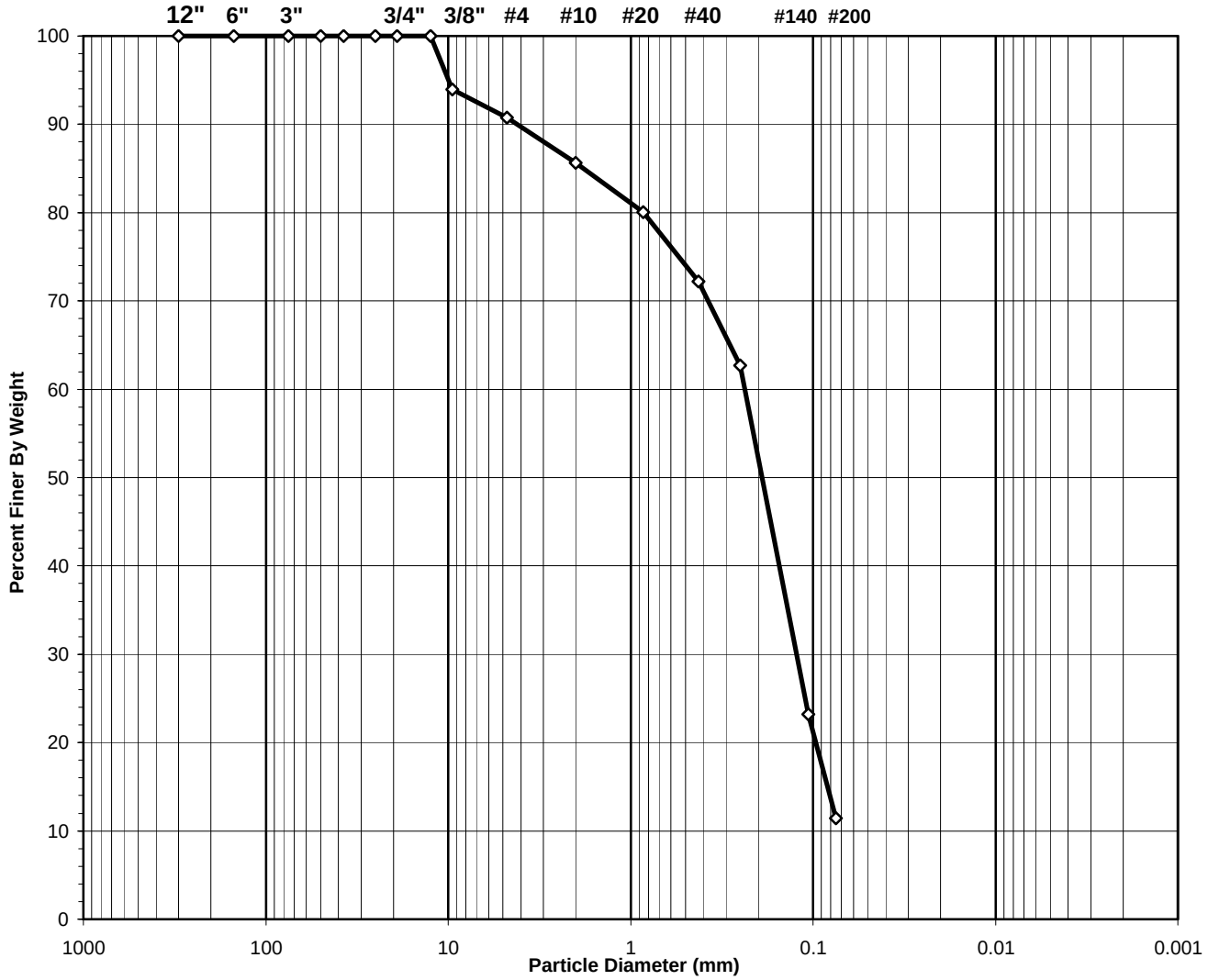
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-D-122706-0-2
Lab ID	2007-255-01-13	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sp-sm, ASSUMED***

USCS Classification ***POORLY GRADED SAND WITH SILT***

UNABLE TO RUN HYDROMETER

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-D-122706-2-4
Lab ID	2007-255-01-14	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	602	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	237.85	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	219.47	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	85.65	Weight of Tare (gm)	NA
Weight of Water (gm)	18.38	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	133.82	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**13.7**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	133.82
Dry Weight - 3/4" Sample (gm)	112.8	Weight of minus #200 material (gm)	21.06
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	112.76
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	4.00	2.99	2.99	97.01	**97.01**
#4	4.75	3.89	2.91	5.90	94.10	**94.10**
#10	2.00	5.24	3.92	9.81	90.19	**90.19**
#20	0.850	8.80	6.58	16.39	83.61	**83.61**
#40	0.425	10.93	8.17	24.56	75.44	**75.44**
#60	0.250	12.45	9.30	33.86	66.14	**66.14**
#140	0.106	47.73	35.67	69.53	30.47	**30.47**
#200	0.075	19.72	14.74	84.26	15.74	**15.74**
Pan	-	21.06	15.74	100.00	-	**-**

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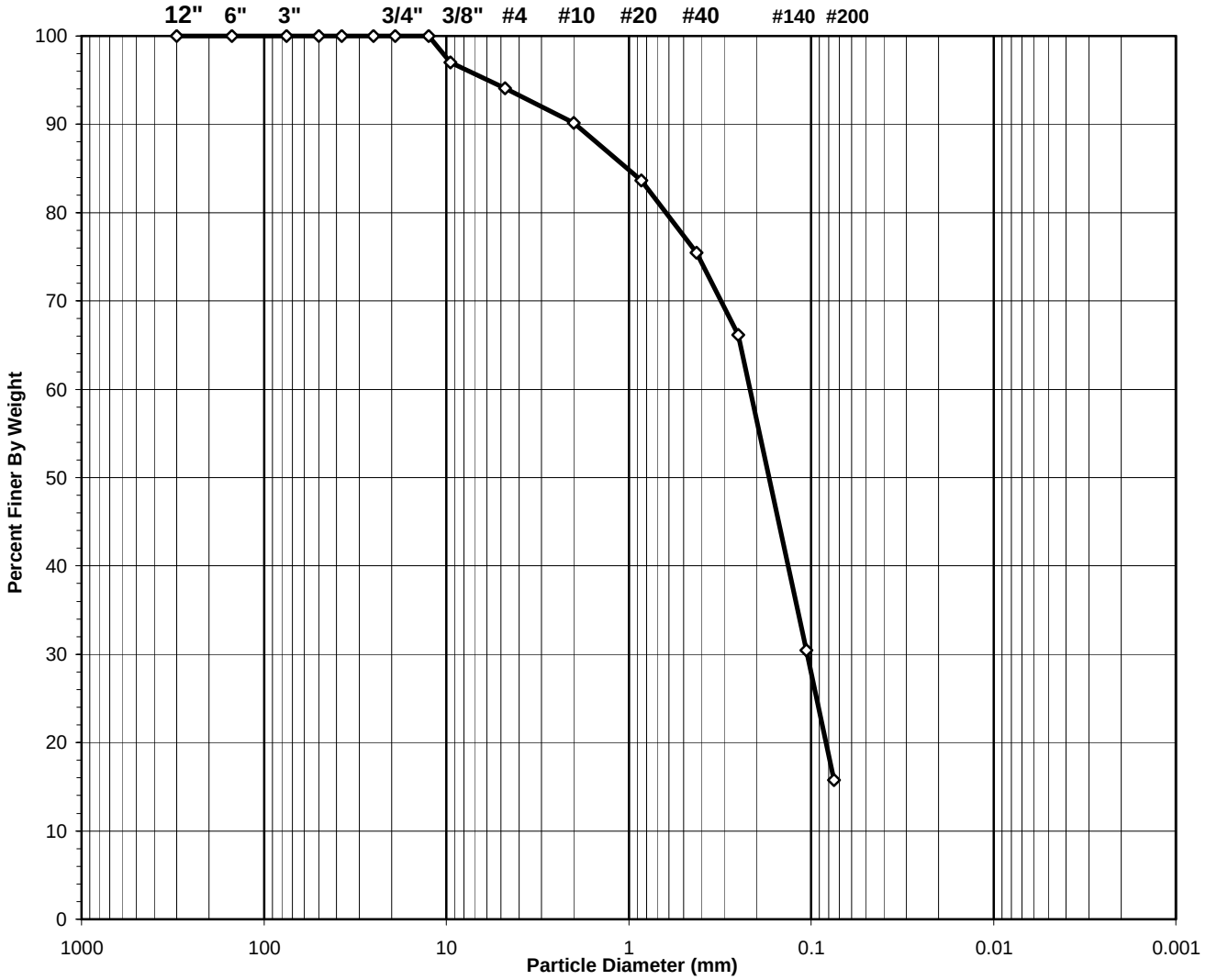
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-D-122706-2-4
Lab ID	2007-255-01-14	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/9/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-D-122706-4-6
Lab ID	2007-255-01-15	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	883	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	276.78	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	254.29	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	110.32	Weight of Tare (gm)	NA
Weight of Water (gm)	22.49	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	143.97	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**15.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	143.97
Dry Weight - 3/4" Sample (gm)	117.4	Weight of minus #200 material (gm)	26.58
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	117.39
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	3.89	2.70	2.70	97.30	**97.30**
#4	4.75	7.72	5.36	8.06	91.94	**91.94**
#10	2.00	6.71	4.66	12.72	87.28	**87.28**
#20	0.850	6.27	4.36	17.08	82.92	**82.92**
#40	0.425	9.69	6.73	23.81	76.19	**76.19**
#60	0.250	13.54	9.40	33.22	66.78	**66.78**
#140	0.106	48.74	33.85	67.07	32.93	**32.93**
#200	0.075	20.83	14.47	81.54	18.46	**18.46**
Pan	-	26.58	18.46	100.00	-	**-**

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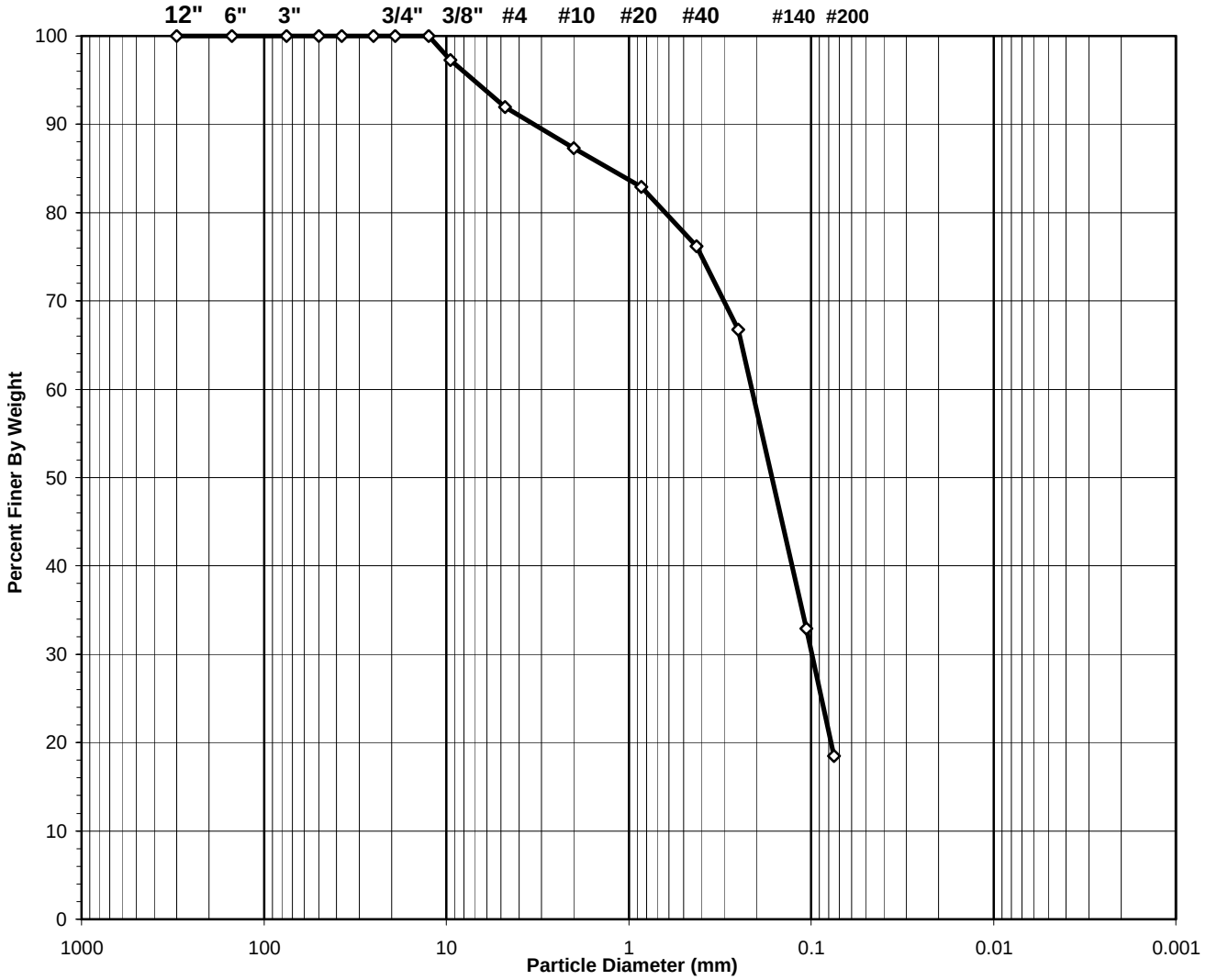
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-D-122706-4-6
Lab ID	2007-255-01-15	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/9/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-D-122706-TOP
Lab ID	2007-255-01-16	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	615	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	253.70	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	234.38	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	84.26	Weight of Tare (gm)	NA
Weight of Water (gm)	19.32	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	150.12	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**12.9**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	150.12
Dry Weight - 3/4" Sample (gm)	121.0	Weight of minus #200 material (gm)	29.14
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	120.98
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	5.93	3.95	3.95	96.05	**96.05**
3/8"	9.50	6.07	4.04	7.99	92.01	**92.01**
#4	4.75	6.19	4.12	12.12	87.88	**87.88**
#10	2.00	5.74	3.82	15.94	84.06	**84.06**
#20	0.850	5.08	3.38	19.32	80.68	**80.68**
#40	0.425	8.99	5.99	25.31	74.69	**74.69**
#60	0.250	12.10	8.06	33.37	66.63	**66.63**
#140	0.106	49.73	33.13	66.50	33.50	**33.50**
#200	0.075	21.15	14.09	80.59	19.41	**19.41**
Pan	-	29.14	19.41	100.00	-	**-**

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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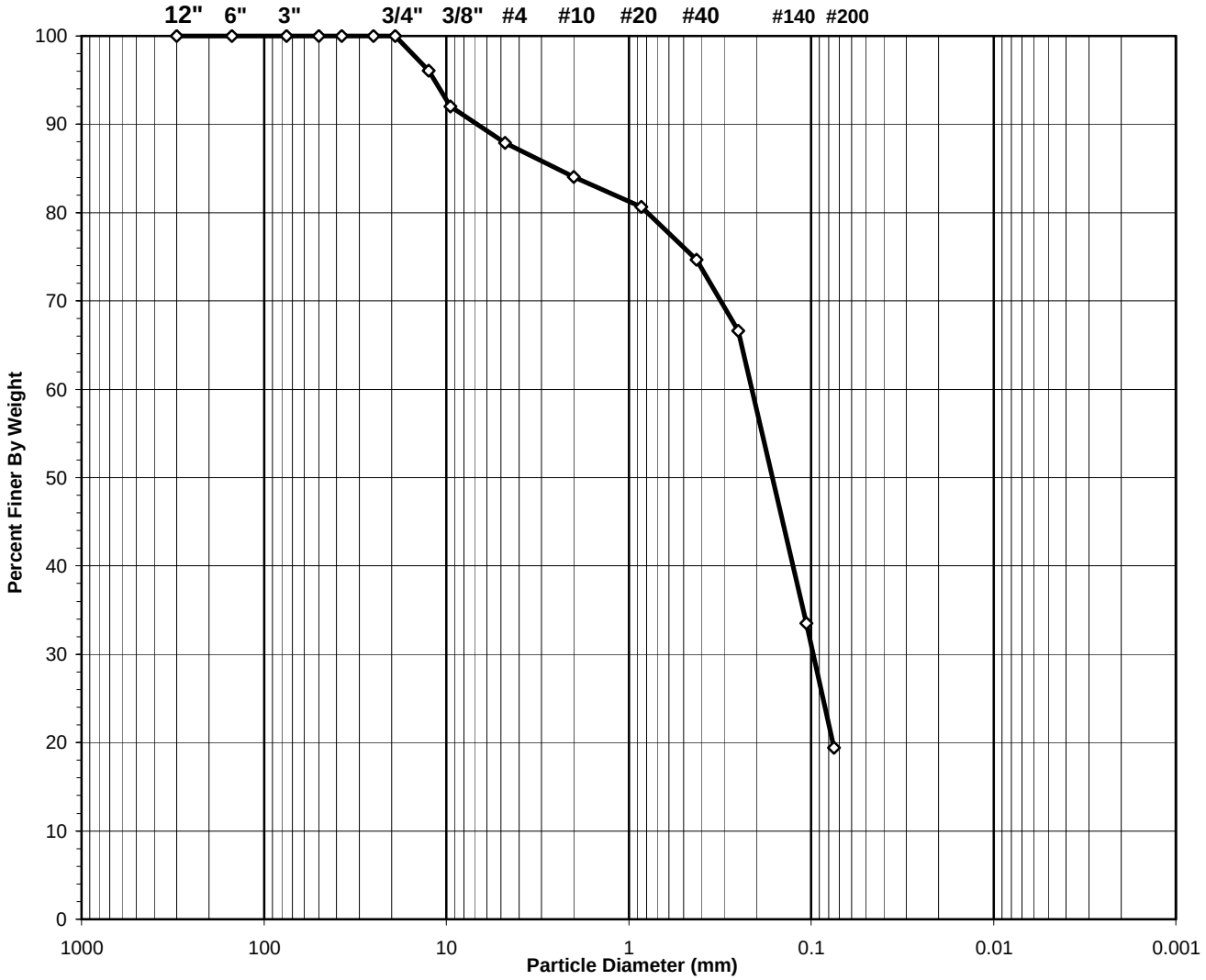
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-D-122706-TOP
Lab ID	2007-255-01-16	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-E-122706-0-2
Lab ID	2007-255-01-17	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	578	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	246.74	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	227.00	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	84.39	Weight of Tare (gm)	NA
Weight of Water (gm)	19.74	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	142.61	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**13.8**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	142.61
Dry Weight - 3/4" Sample (gm)	99.17	Weight of minus #200 material (gm)	43.44
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	99.17
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.5	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	10.48	7.35	7.35	92.65	**92.65**
#4	4.75	8.33	5.84	13.19	86.81	**86.81**
#10	2.00	7.00	4.91	18.10	81.90	**81.90**
#20	0.85	6.65	4.66	22.76	77.24	**77.24**
#40	0.425	11.00	7.71	30.47	69.53	**69.53**
#60	0.250	11.88	8.33	38.81	61.19	**61.19**
#140	0.106	32.31	22.66	61.46	38.54	**38.54**
#200	0.075	11.52	8.08	69.54	30.46	**30.46**
Pan	-	43.44	30.46	100.00	-	**-**

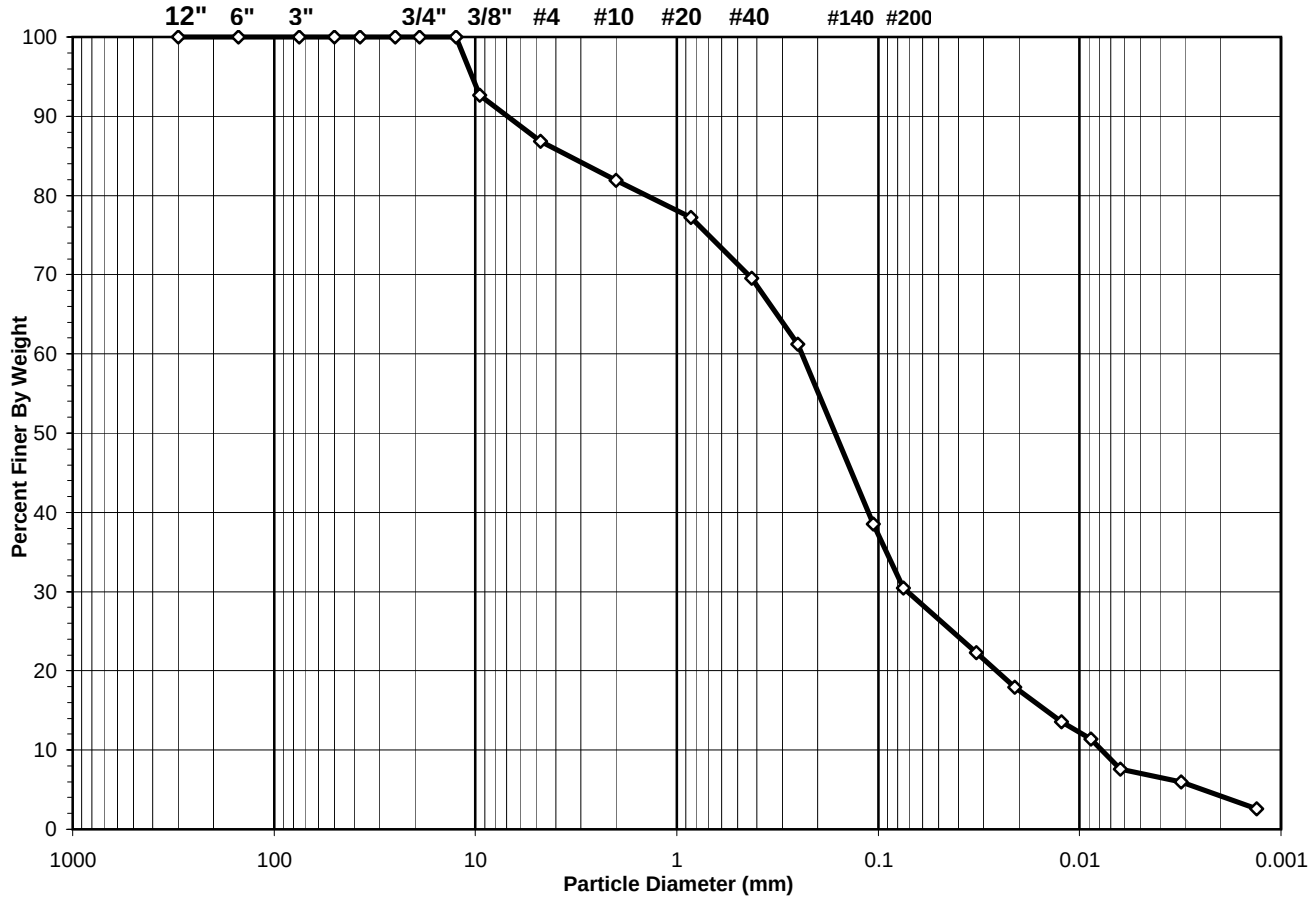
Tested By PC Date 7/9/2007 Checked By Date

SIEVE AND HYDROMETER ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-E-122706-0-2
Lab ID	2007-255-01-17	Soil Color	**BROWN**

	SIEVE ANALYSIS			*HYDROMETER*	
USCS	**cobbles**	**gravel**	**sand**	**silt and clay fraction**	
USDA	**cobbles**	**gravel**	**sand**	**silt**	**clay**



Sieve Sizes (mm)	**USCS Summary**	**Percentage**
Greater Than #4	*Gravel*	13.19
#4 To #200	*Sand*	56.35
Finer Than #200	*Silt & Clay*	30.46

USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

DCN: CT-S3A DATE:1/28/06 REVISION: 7

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-E-122706-2-4
Lab ID	2007-255-01-18	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1692	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	237.37	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	211.56	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	82.82	Weight of Tare (gm)	NA
Weight of Water (gm)	25.81	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	128.74	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**20.0**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	128.74
Dry Weight - 3/4" Sample (gm)	87.05	Weight of minus #200 material (gm)	41.69
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	87.05
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.5	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	4.35	3.38	3.38	96.62	**96.62**
#4	4.75	4.85	3.77	7.15	92.85	**92.85**
#10	2.00	5.26	4.09	11.23	88.77	**88.77**
#20	0.85	5.11	3.97	15.20	84.80	**84.80**
#40	0.425	10.87	8.44	23.64	76.36	**76.36**
#60	0.250	13.94	10.83	34.47	65.53	**65.53**
#140	0.106	32.67	25.38	59.85	40.15	**40.15**
#200	0.075	10.00	7.77	67.62	32.38	**32.38**
Pan	-	41.69	32.38	100.00	-	**-**

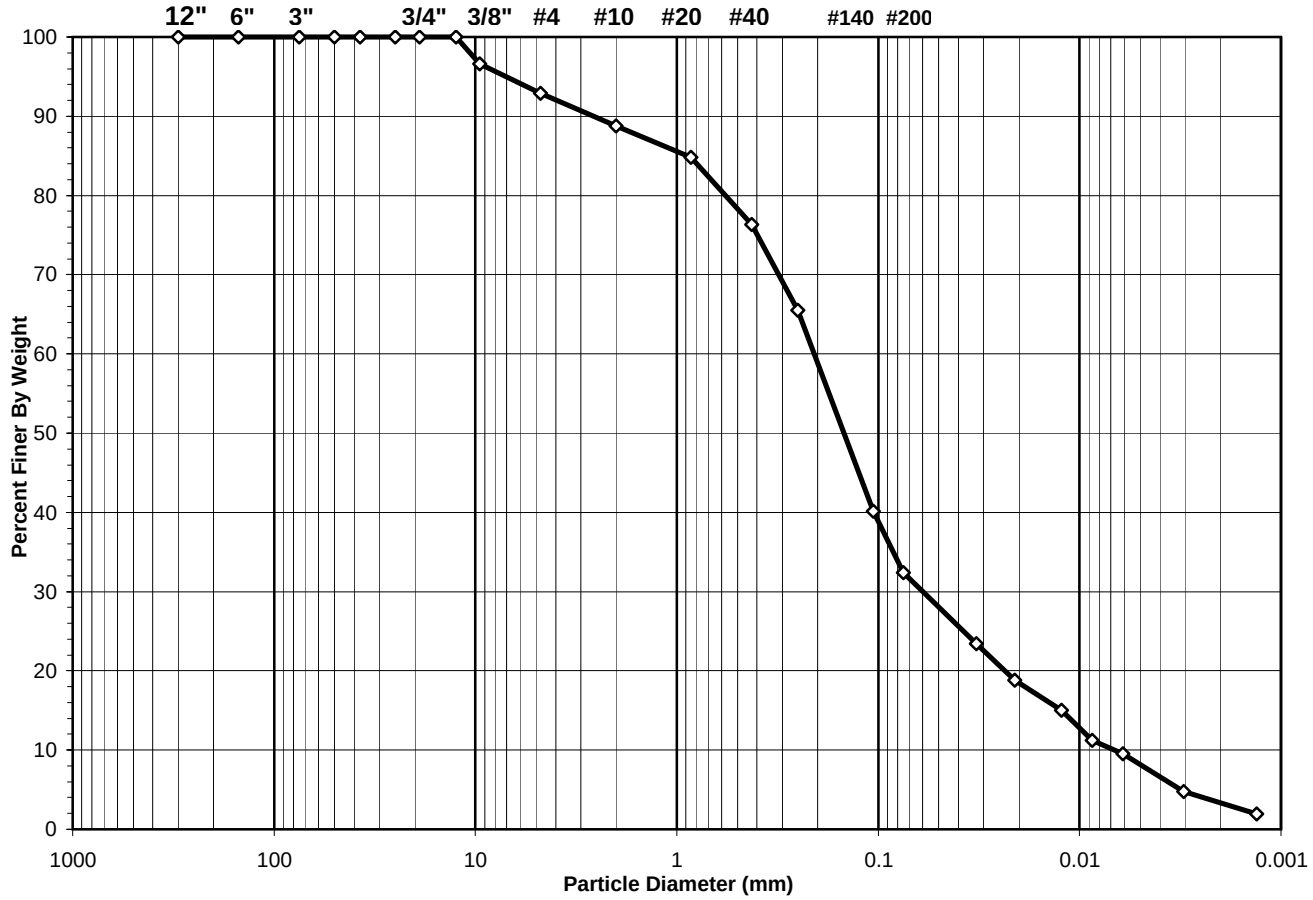
Tested By PC Date 7/9/2007 Checked By Date

SIEVE AND HYDROMETER ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-E-122706-2-4
Lab ID	2007-255-01-18	Soil Color	**BROWN**

	SIEVE ANALYSIS			*HYDROMETER*	
USCS	**cobbles**	**gravel**	**sand**	**silt and clay fraction**	
USDA	**cobbles**	**gravel**	**sand**	**silt**	**clay**



Sieve Sizes (mm)	**USCS Summary**	**Percentage**
Greater Than #4	*Gravel*	7.15
#4 To #200	*Sand*	60.47
Finer Than #200	*Silt & Clay*	32.38

USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

DCN: CT-S3A DATE:1/28/06 REVISION: 7

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-E-122706-4-6
Lab ID	2007-255-01-19	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1719	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	280.52	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	257.88	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	84.36	Weight of Tare (gm)	NA
Weight of Water (gm)	22.64	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	173.52	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**13.0**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	173.52
Dry Weight - 3/4" Sample (gm)	120.76	Weight of minus #200 material (gm)	52.76
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	120.76
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.5	4.99	2.88	2.88	97.12	**97.12**
3/8"	9.50	4.51	2.60	5.47	94.53	**94.53**
#4	4.75	9.79	5.64	11.12	88.88	**88.88**
#10	2.00	10.20	5.88	17.00	83.00	**83.00**
#20	0.85	10.26	5.91	22.91	77.09	**77.09**
#40	0.425	13.09	7.54	30.45	69.55	**69.55**
#60	0.250	14.92	8.60	39.05	60.95	**60.95**
#140	0.106	38.50	22.19	61.24	38.76	**38.76**
#200	0.075	14.50	8.36	69.59	30.41	**30.41**
Pan	-	52.76	30.41	100.00	-	**-**

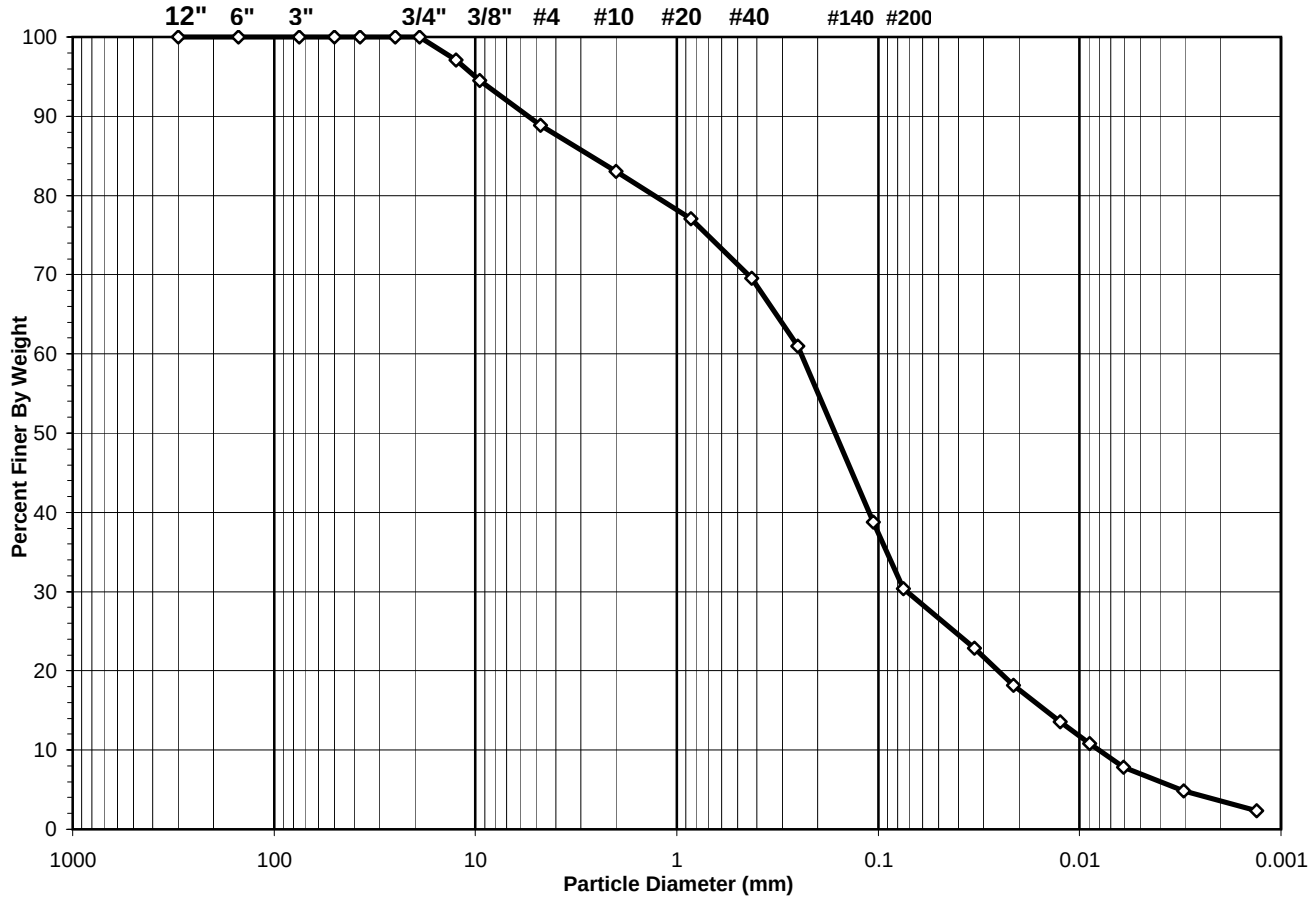
Tested By PC Date 7/9/2007 Checked By Date

SIEVE AND HYDROMETER ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-E-122706-4-6
Lab ID	2007-255-01-19	Soil Color	**BROWN**

	SIEVE ANALYSIS			*HYDROMETER*	
USCS	**cobbles**	**gravel**	**sand**	**silt and clay fraction**	
USDA	**cobbles**	**gravel**	**sand**	**silt**	**clay**



Sieve Sizes (mm)	**USCS Summary**	**Percentage**
Greater Than #4	*Gravel*	11.12
#4 To #200	*Sand*	58.48
Finer Than #200	*Silt & Clay*	30.41

USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

DCN: CT-S3A DATE:1/28/06 REVISION: 7

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-E-122706-TOP
Lab ID	2007-255-01-20	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	203	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	281.31	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	256.32	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	99.11	Weight of Tare (gm)	NA
Weight of Water (gm)	24.99	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	157.21	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**15.9**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	157.21
Dry Weight - 3/4" Sample (gm)	128.27	Weight of minus #200 material (gm)	28.94
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	128.27
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.5	3.71	2.36	2.36	97.64	**97.64**
3/8"	9.50	3.34	2.12	4.48	95.52	**95.52**
#4	4.75	13.76	8.75	13.24	86.76	**86.76**
#10	2.00	12.50	7.95	21.19	78.81	**78.81**
#20	0.85	12.29	7.82	29.01	70.99	**70.99**
#40	0.425	19.19	12.21	41.21	58.79	**58.79**
#60	0.250	16.90	10.75	51.96	48.04	**48.04**
#140	0.106	35.99	22.89	74.86	25.14	**25.14**
#200	0.075	10.59	6.74	81.59	18.41	**18.41**
Pan	-	28.94	18.41	100.00	-	**-**

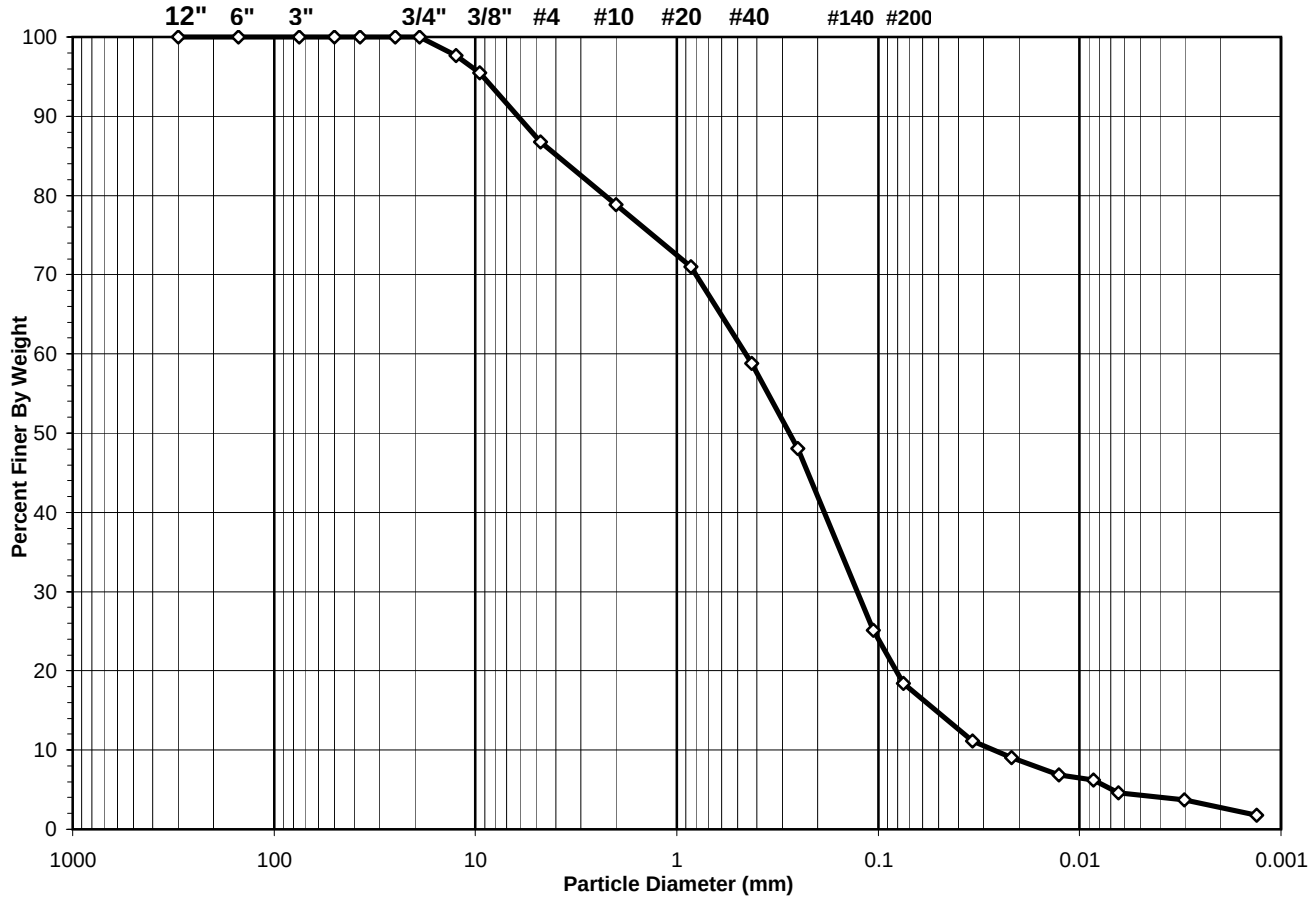
Tested By PC Date 7/9/2007 Checked By Date

SIEVE AND HYDROMETER ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-E-122706-TOP
Lab ID	2007-255-01-20	Soil Color	**BROWN**

	SIEVE ANALYSIS			*HYDROMETER*	
USCS	**cobbles**	**gravel**	**sand**	**silt and clay fraction**	
USDA	**cobbles**	**gravel**	**sand**	**silt**	**clay**



Sieve Sizes (mm)	**USCS Summary**	**Percentage**
Greater Than #4	*Gravel*	13.24
#4 To #200	*Sand*	68.35
Finer Than #200	*Silt & Clay*	18.41

USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

DCN: CT-S3A DATE:1/28/06 REVISION: 7

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-F-122706-0-2
Lab ID	2007-255-01-21	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	607	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	225.69	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	208.78	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	82.82	Weight of Tare (gm)	NA
Weight of Water (gm)	16.91	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	125.96	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**13.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	125.96
Dry Weight - 3/4" Sample (gm)	109.0	Weight of minus #200 material (gm)	17.01
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	108.95
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	2.15	1.71	1.71	98.29	**98.29**
#4	4.75	8.77	6.96	8.67	91.33	**91.33**
#10	2.00	9.69	7.69	16.36	83.64	**83.64**
#20	0.850	8.84	7.02	23.38	76.62	**76.62**
#40	0.425	8.97	7.12	30.50	69.50	**69.50**
#60	0.250	11.46	9.10	39.60	60.40	**60.40**
#140	0.106	45.65	36.24	75.84	24.16	**24.16**
#200	0.075	13.42	10.65	86.50	13.50	**13.50**
Pan	-	17.01	13.50	100.00	-	**-**

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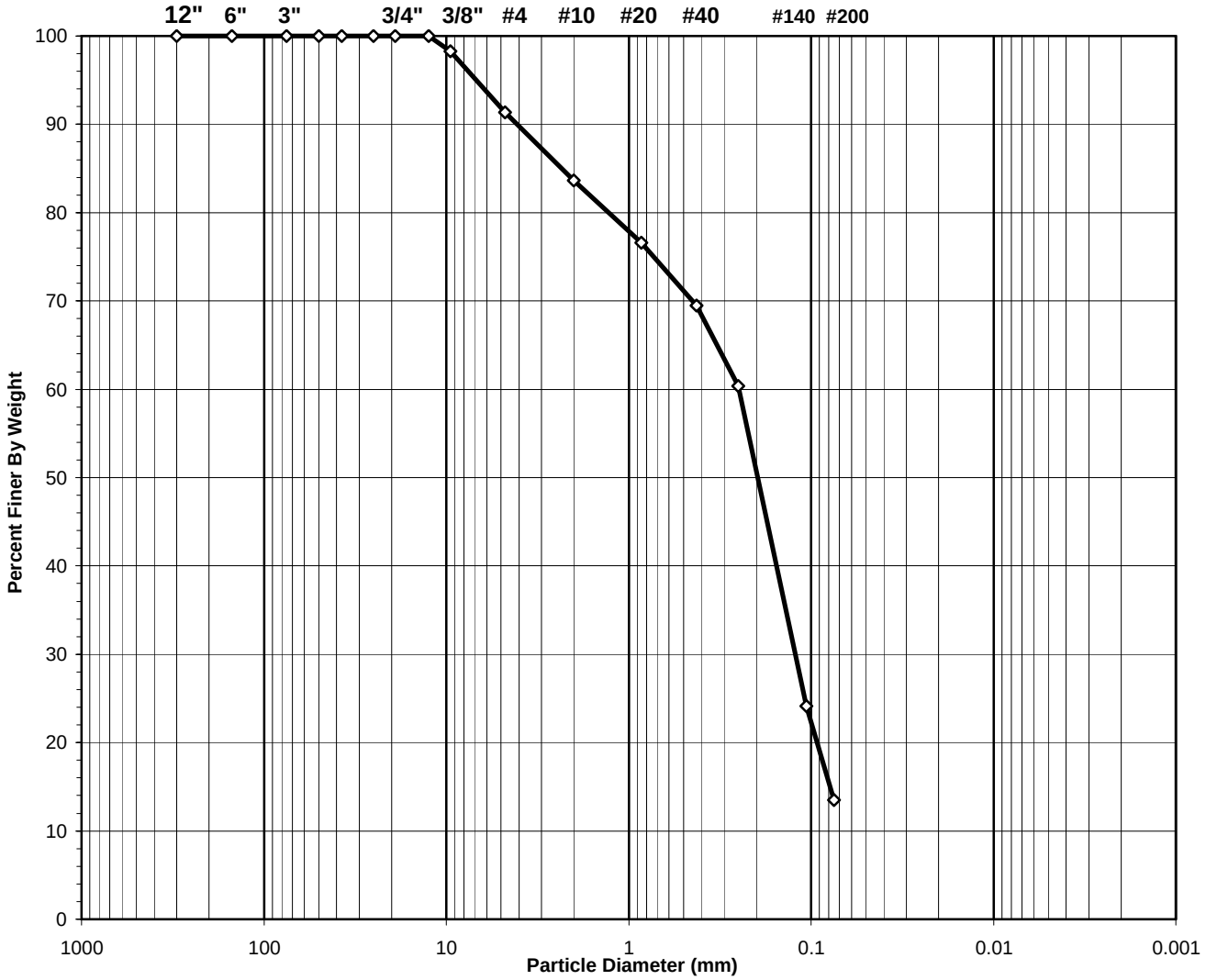
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-F-122706-0-2
Lab ID	2007-255-01-21	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-F-122706-2-4
Lab ID	2007-255-01-22	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1714	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	192.11	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	180.00	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	83.08	Weight of Tare (gm)	NA
Weight of Water (gm)	12.11	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	96.92	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**12.5**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	96.92
Dry Weight - 3/4" Sample (gm)	88.4	Weight of minus #200 material (gm)	8.49
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	88.43
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	11.07	11.42	11.42	88.58	**88.58**
3/8"	9.50	0.00	0.00	11.42	88.58	**88.58**
#4	4.75	10.73	11.07	22.49	77.51	**77.51**
#10	2.00	10.48	10.81	33.31	66.69	**66.69**
#20	0.850	8.01	8.26	41.57	58.43	**58.43**
#40	0.425	9.18	9.47	51.04	48.96	**48.96**
#60	0.250	9.52	9.82	60.86	39.14	**39.14**
#140	0.106	23.18	23.92	84.78	15.22	**15.22**
#200	0.075	6.26	6.46	91.24	8.76	**8.76**
Pan	-	8.49	8.76	100.00	-	**-**

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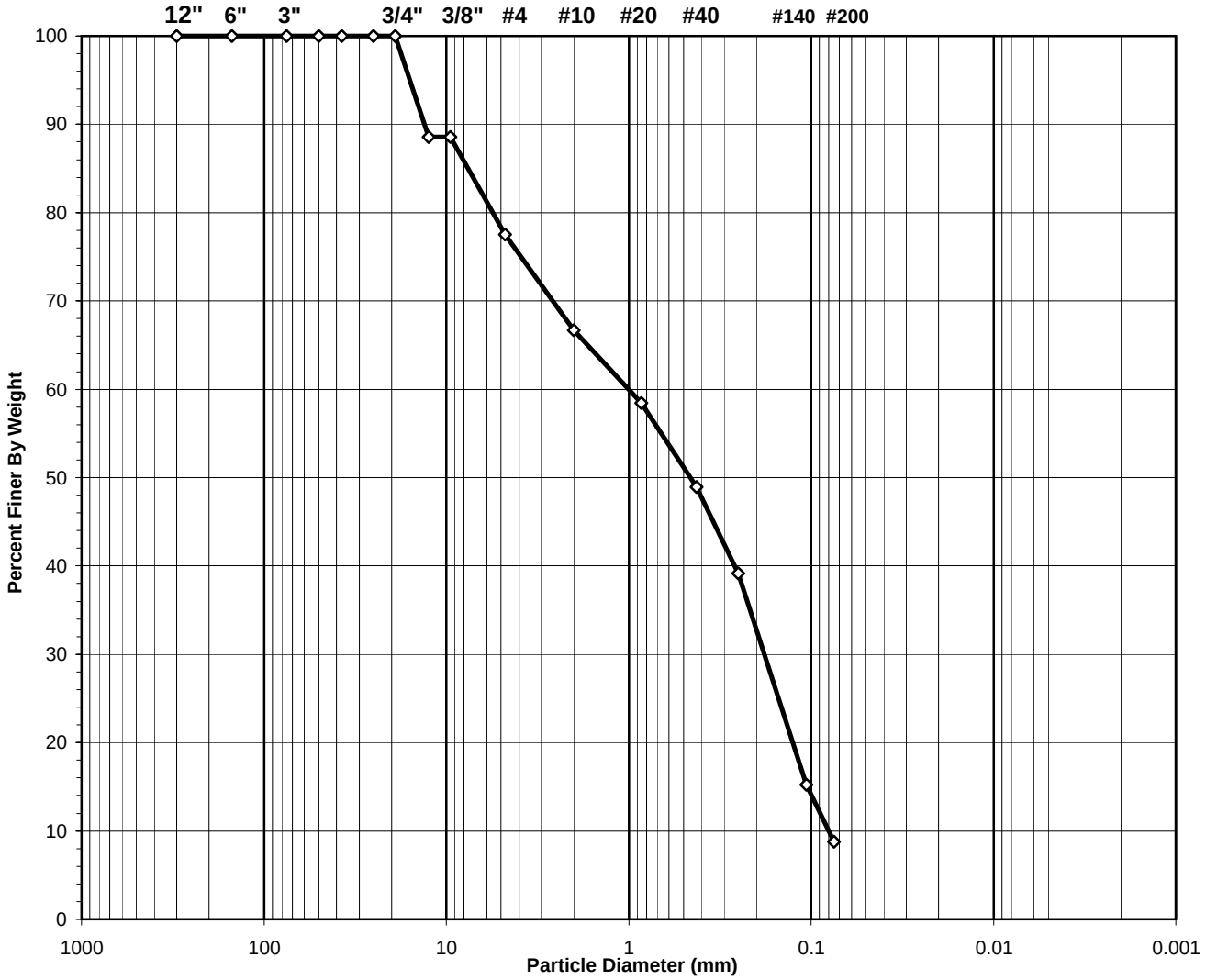
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-F-122706-2-4
Lab ID	2007-255-01-22	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol	***sp-sm, ASSUMED***	**D60 =**	**1.0**	**CC =**	**0.4**
USCS Classification	***POORLY GRADED SAND WITH SILT AND GRAVEL***	**D30 =**	**0.2**	**CU =**	**12.5**
UNABLE TO RUN HYDROMETER		**D10 =**	**0.1**		

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-F-122706-4-6
Lab ID	2007-255-01-23	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	609	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	238.59	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	227.79	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	81.49	Weight of Tare (gm)	NA
Weight of Water (gm)	10.80	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	146.30	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**7.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	146.30
Dry Weight - 3/4" Sample (gm)	131.5	Weight of minus #200 material (gm)	14.82
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	131.48
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	5.31	3.63	3.63	96.37	**96.37**
3/8"	9.50	8.60	5.88	9.51	90.49	**90.49**
#4	4.75	15.31	10.46	19.97	80.03	**80.03**
#10	2.00	18.71	12.79	32.76	67.24	**67.24**
#20	0.850	14.89	10.18	42.94	57.06	**57.06**
#40	0.425	12.72	8.69	51.63	48.37	**48.37**
#60	0.250	12.23	8.36	59.99	40.01	**40.01**
#140	0.106	32.93	22.51	82.50	17.50	**17.50**
#200	0.075	10.78	7.37	89.87	10.13	**10.13**
Pan	-	14.82	10.13	100.00	-	**-**

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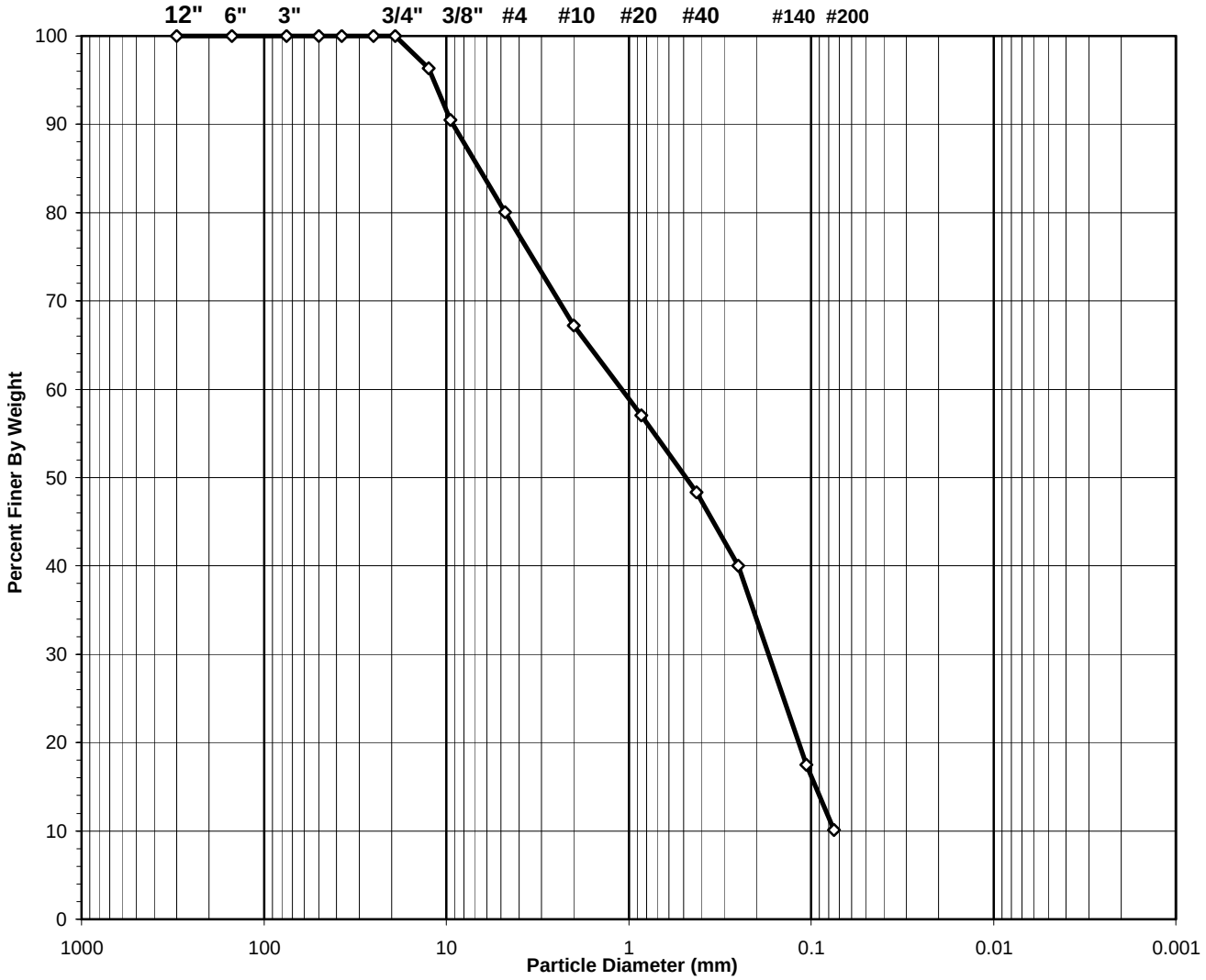
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-F-122706-4-6
Lab ID	2007-255-01-23	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sp-sm, ASSUMED***

USCS Classification ***POORLY GRADED SAND WITH SILT AND GRAVEL***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-F-122706-REM
Lab ID	2007-255-01-24	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	882	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	170.14	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	166.42	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	110.41	Weight of Tare (gm)	NA
Weight of Water (gm)	3.72	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	56.01	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**6.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	56.01
Dry Weight - 3/4" Sample (gm)	48.9	Weight of minus #200 material (gm)	7.16
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	48.85
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	2.89	5.16	5.16	94.84	**94.84**
#4	4.75	3.73	6.66	11.82	88.18	**88.18**
#10	2.00	4.32	7.71	19.53	80.47	**80.47**
#20	0.850	4.15	7.41	26.94	73.06	**73.06**
#40	0.425	5.77	10.30	37.24	62.76	**62.76**
#60	0.250	6.52	11.64	48.88	51.12	**51.12**
#140	0.106	16.25	29.01	77.90	22.10	**22.10**
#200	0.075	5.22	9.32	87.22	12.78	**12.78**
Pan	-	7.16	12.78	100.00	-	**-**

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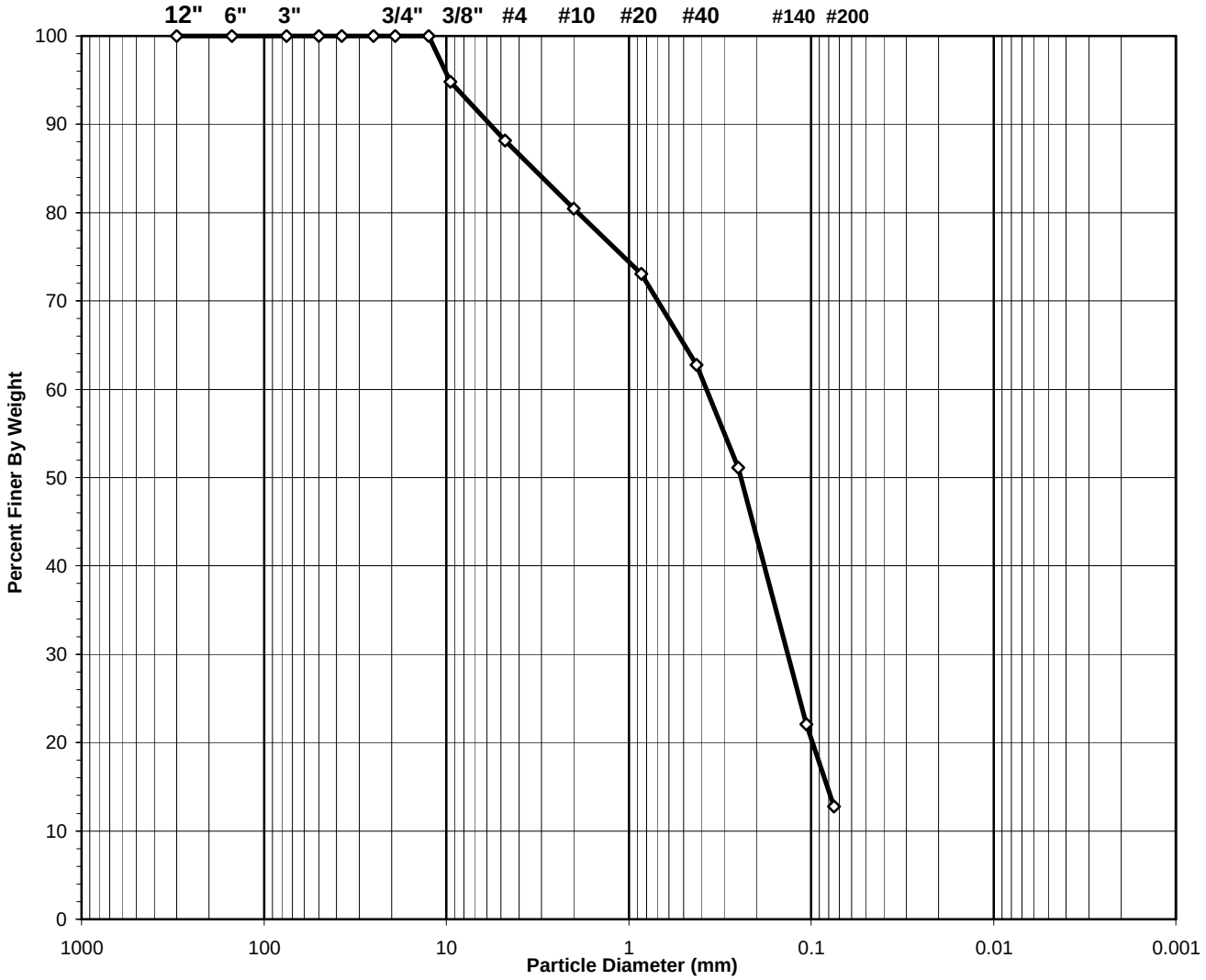
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-F-122706-REM
Lab ID	2007-255-01-24	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-F-122706-TOP
Lab ID	2007-255-01-25	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	587	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	240.73	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	214.32	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	82.38	Weight of Tare (gm)	NA
Weight of Water (gm)	26.41	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	131.94	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**20.0**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	131.94
Dry Weight - 3/4" Sample (gm)	103.1	Weight of minus #200 material (gm)	28.87
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	103.07
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	1.67	1.27	1.27	98.73	**98.73**
#10	2.00	3.11	2.36	3.62	96.38	**96.38**
#20	0.850	4.45	3.37	7.00	93.00	**93.00**
#40	0.425	11.01	8.34	15.34	84.66	**84.66**
#60	0.250	16.80	12.73	28.07	71.93	**71.93**
#140	0.106	48.27	36.58	64.66	35.34	**35.34**
#200	0.075	17.76	13.46	78.12	21.88	**21.88**
Pan	-	28.87	21.88	100.00	-	**-**

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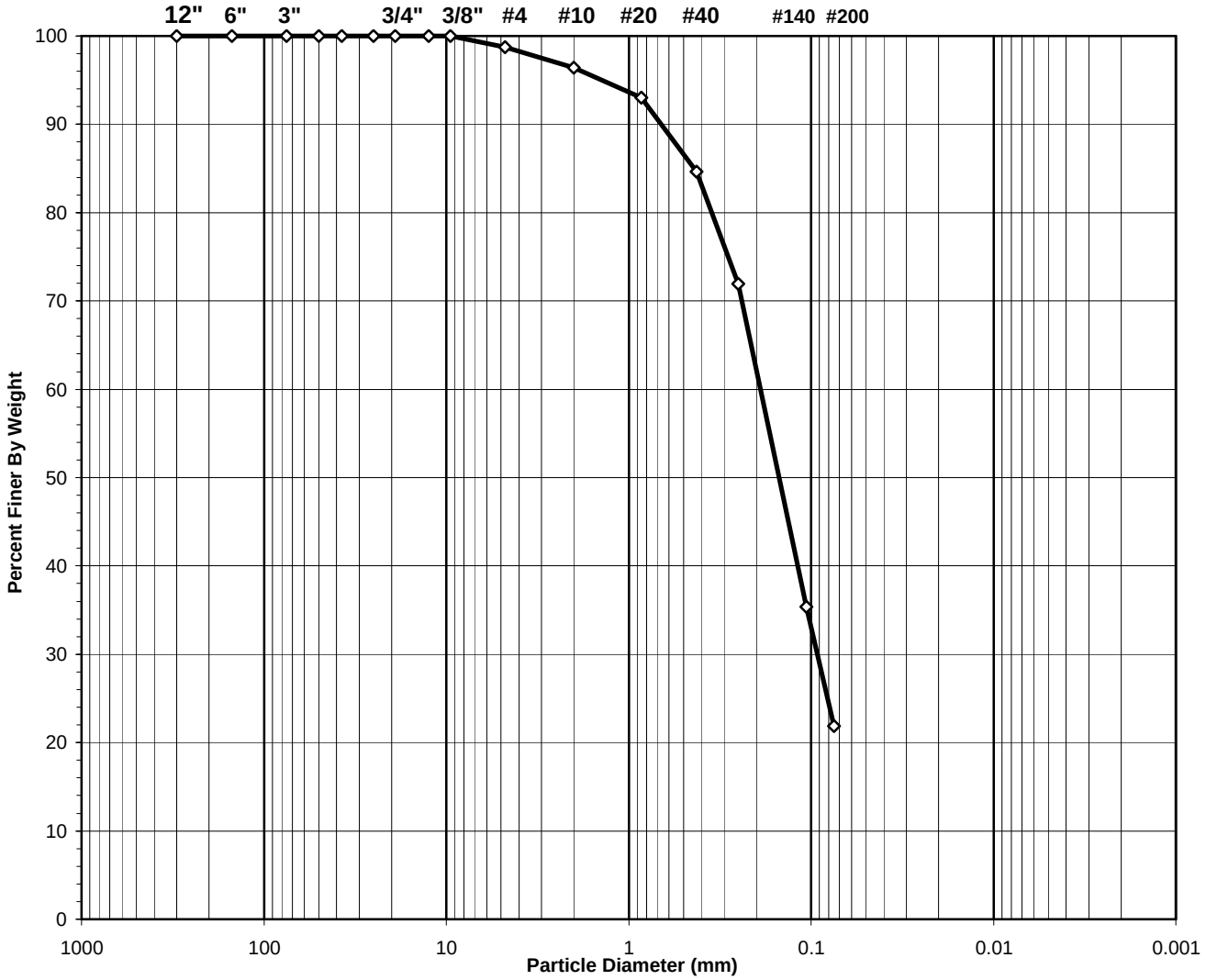
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-F-122706-TOP
Lab ID	2007-255-01-25	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-G-122706-0-2
Lab ID	2007-255-01-26	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	622	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	202.62	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	191.71	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	86.96	Weight of Tare (gm)	NA
Weight of Water (gm)	10.91	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	104.75	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**10.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	104.75
Dry Weight - 3/4" Sample (gm)	86.7	Weight of minus #200 material (gm)	18.09
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	86.66
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	5.81	5.55	5.55	94.45	**94.45**
3/8"	9.50	2.13	2.03	7.58	92.42	**92.42**
#4	4.75	6.47	6.18	13.76	86.24	**86.24**
#10	2.00	9.27	8.85	22.61	77.39	**77.39**
#20	0.850	7.30	6.97	29.58	70.42	**70.42**
#40	0.425	6.40	6.11	35.68	64.32	**64.32**
#60	0.250	6.08	5.80	41.49	58.51	**58.51**
#140	0.106	30.97	29.57	71.05	28.95	**28.95**
#200	0.075	12.23	11.68	82.73	17.27	**17.27**
Pan	-	18.09	17.27	100.00	-	**-**

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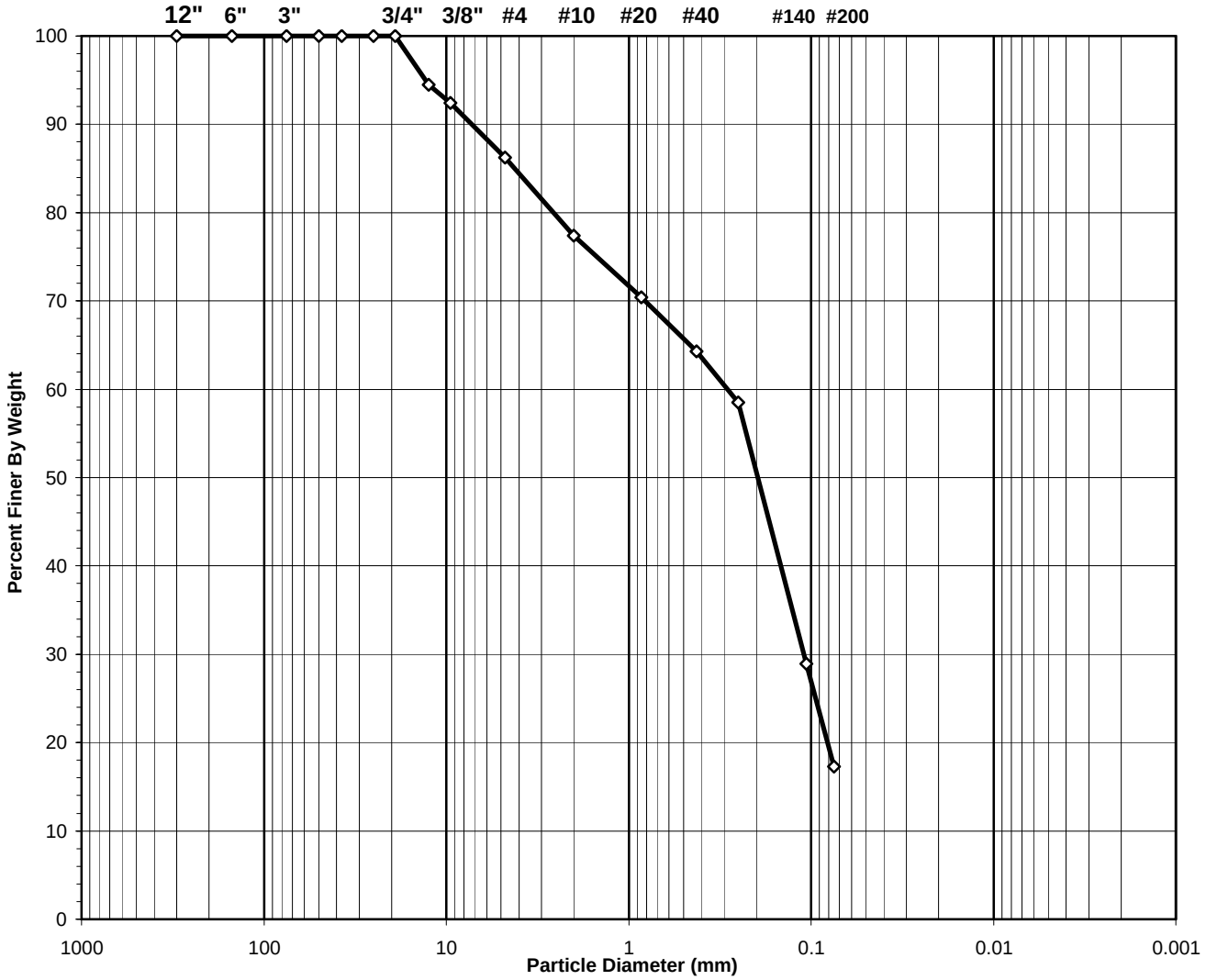
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-G-122706-0-2
Lab ID	2007-255-01-26	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-G-122706-2-4
Lab ID	2007-255-01-27	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	565	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	202.88	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	196.56	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	82.84	Weight of Tare (gm)	NA
Weight of Water (gm)	6.32	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	113.72	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**5.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	113.72
Dry Weight - 3/4" Sample (gm)	103.1	Weight of minus #200 material (gm)	10.66
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	103.06
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	10.06	8.85	8.85	91.15	**91.15**
#4	4.75	7.05	6.20	15.05	84.95	**84.95**
#10	2.00	11.90	10.46	25.51	74.49	**74.49**
#20	0.850	12.31	10.82	36.33	63.67	**63.67**
#40	0.425	10.70	9.41	45.74	54.26	**54.26**
#60	0.250	9.77	8.59	54.34	45.66	**45.66**
#140	0.106	31.08	27.33	81.67	18.33	**18.33**
#200	0.075	10.19	8.96	90.63	9.37	**9.37**
Pan	-	10.66	9.37	100.00	-	**-**

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DCN: CT-S3C DATE 6-25-98 REVISION: 2

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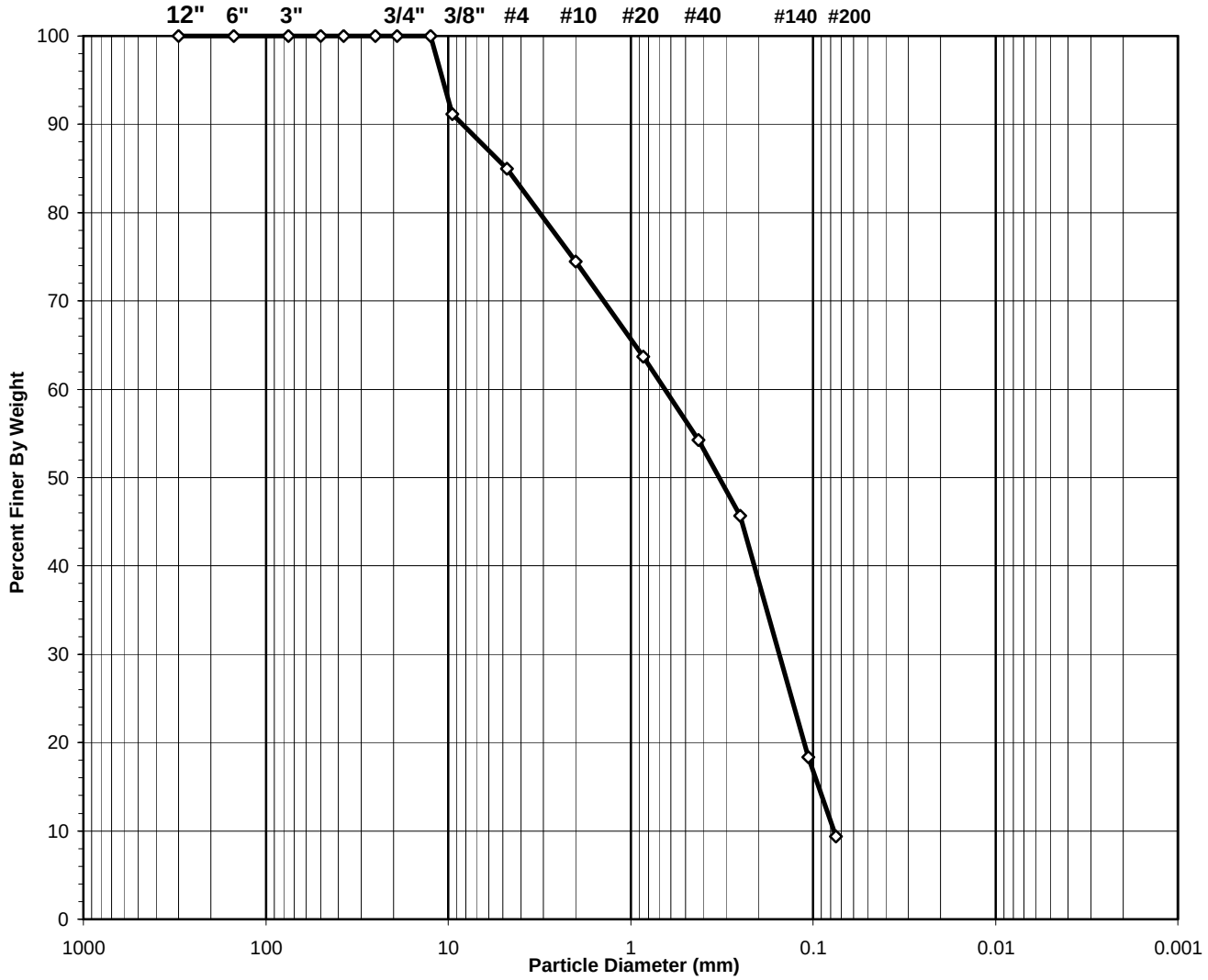
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-G-122706-2-4
Lab ID	2007-255-01-27	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sp-sm, ASSUMED*** **D60 = 0.6** **CC = 0.5**

USCS Classification ***POORLY GRADED SAND WITH SILT AND GRAVEL*** **D30 = 0.2** **CU = 8.4**

UNABLE TO RUN HYDROMETER **D10 = 0.1**

Tested By PC Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-G-122706-REM
Lab ID	2007-255-01-28	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	2728	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	242.78	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	220.40	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	85.34	Weight of Tare (gm)	NA
Weight of Water (gm)	22.38	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	135.06	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**16.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	135.06
Dry Weight - 3/4" Sample (gm)	111.4	Weight of minus #200 material (gm)	23.71
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	111.35
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	0.00	0.00	0.00	100.00	**100.00**
#10	2.00	0.00	0.00	0.00	100.00	**100.00**
#20	0.850	0.78	0.58	0.58	99.42	**99.42**
#40	0.425	5.40	4.00	4.58	95.42	**95.42**
#60	0.250	15.60	11.55	16.13	83.87	**83.87**
#140	0.106	66.31	49.10	65.22	34.78	**34.78**
#200	0.075	23.26	17.22	82.44	17.56	**17.56**
Pan	-	23.71	17.56	100.00	-	**-**

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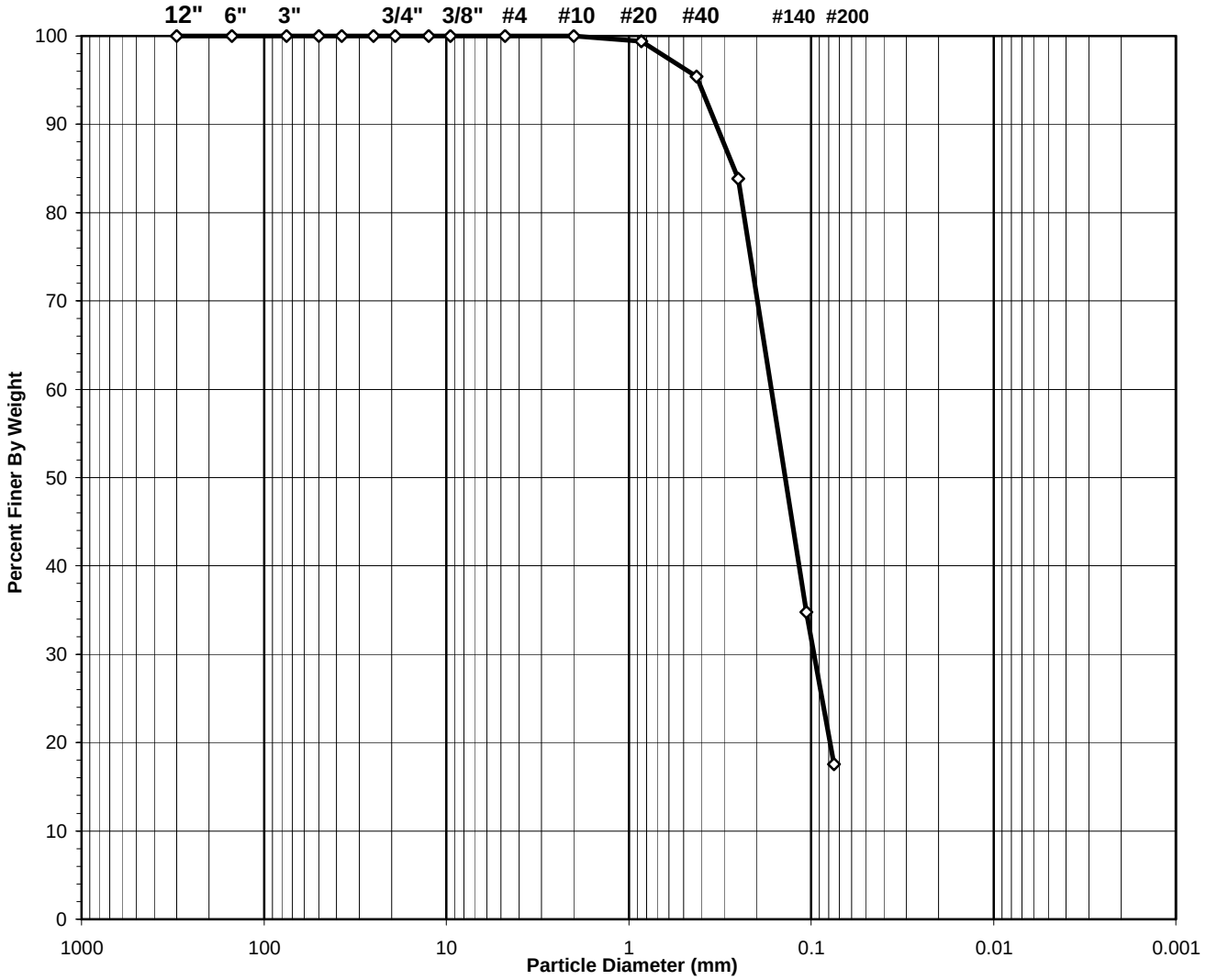
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-G-122706-REM
Lab ID	2007-255-01-28	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-G-122706-TOP
Lab ID	2007-255-01-29	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1706	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	251.16	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	212.94	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	82.92	Weight of Tare (gm)	NA
Weight of Water (gm)	38.22	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	130.02	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**29.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	130.02
Dry Weight - 3/4" Sample (gm)	79.2	Weight of minus #200 material (gm)	50.85
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	79.17
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	0.51	0.39	0.39	99.61	**99.61**
#10	2.00	0.15	0.12	0.51	99.49	**99.49**
#20	0.850	0.52	0.40	0.91	99.09	**99.09**
#40	0.425	0.99	0.76	1.67	98.33	**98.33**
#60	0.250	3.00	2.31	3.98	96.02	**96.02**
#140	0.106	43.48	33.44	37.42	62.58	**62.58**
#200	0.075	30.52	23.47	60.89	39.11	**39.11**
Pan	-	50.85	39.11	100.00	-	**-**

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DCN: CT-S3C DATE 6-25-98 REVISION: 2

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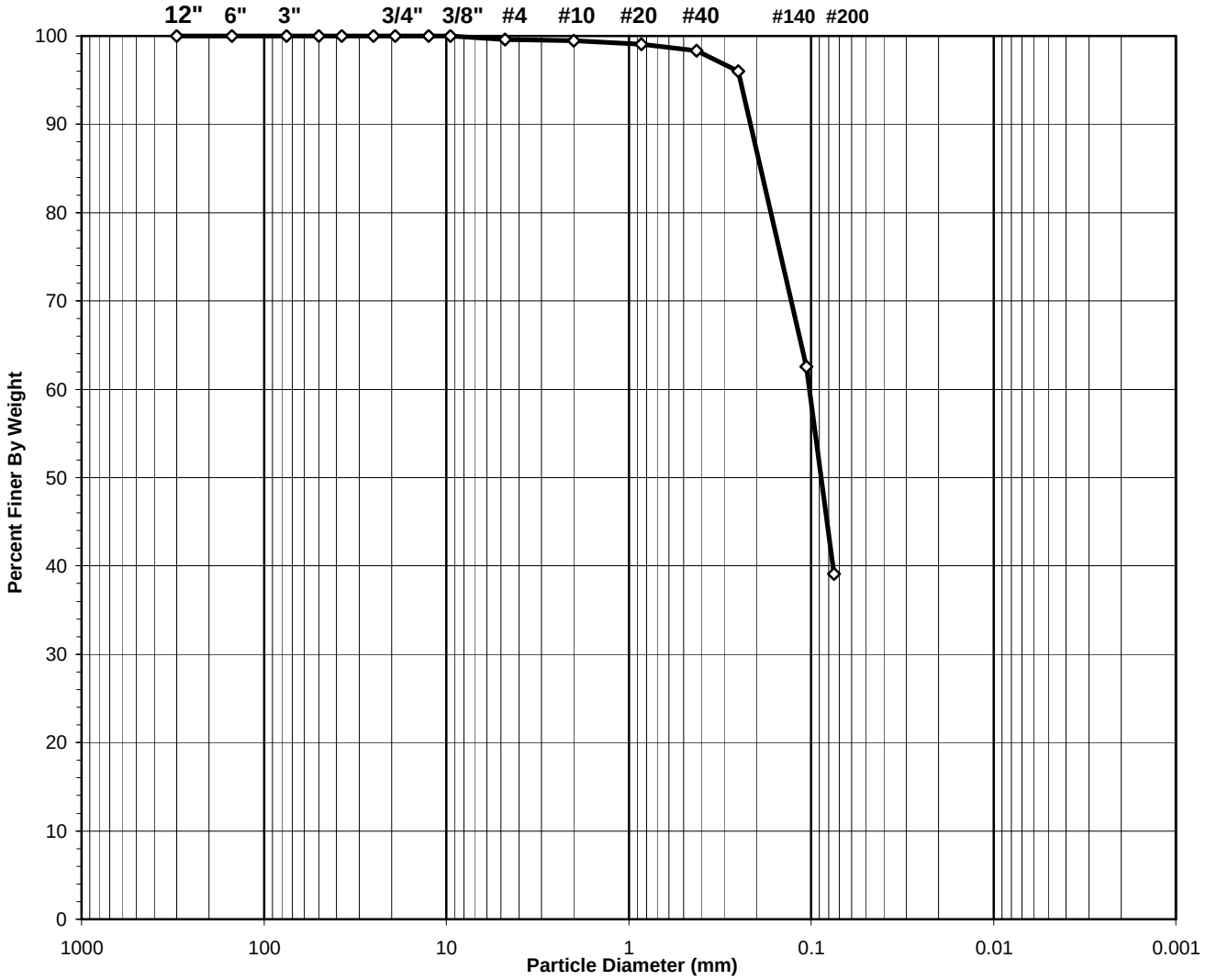
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-G-122706-TOP
Lab ID	2007-255-01-29	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-H-122706-0-2
Lab ID	2007-255-01-30	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	626	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	144.85	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	138.06	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	86.29	Weight of Tare (gm)	NA
Weight of Water (gm)	6.79	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	51.77	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**13.1**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	51.77
Dry Weight - 3/4" Sample (gm)	42.2	Weight of minus #200 material (gm)	9.59
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	42.18
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	1.92	3.71	3.71	96.29	**96.29**
#10	2.00	3.10	5.99	9.70	90.30	**90.30**
#20	0.850	1.32	2.55	12.25	87.75	**87.75**
#40	0.425	1.26	2.43	14.68	85.32	**85.32**
#60	0.250	2.65	5.12	19.80	80.20	**80.20**
#140	0.106	21.77	42.05	61.85	38.15	**38.15**
#200	0.075	10.16	19.63	81.48	18.52	**18.52**
Pan	-	9.59	18.52	100.00	-	**-**

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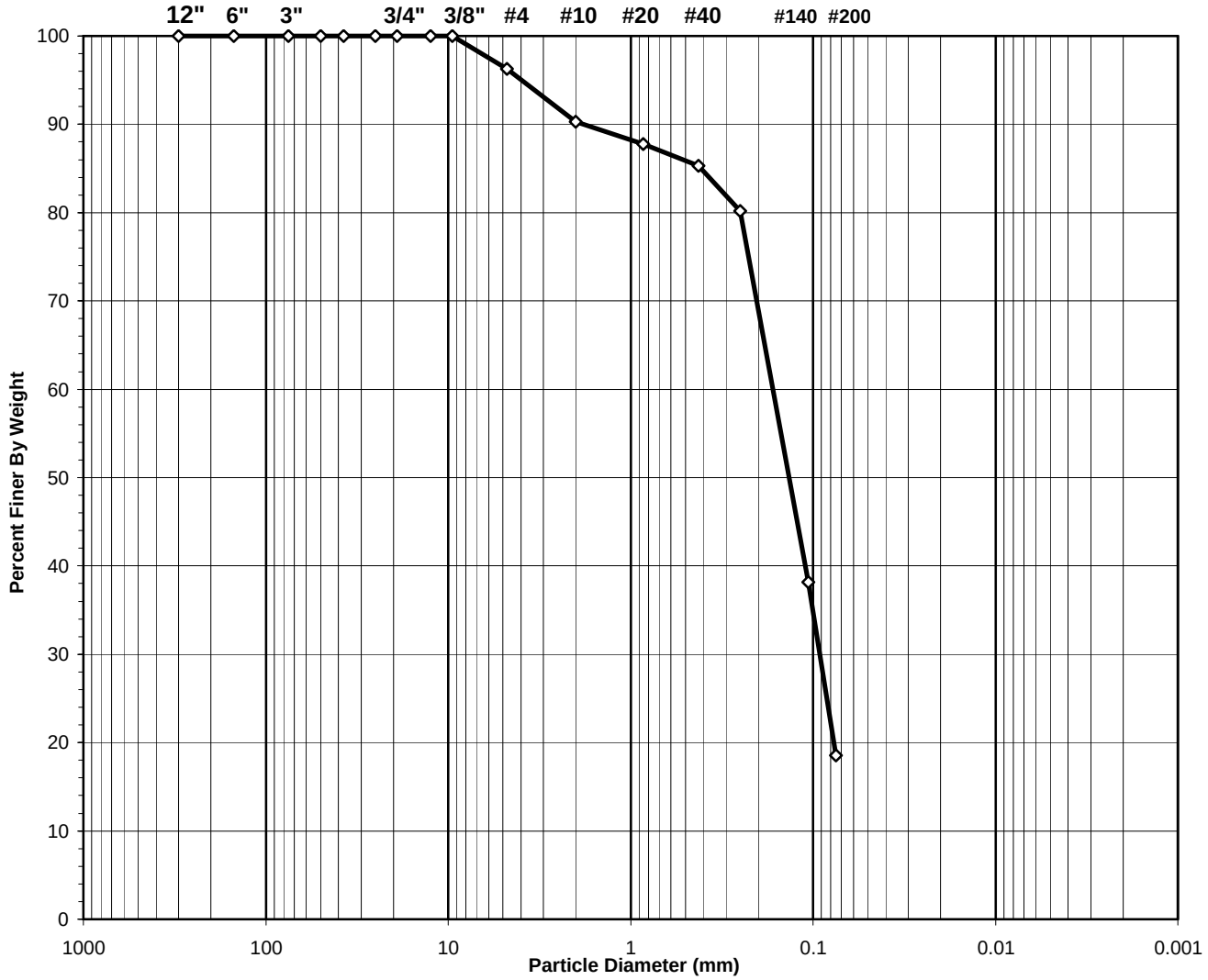
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-H-122706-0-2
Lab ID	2007-255-01-30	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-H-122706-2-4
Lab ID	2007-255-01-31	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	728	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	199.92	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	190.30	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	86.40	Weight of Tare (gm)	NA
Weight of Water (gm)	9.62	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	103.90	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**9.3**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	103.90
Dry Weight - 3/4" Sample (gm)	85.6	Weight of minus #200 material (gm)	18.35
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	85.55
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	1.97	1.90	1.90	98.10	**98.10**
#10	2.00	7.23	6.96	8.85	91.15	**91.15**
#20	0.850	5.68	5.47	14.32	85.68	**85.68**
#40	0.425	6.42	6.18	20.50	79.50	**79.50**
#60	0.250	7.02	6.76	27.26	72.74	**72.74**
#140	0.106	40.57	39.05	66.30	33.70	**33.70**
#200	0.075	16.66	16.03	82.34	17.66	**17.66**
Pan	-	18.35	17.66	100.00	-	**-**

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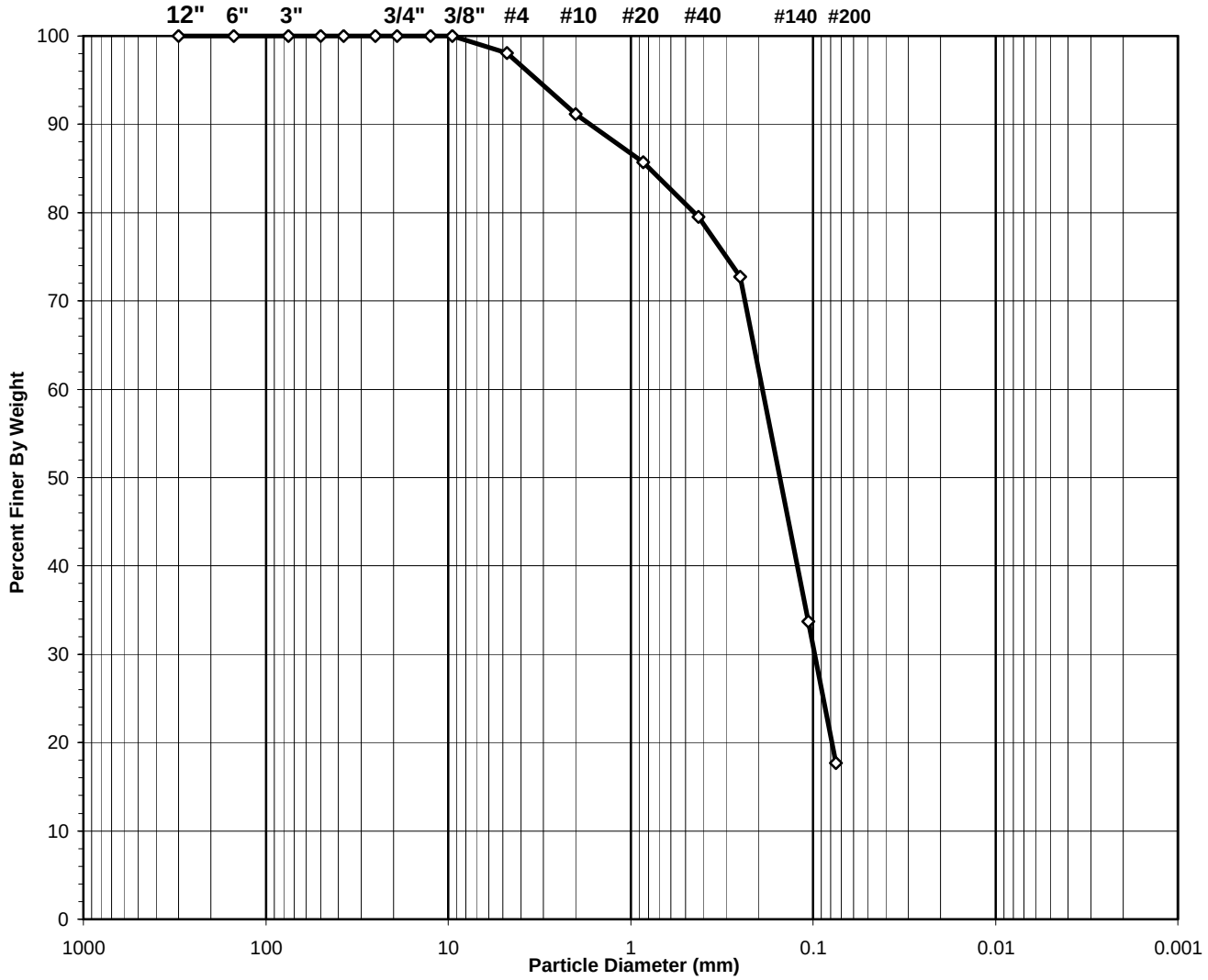
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-H-122706-2-4
Lab ID	2007-255-01-31	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-H-122706-4-6
Lab ID	2007-255-01-32	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	887	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	214.51	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	204.12	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	109.78	Weight of Tare (gm)	NA
Weight of Water (gm)	10.39	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	94.34	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**11.0**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	94.34
Dry Weight - 3/4" Sample (gm)	76.2	Weight of minus #200 material (gm)	18.19
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	76.15
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	1.74	1.84	1.84	98.16	**98.16**
#4	4.75	2.10	2.23	4.07	95.93	**95.93**
#10	2.00	3.97	4.21	8.28	91.72	**91.72**
#20	0.850	2.76	2.93	11.20	88.80	**88.80**
#40	0.425	5.00	5.30	16.50	83.50	**83.50**
#60	0.250	6.32	6.70	23.20	76.80	**76.80**
#140	0.106	38.05	40.33	63.54	36.46	**36.46**
#200	0.075	16.21	17.18	80.72	19.28	**19.28**
Pan	-	18.19	19.28	100.00	-	**-**

Tested By PC Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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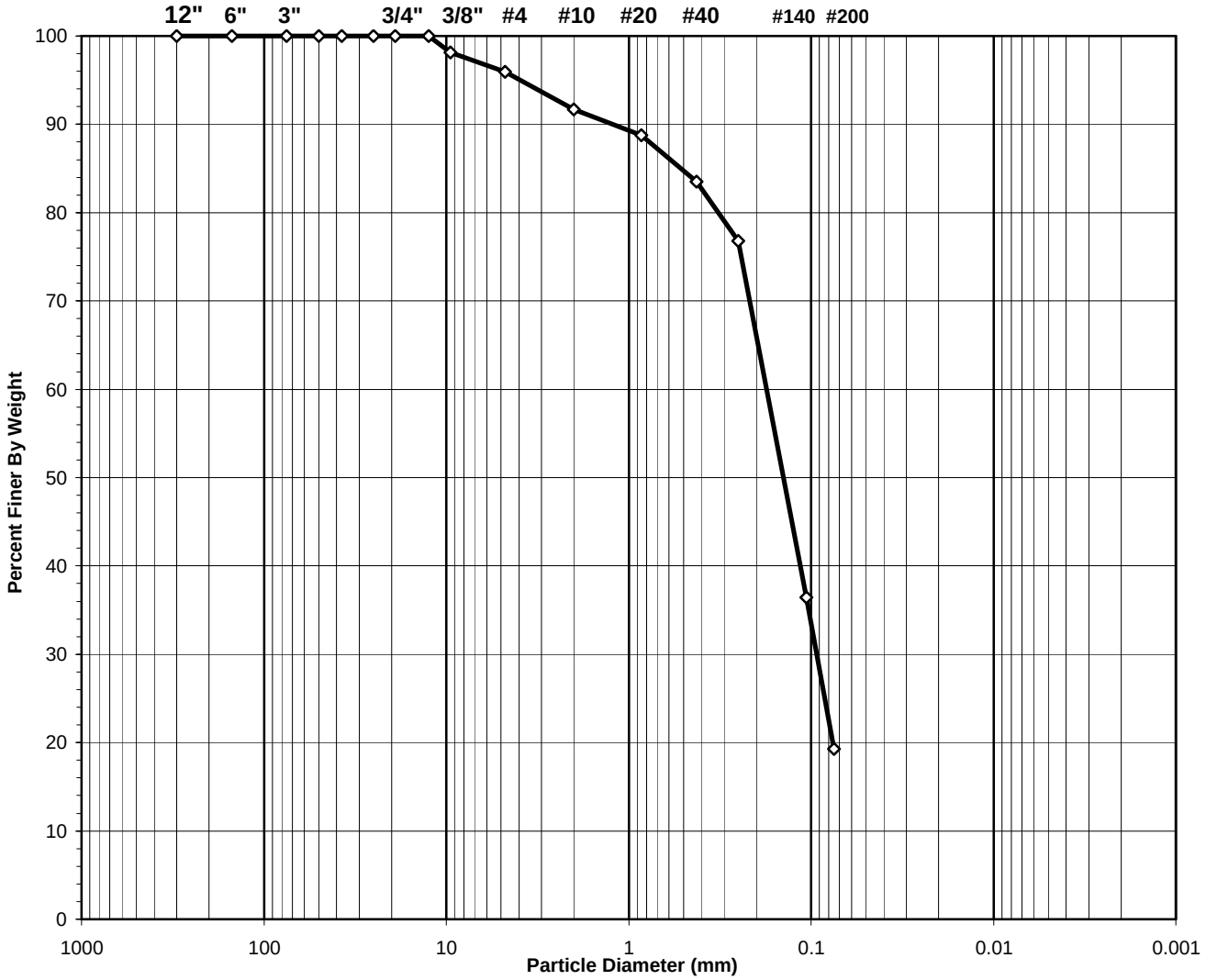
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-H-122706-4-6
Lab ID	2007-255-01-32	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-H-122706-REM
Lab ID	2007-255-01-33	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	912	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	275.29	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	253.99	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	110.56	Weight of Tare (gm)	NA
Weight of Water (gm)	21.30	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	143.43	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**14.9**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	143.43
Dry Weight - 3/4" Sample (gm)	122.3	Weight of minus #200 material (gm)	21.12
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	122.31
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	4.32	3.01	3.01	96.99	**96.99**
3/8"	9.50	6.64	4.63	7.64	92.36	**92.36**
#4	4.75	12.43	8.67	16.31	83.69	**83.69**
#10	2.00	13.48	9.40	25.71	74.29	**74.29**
#20	0.850	10.35	7.22	32.92	67.08	**67.08**
#40	0.425	12.99	9.06	41.98	58.02	**58.02**
#60	0.250	12.42	8.66	50.64	49.36	**49.36**
#140	0.106	36.50	25.45	76.09	23.91	**23.91**
#200	0.075	13.18	9.19	85.28	14.72	**14.72**
Pan	-	21.12	14.72	100.00	-	**-**

Tested By PC Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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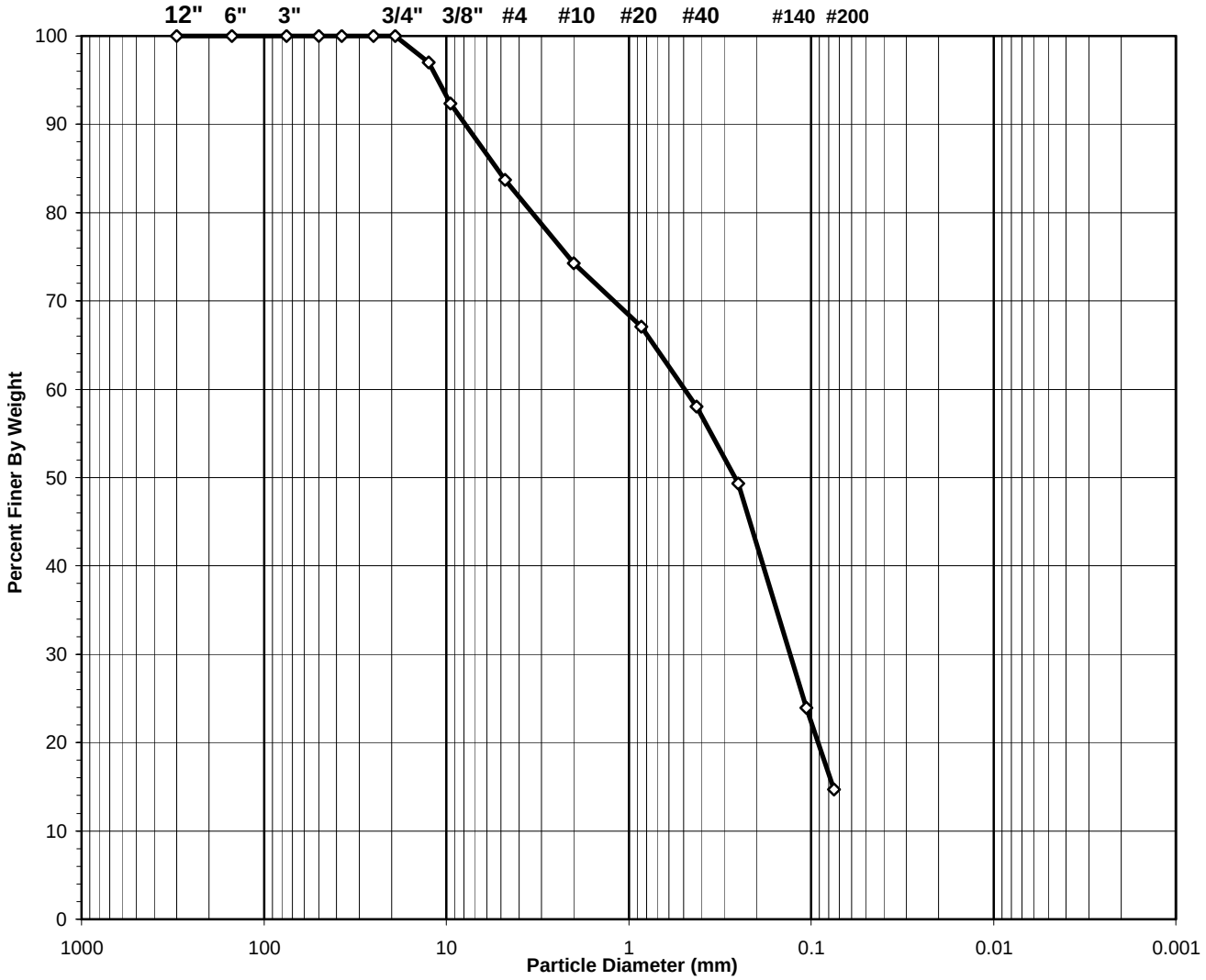
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-H-122706-REM
Lab ID	2007-255-01-33	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND WITH GRAVEL***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-H-122706-TOP
Lab ID	2007-255-01-34	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	878	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	256.60	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	220.15	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	110.55	Weight of Tare (gm)	NA
Weight of Water (gm)	36.45	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	109.60	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**33.3**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	109.60
Dry Weight - 3/4" Sample (gm)	72.9	Weight of minus #200 material (gm)	36.66
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	72.94
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.50	0.46	0.46	99.54	**99.54**
#4	4.75	0.41	0.37	0.83	99.17	**99.17**
#10	2.00	3.97	3.62	4.45	95.55	**95.55**
#20	0.850	1.23	1.12	5.57	94.43	**94.43**
#40	0.425	2.60	2.37	7.95	92.05	**92.05**
#60	0.250	5.63	5.14	13.08	86.92	**86.92**
#140	0.106	37.39	34.11	47.20	52.80	**52.80**
#200	0.075	21.21	19.35	66.55	33.45	**33.45**
Pan	-	36.66	33.45	100.00	-	**-**

Tested By PC Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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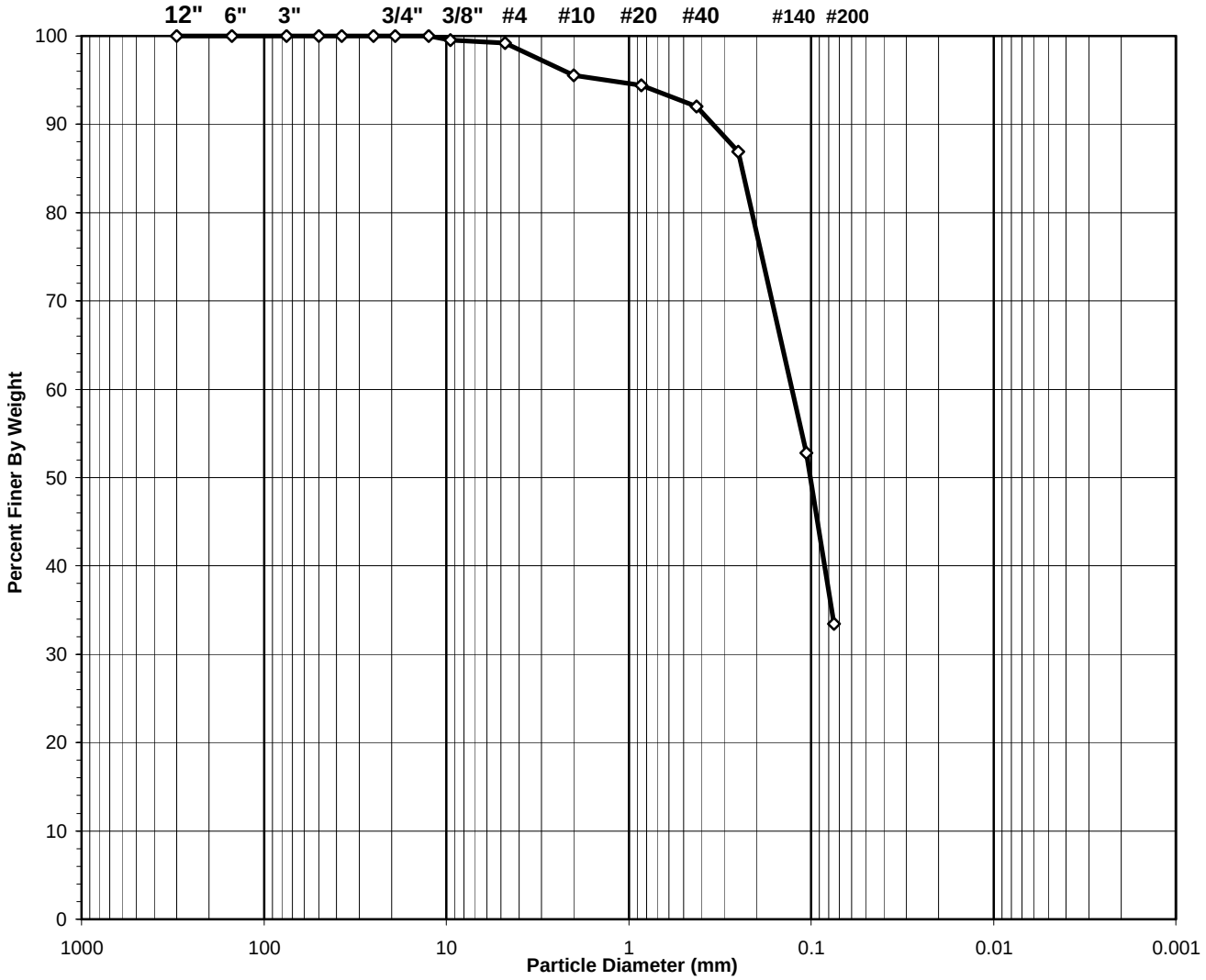
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-H-122706-TOP
Lab ID	2007-255-01-34	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-I-122706-2-4
Lab ID	2007-255-01-35	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	598	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	283.05	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	249.29	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	84.74	Weight of Tare (gm)	NA
Weight of Water (gm)	33.76	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	164.55	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**20.5**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	164.55
Dry Weight - 3/4" Sample (gm)	103.39	Weight of minus #200 material (gm)	61.16
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	103.39
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.5	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	8.18	4.97	4.97	95.03	**95.03**
#10	2.00	9.05	5.50	10.47	89.53	**89.53**
#20	0.85	9.35	5.68	16.15	83.85	**83.85**
#40	0.425	12.73	7.74	23.89	76.11	**76.11**
#60	0.250	14.09	8.56	32.45	67.55	**67.55**
#140	0.106	35.59	21.63	54.08	45.92	**45.92**
#200	0.075	14.40	8.75	62.83	37.17	**37.17**
Pan	-	61.16	37.17	100.00	-	**-**

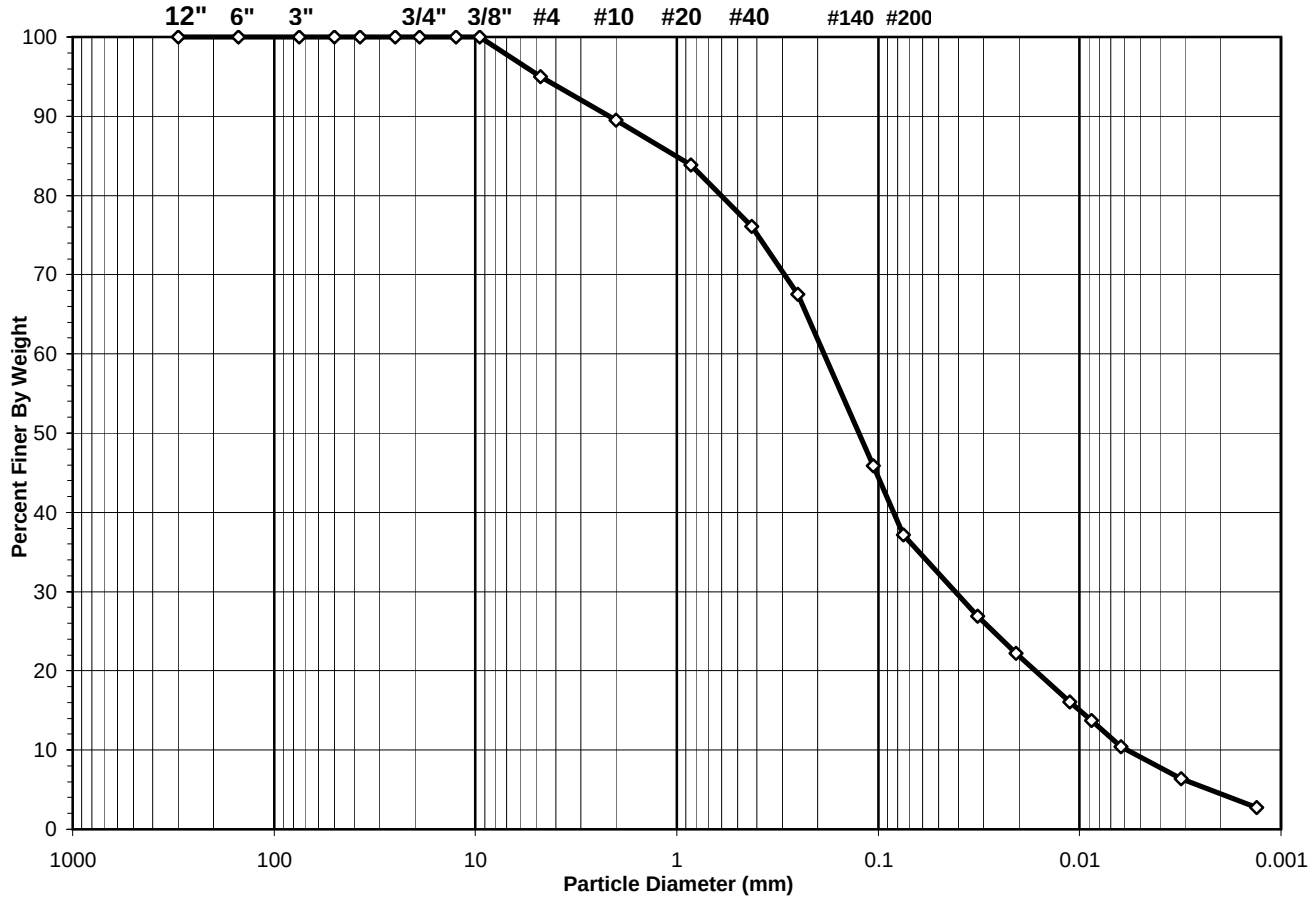
Tested By PC Date 7/9/2007 Checked By Date

SIEVE AND HYDROMETER ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-I-122706-2-4
Lab ID	2007-255-01-35	Soil Color	**BROWN**

	SIEVE ANALYSIS			*HYDROMETER*	
USCS	**cobbles**	**gravel**	**sand**	**silt and clay fraction**	
USDA	**cobbles**	**gravel**	**sand**	**silt**	**clay**



USCS Summary		
Sieve Sizes (mm)		**Percentage**
Greater Than #4	*Gravel*	4.97
#4 To #200	*Sand*	57.86
Finer Than #200	*Silt & Clay*	37.17

USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

DCN: CT-S3A DATE:1/28/06 REVISION: 7

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-I-122706-4-6
Lab ID	2007-255-01-36	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	876	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	273.06	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	242.35	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	109.98	Weight of Tare (gm)	NA
Weight of Water (gm)	30.71	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	132.37	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**23.2**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	132.37
Dry Weight - 3/4" Sample (gm)	83.83	Weight of minus #200 material (gm)	48.54
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	83.83
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.5	4.89	3.69	3.69	96.31	**96.31**
3/8"	9.50	5.91	4.46	8.16	91.84	**91.84**
#4	4.75	1.74	1.31	9.47	90.53	**90.53**
#10	2.00	7.21	5.45	14.92	85.08	**85.08**
#20	0.85	6.86	5.18	20.10	79.90	**79.90**
#40	0.425	9.19	6.94	27.05	72.95	**72.95**
#60	0.250	10.06	7.60	34.65	65.35	**65.35**
#140	0.106	26.78	20.23	54.88	45.12	**45.12**
#200	0.075	11.19	8.45	63.33	36.67	**36.67**
Pan	-	48.54	36.67	100.00	-	**-**

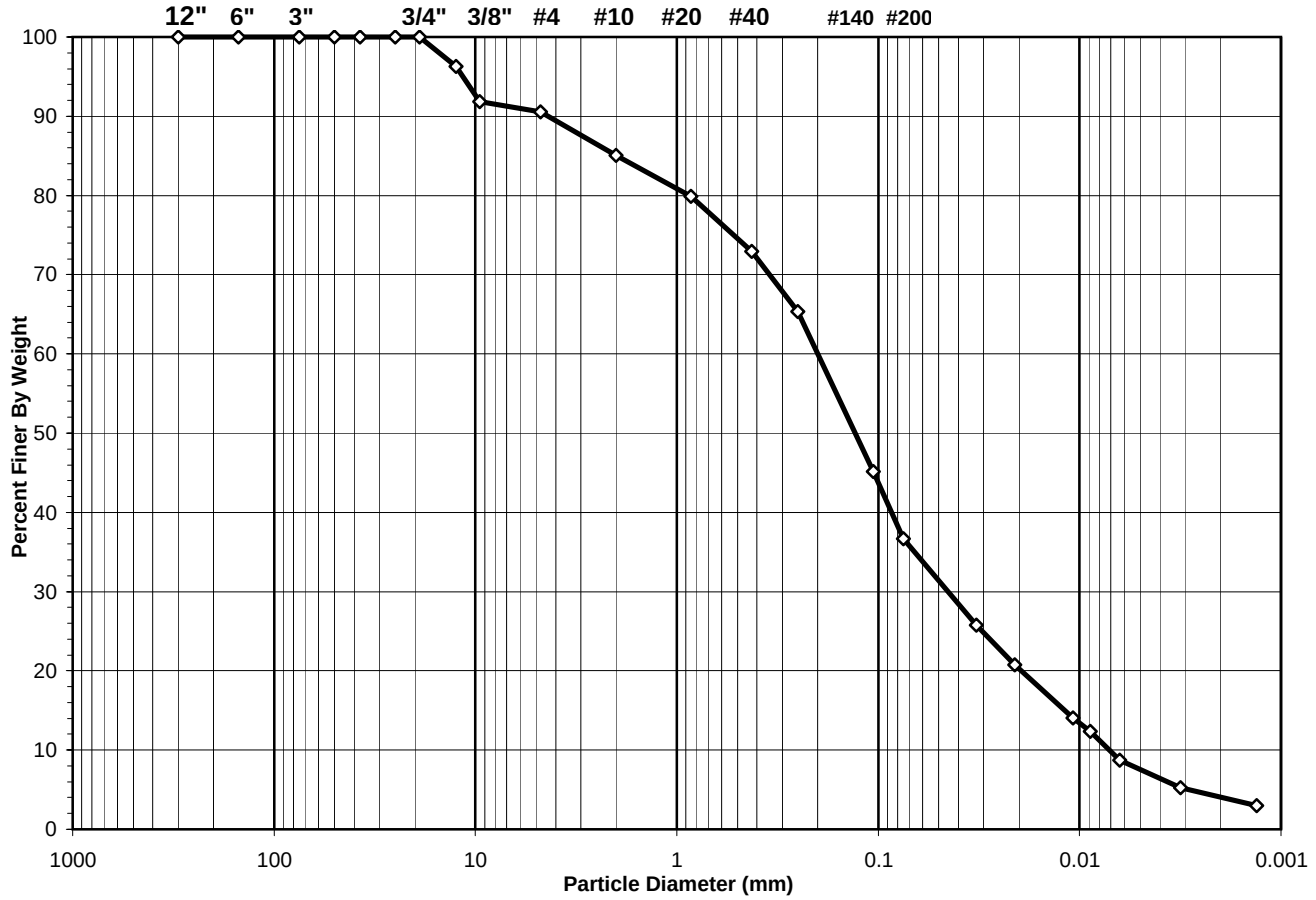
Tested By PC Date 7/10/2007 Checked By Date

SIEVE AND HYDROMETER ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-I-122706-4-6
Lab ID	2007-255-01-36	Soil Color	**BROWN**

	SIEVE ANALYSIS			*HYDROMETER*	
USCS	**cobbles**	**gravel**	**sand**	**silt and clay fraction**	
USDA	**cobbles**	**gravel**	**sand**	**silt**	**clay**



USCS Summary		
Sieve Sizes (mm)		**Percentage**
Greater Than #4	*Gravel*	9.47
#4 To #200	*Sand*	53.86
Finer Than #200	*Silt & Clay*	36.67

USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

DCN: CT-S3A DATE:1/28/06 REVISION: 7

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-I-122706-TOP
Lab ID	2007-255-01-37	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	872	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	335.47	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	298.42	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	110.51	Weight of Tare (gm)	NA
Weight of Water (gm)	37.05	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	187.91	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**19.7**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	187.91
Dry Weight - 3/4" Sample (gm)	132.13	Weight of minus #200 material (gm)	55.78
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	132.13
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.5	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	4.58	2.44	2.44	97.56	**97.56**
#4	4.75	4.21	2.24	4.68	95.32	**95.32**
#10	2.00	6.16	3.28	7.96	92.04	**92.04**
#20	0.85	8.00	4.26	12.21	87.79	**87.79**
#40	0.425	13.42	7.14	19.36	80.64	**80.64**
#60	0.250	17.74	9.44	28.80	71.20	**71.20**
#140	0.106	55.72	29.65	58.45	41.55	**41.55**
#200	0.075	22.30	11.87	70.32	29.68	**29.68**
Pan	-	55.78	29.68	100.00	-	**-**

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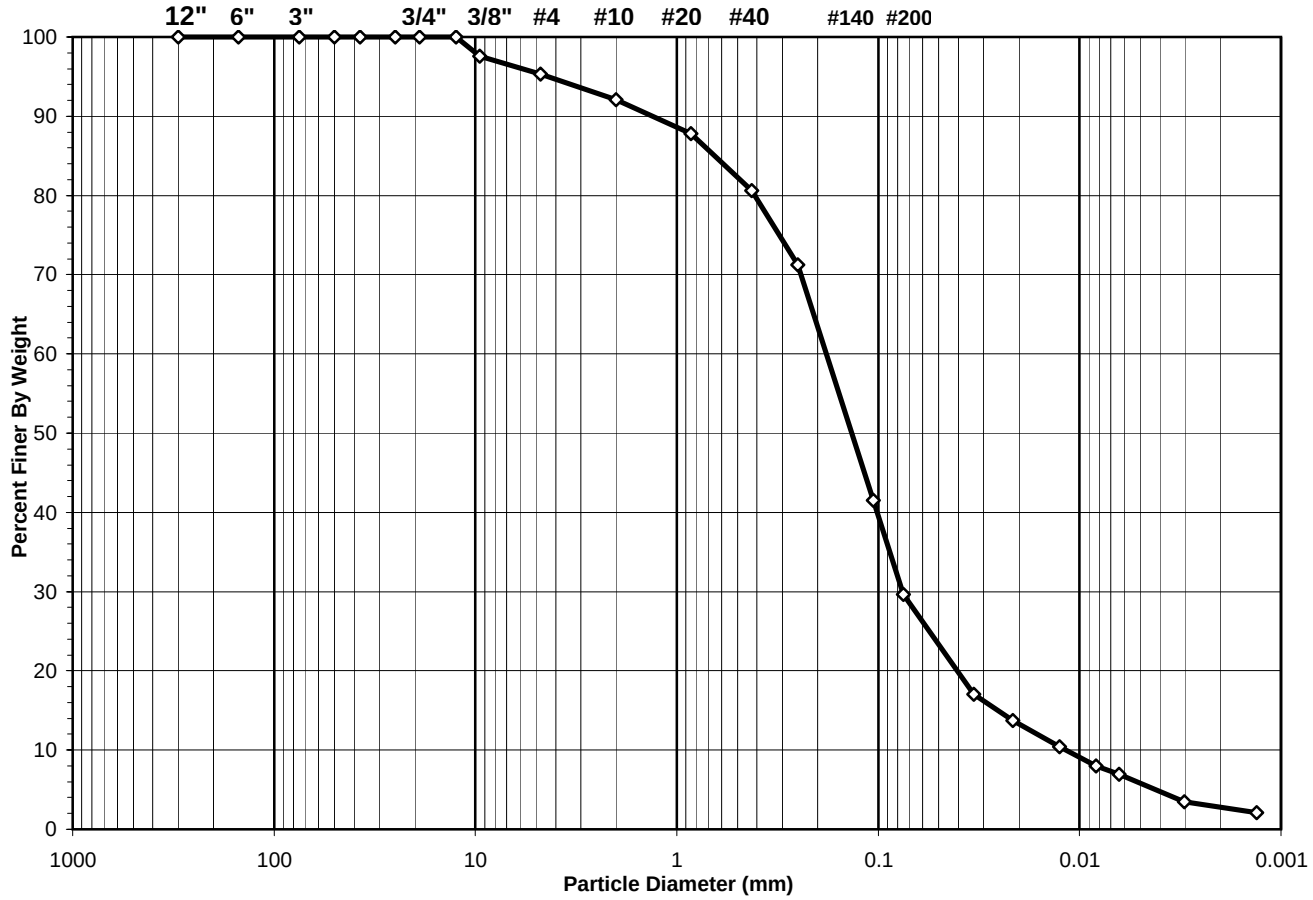
SIEVE AND HYDROMETER ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-I-122706-TOP
Lab ID	2007-255-01-37	Soil Color	**BROWN**

	SIEVE ANALYSIS			*HYDROMETER*	
USCS	**cobbles**	**gravel**	**sand**	**silt and clay fraction**	
USDA	**cobbles**	**gravel**	**sand**	**silt**	**clay**



USCS Summary		
Sieve Sizes (mm)		**Percentage**
Greater Than #4	*Gravel*	4.68
#4 To #200	*Sand*	65.64
Finer Than #200	*Silt & Clay*	29.68

USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

DCN: CT-S3A DATE:1/28/06 REVISION: 7

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-J-122706-0-2
Lab ID	2007-255-01-38	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	917	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	285.50	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	269.32	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	109.88	Weight of Tare (gm)	NA
Weight of Water (gm)	16.18	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	159.44	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**10.1**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	159.44
Dry Weight - 3/4" Sample (gm)	143.2	Weight of minus #200 material (gm)	16.27
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	143.17
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	5.53	3.47	3.47	96.53	**96.53**
3/8"	9.50	17.89	11.22	14.69	85.31	**85.31**
#4	4.75	17.71	11.11	25.80	74.20	**74.20**
#10	2.00	18.69	11.72	37.52	62.48	**62.48**
#20	0.850	14.34	8.99	46.51	53.49	**53.49**
#40	0.425	12.69	7.96	54.47	45.53	**45.53**
#60	0.250	10.92	6.85	61.32	38.68	**38.68**
#140	0.106	34.79	21.82	83.14	16.86	**16.86**
#200	0.075	10.61	6.65	89.80	10.20	**10.20**
Pan	-	16.27	10.20	100.00	-	**-**

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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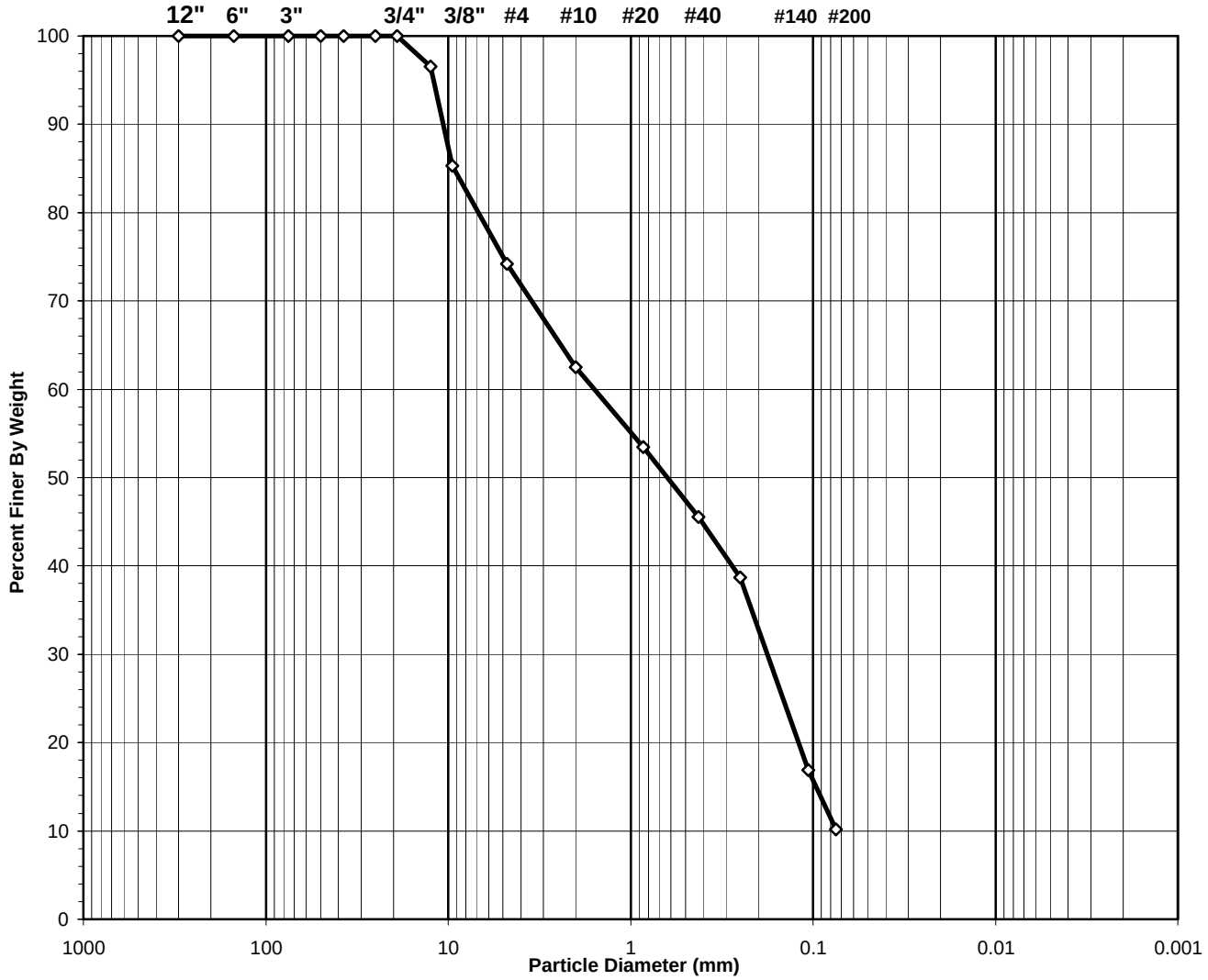
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-J-122706-0-2
Lab ID	2007-255-01-38	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sp-sm, ASSUMED***

USCS Classification ***POORLY GRADED SAND WITH SILT AND GRAVEL***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-J-122706-2-4
Lab ID	2007-255-01-39	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	899	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	239.17	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	224.95	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	110.08	Weight of Tare (gm)	NA
Weight of Water (gm)	14.22	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	114.87	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**12.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	114.87
Dry Weight - 3/4" Sample (gm)	104.7	Weight of minus #200 material (gm)	10.17
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	104.70
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	3.12	2.72	2.72	97.28	**97.28**
#4	4.75	9.15	7.97	10.68	89.32	**89.32**
#10	2.00	15.18	13.21	23.90	76.10	**76.10**
#20	0.850	15.21	13.24	37.14	62.86	**62.86**
#40	0.425	12.64	11.00	48.14	51.86	**51.86**
#60	0.250	12.16	10.59	58.73	41.27	**41.27**
#140	0.106	29.55	25.72	84.45	15.55	**15.55**
#200	0.075	7.69	6.69	91.15	8.85	**8.85**
Pan	-	10.17	8.85	100.00	-	**-**

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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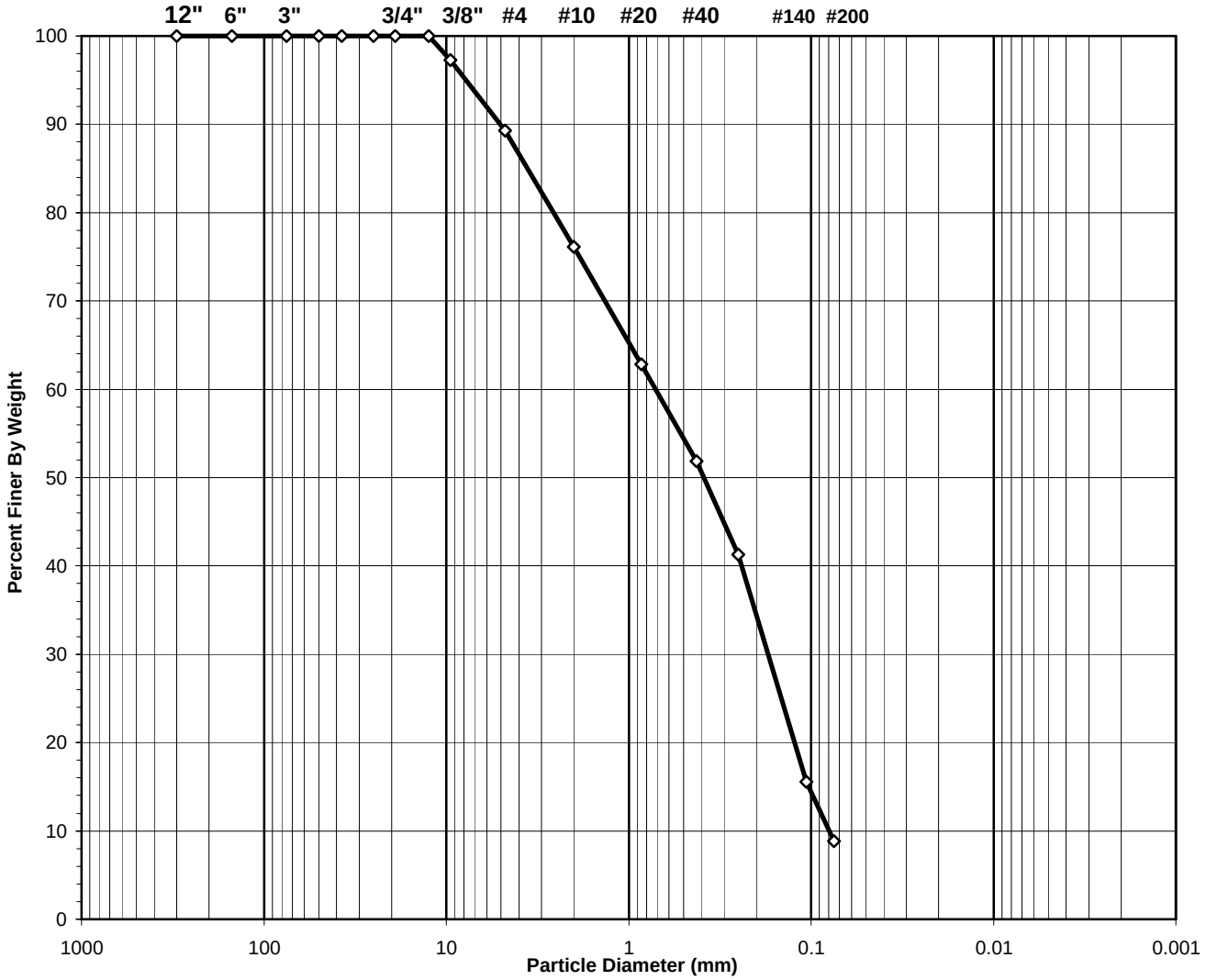
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-J-122706-2-4
Lab ID	2007-255-01-39	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sp-sm, ASSUMED*** **D60 = 0.7** **CC = 0.5**

USCS Classification ***POORLY GRADED SAND WITH SILT*** **D30 = 0.2** **CU = 8.9**

UNABLE TO RUN HYDROMETER **D10 = 0.1**

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-J-122706-4-6
Lab ID	2007-255-01-40	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	909	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	258.63	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	244.23	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	109.62	Weight of Tare (gm)	NA
Weight of Water (gm)	14.40	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	134.61	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**10.7**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	134.61
Dry Weight - 3/4" Sample (gm)	121.4	Weight of minus #200 material (gm)	13.24
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	121.37
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	5.90	4.38	4.38	95.62	**95.62**
3/8"	9.50	3.77	2.80	7.18	92.82	**92.82**
#4	4.75	9.51	7.06	14.25	85.75	**85.75**
#10	2.00	7.87	5.85	20.10	79.90	**79.90**
#20	0.850	16.39	12.18	32.27	67.73	**67.73**
#40	0.425	25.61	19.03	51.30	48.70	**48.70**
#60	0.250	18.66	13.86	65.16	34.84	**34.84**
#140	0.106	26.75	19.87	85.03	14.97	**14.97**
#200	0.075	6.91	5.13	90.16	9.84	**9.84**
Pan	-	13.24	9.84	100.00	-	**-**

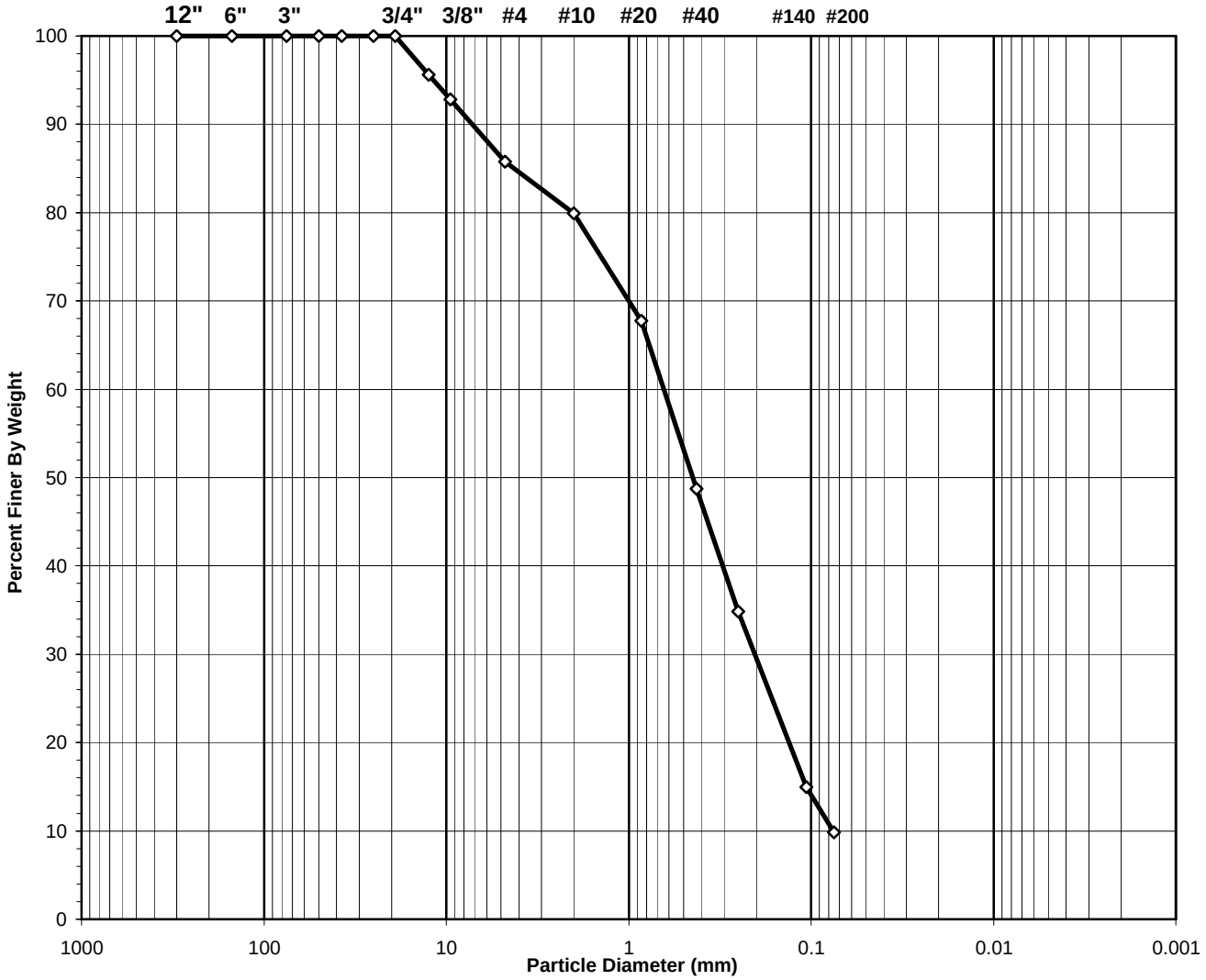
Tested By PC Date 7/6/2007 Checked By Date

SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-J-122706-4-6
Lab ID	2007-255-01-40	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sp-sm, ASSUMED*** **D60 = 0.6** **CC = 0.8**

USCS Classification ***POORLY GRADED SAND WITH SILT*** **D30 = 0.2** **CU = 8.5**

UNABLE TO RUN HYDROMETER **D10 = 0.1**

Tested By PC Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION 2 *C:\Documents and Settings\jdenkenberge\Local Settings\Temporary Internet Files\OLK2F\[255-01-40.xls]Sheet1*

WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-J-122706-TOP
Lab ID	2007-255-01-41	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	916	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	201.24	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	184.11	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	109.91	Weight of Tare (gm)	NA
Weight of Water (gm)	17.13	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	74.20	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**23.1**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	74.20
Dry Weight - 3/4" Sample (gm)	59.6	Weight of minus #200 material (gm)	14.63
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	59.57
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	0.29	0.39	0.39	99.61	**99.61**
#10	2.00	0.15	0.20	0.59	99.41	**99.41**
#20	0.850	0.37	0.50	1.09	98.91	**98.91**
#40	0.425	5.31	7.16	8.25	91.75	**91.75**
#60	0.250	11.13	15.00	23.25	76.75	**76.75**
#140	0.106	33.43	45.05	68.30	31.70	**31.70**
#200	0.075	8.89	11.98	80.28	19.72	**19.72**
Pan	-	14.63	19.72	100.00	-	**-**

Tested By PC Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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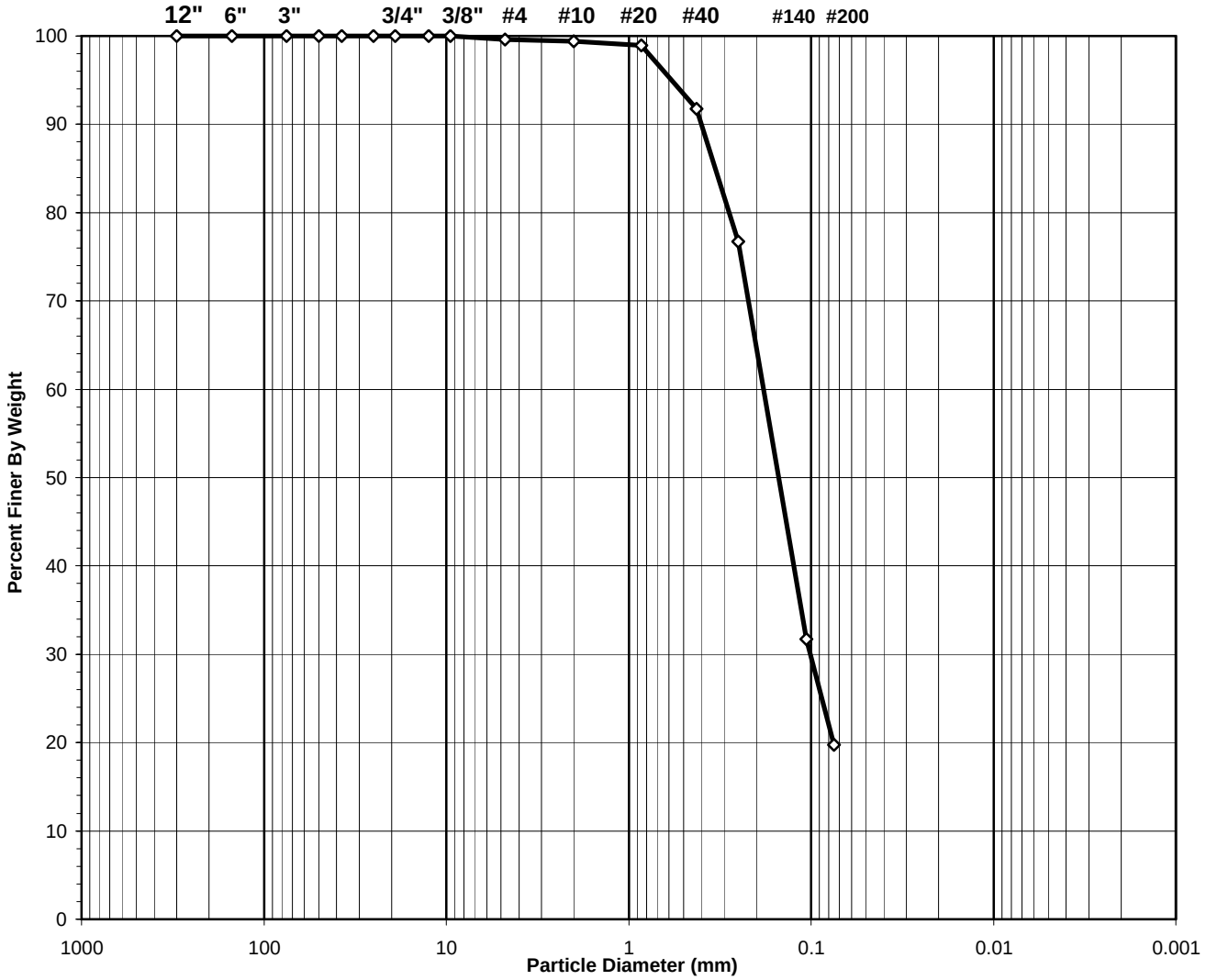
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-J-122706-TOP
Lab ID	2007-255-01-41	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-K-122706-0-2
Lab ID	2007-255-01-42	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	891	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	281.60	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	259.93	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	110.52	Weight of Tare (gm)	NA
Weight of Water (gm)	21.67	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	149.41	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**14.5**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	149.41
Dry Weight - 3/4" Sample (gm)	119.6	Weight of minus #200 material (gm)	29.81
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	119.60
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	2.96	1.98	1.98	98.02	**98.02**
#4	4.75	7.29	4.88	6.86	93.14	**93.14**
#10	2.00	8.15	5.45	12.32	87.68	**87.68**
#20	0.850	7.55	5.05	17.37	82.63	**82.63**
#40	0.425	10.58	7.08	24.45	75.55	**75.55**
#60	0.250	10.69	7.15	31.60	68.40	**68.40**
#140	0.106	51.26	34.31	65.91	34.09	**34.09**
#200	0.075	21.12	14.14	80.05	19.95	**19.95**
Pan	-	29.81	19.95	100.00	-	**-**

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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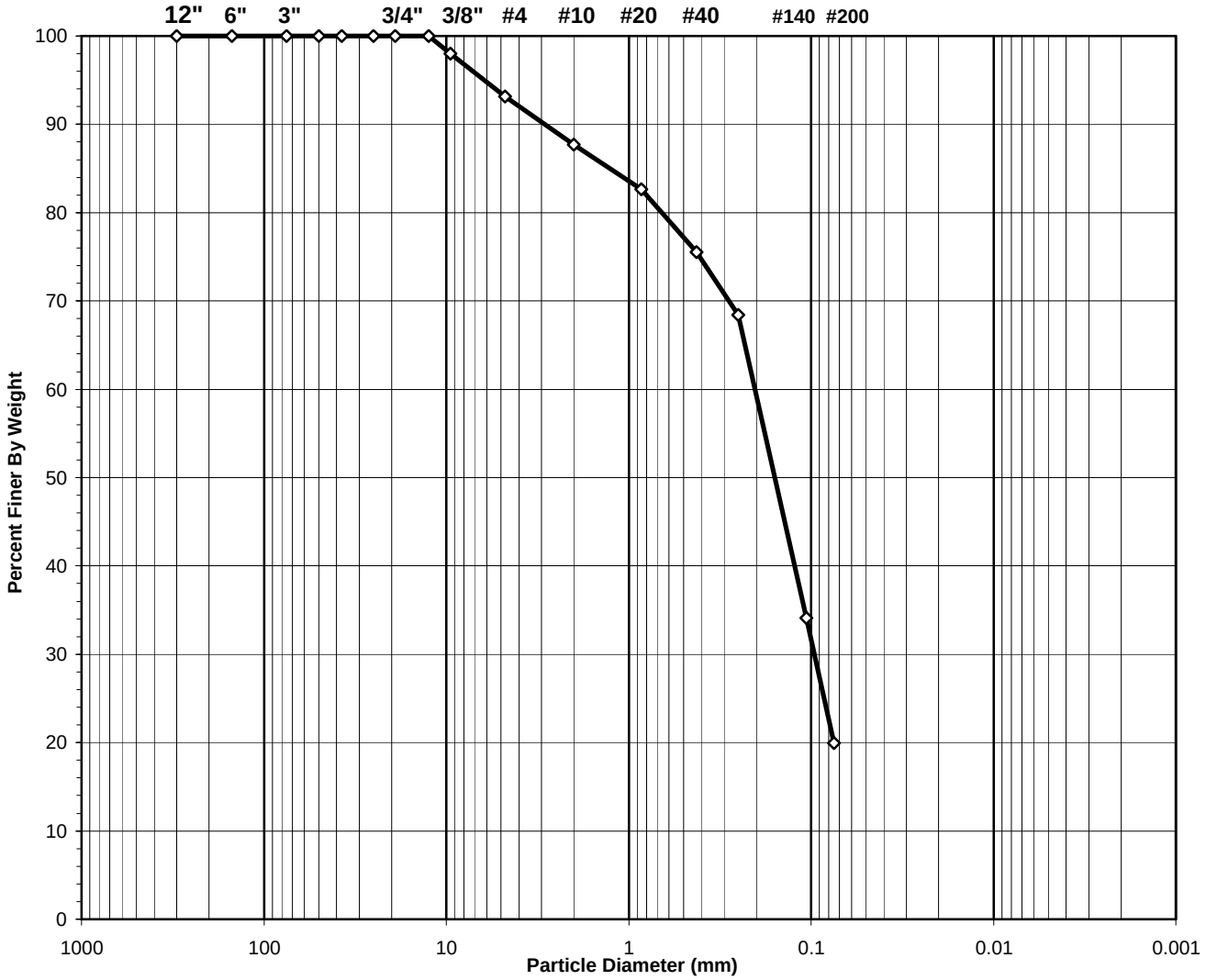
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-K-122706-0-2
Lab ID	2007-255-01-42	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-K-122706-2-4
Lab ID	2007-255-01-43	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	905	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	231.81	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	215.63	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	110.13	Weight of Tare (gm)	NA
Weight of Water (gm)	16.18	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	105.50	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**15.3**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	105.50
Dry Weight - 3/4" Sample (gm)	87.2	Weight of minus #200 material (gm)	18.34
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	87.16
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	2.56	2.43	2.43	97.57	**97.57**
#4	4.75	3.99	3.78	6.21	93.79	**93.79**
#10	2.00	4.22	4.00	10.21	89.79	**89.79**
#20	0.850	3.69	3.50	13.71	86.29	**86.29**
#40	0.425	6.55	6.21	19.91	80.09	**80.09**
#60	0.250	9.96	9.44	29.36	70.64	**70.64**
#140	0.106	40.94	38.81	68.16	31.84	**31.84**
#200	0.075	15.25	14.45	82.62	17.38	**17.38**
Pan	-	18.34	17.38	100.00	-	**-**

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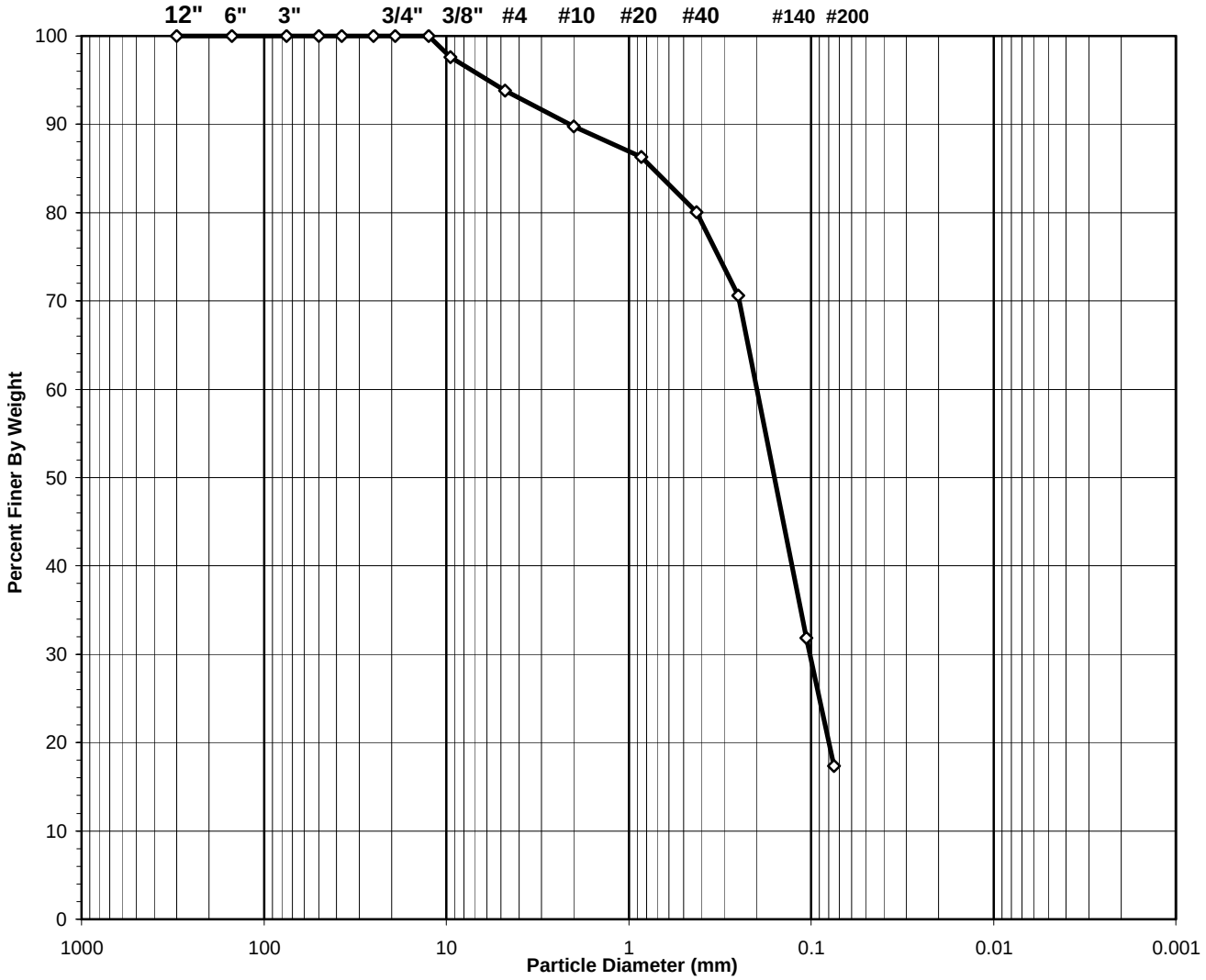
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-K-122706-2-4
Lab ID	2007-255-01-43	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-K-122706-4-6
Lab ID	2007-255-01-44	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	903	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	233.50	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	217.75	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	109.71	Weight of Tare (gm)	NA
Weight of Water (gm)	15.75	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	108.04	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**14.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	108.04
Dry Weight - 3/4" Sample (gm)	90.1	Weight of minus #200 material (gm)	17.96
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	90.08
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	2.96	2.74	2.74	97.26	**97.26**
#4	4.75	7.43	6.88	9.62	90.38	**90.38**
#10	2.00	4.59	4.25	13.87	86.13	**86.13**
#20	0.850	4.41	4.08	17.95	82.05	**82.05**
#40	0.425	8.87	8.21	26.16	73.84	**73.84**
#60	0.250	13.17	12.19	38.35	61.65	**61.65**
#140	0.106	35.62	32.97	71.32	28.68	**28.68**
#200	0.075	13.03	12.06	83.38	16.62	**16.62**
Pan	-	17.96	16.62	100.00	-	**-**

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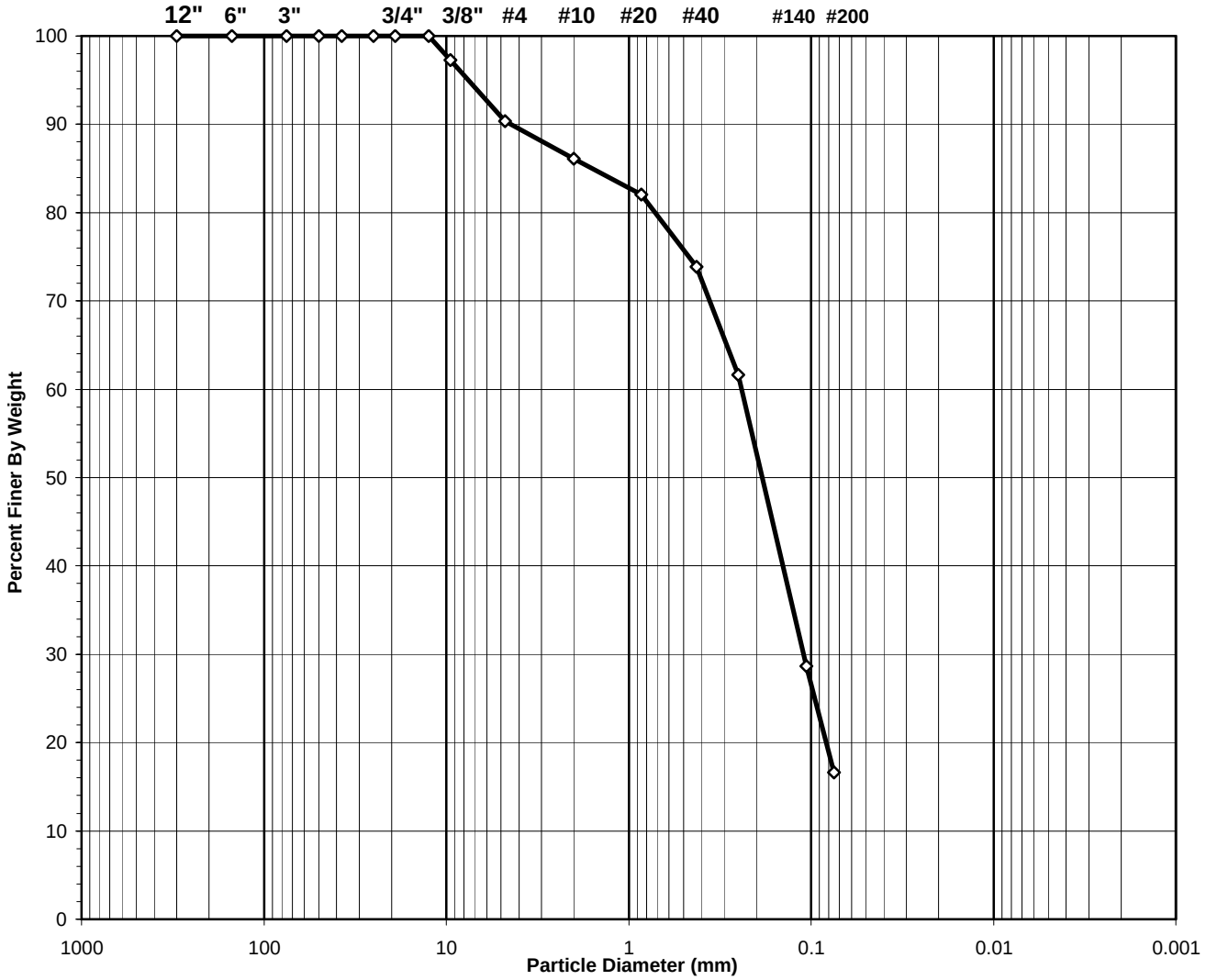
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-K-122706-4-6
Lab ID	2007-255-01-44	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/9/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-K-122706-REM
Lab ID	2007-255-01-45	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1717	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	227.46	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	208.75	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	83.28	Weight of Tare (gm)	NA
Weight of Water (gm)	18.71	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	125.47	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**14.9**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	125.47
Dry Weight - 3/4" Sample (gm)	105.0	Weight of minus #200 material (gm)	20.48
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	104.99
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	5.26	4.19	4.19	95.81	**95.81**
#10	2.00	5.58	4.45	8.64	91.36	**91.36**
#20	0.850	7.65	6.10	14.74	85.26	**85.26**
#40	0.425	15.75	12.55	27.29	72.71	**72.71**
#60	0.250	17.56	14.00	41.28	58.72	**58.72**
#140	0.106	40.53	32.30	73.59	26.41	**26.41**
#200	0.075	12.66	10.09	83.68	16.32	**16.32**
Pan	-	20.48	16.32	100.00	-	**-**

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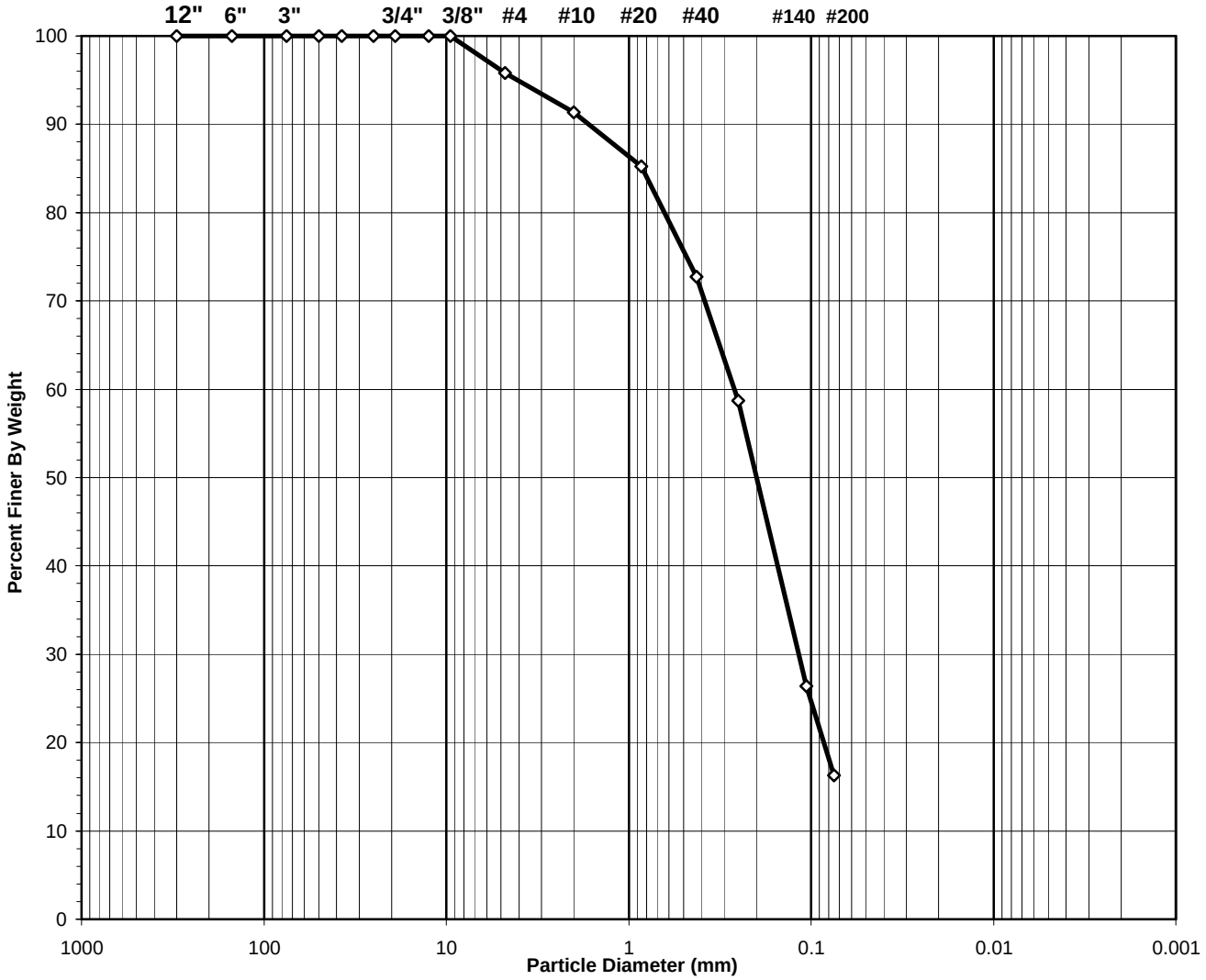
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-K-122706-REM
Lab ID	2007-255-01-45	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-K-122706-TOP
Lab ID	2007-255-01-46	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	542	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	266.12	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	234.17	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	82.23	Weight of Tare (gm)	NA
Weight of Water (gm)	31.95	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	151.94	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**21.0**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	151.94
Dry Weight - 3/4" Sample (gm)	108.7	Weight of minus #200 material (gm)	43.20
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	108.74
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	0.59	0.39	0.39	99.61	**99.61**
#10	2.00	1.86	1.22	1.61	98.39	**98.39**
#20	0.850	3.95	2.60	4.21	95.79	**95.79**
#40	0.425	7.07	4.65	8.87	91.13	**91.13**
#60	0.250	12.49	8.22	17.09	82.91	**82.91**
#140	0.106	56.16	36.96	54.05	45.95	**45.95**
#200	0.075	26.62	17.52	71.57	28.43	**28.43**
Pan	-	43.20	28.43	100.00	-	**-**

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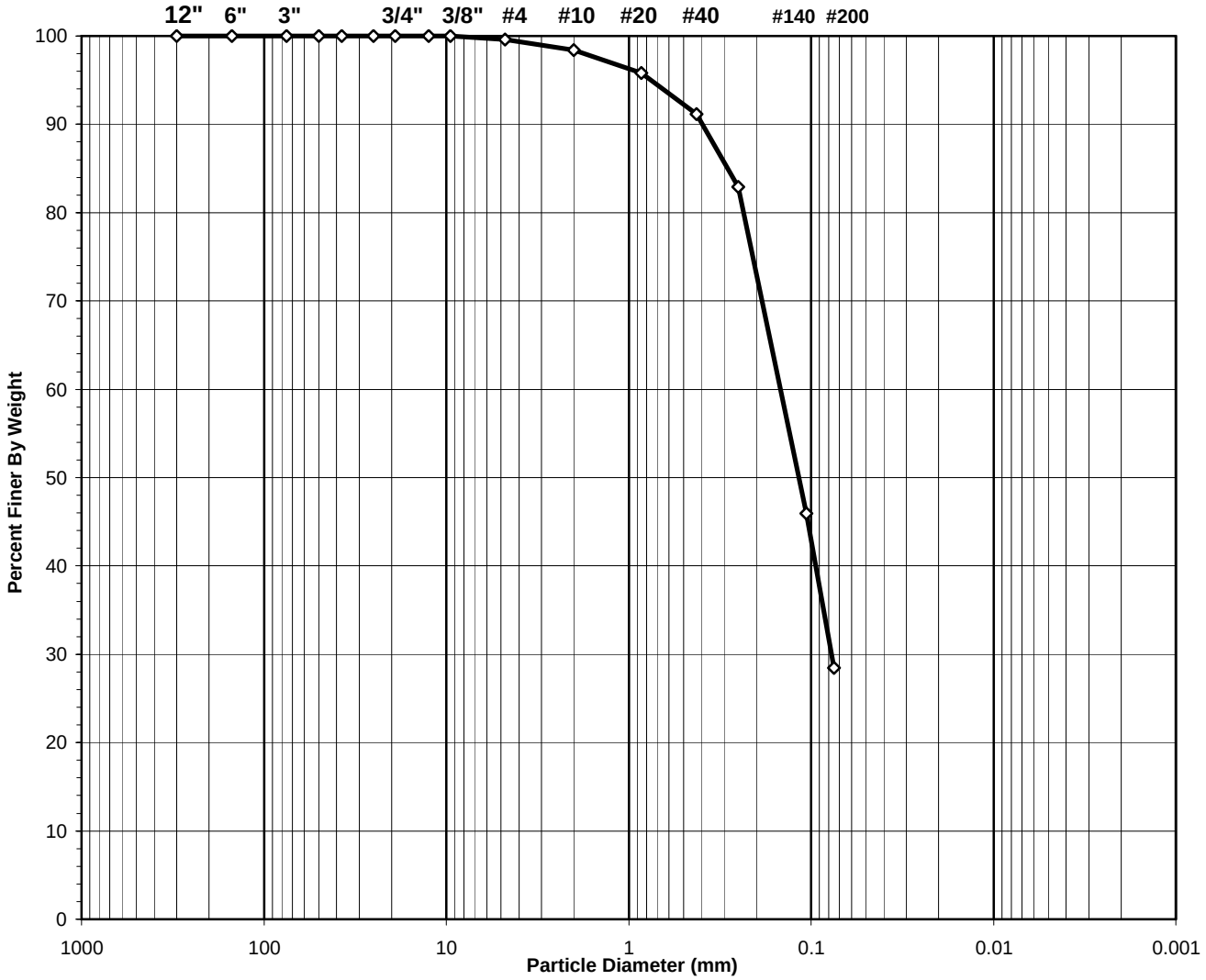
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-K-122706-TOP
Lab ID	2007-255-01-46	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/10/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-L-122706-0-2
Lab ID	2007-255-01-47	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1131A	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	248.23	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	223.31	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	84.28	Weight of Tare (gm)	NA
Weight of Water (gm)	24.92	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	139.03	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**17.9**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	139.03
Dry Weight - 3/4" Sample (gm)	121.3	Weight of minus #200 material (gm)	17.72
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	121.31
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	1.50	1.08	1.08	98.92	**98.92**
#4	4.75	9.39	6.75	7.83	92.17	**92.17**
#10	2.00	11.12	8.00	15.83	84.17	**84.17**
#20	0.850	8.33	5.99	21.82	78.18	**78.18**
#40	0.425	11.17	8.03	29.86	70.14	**70.14**
#60	0.250	12.71	9.14	39.00	61.00	**61.00**
#140	0.106	51.05	36.72	75.72	24.28	**24.28**
#200	0.075	16.04	11.54	87.25	12.75	**12.75**
Pan	-	17.72	12.75	100.00	-	**-**

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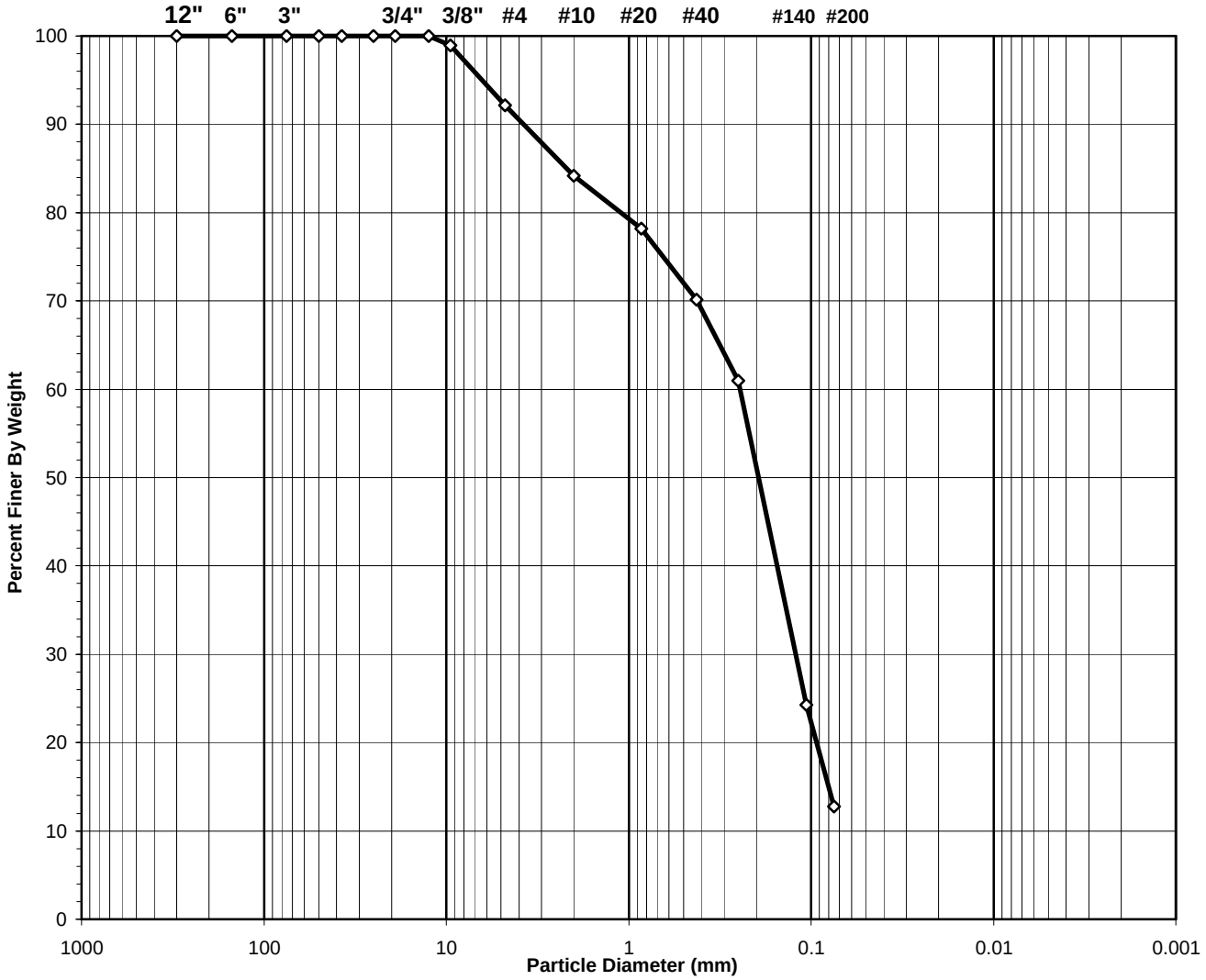
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-L-122706-0-2
Lab ID	2007-255-01-47	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/9/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-L-122706-2-4
Lab ID	2007-255-01-48	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1125	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	225.11	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	215.06	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	83.92	Weight of Tare (gm)	NA
Weight of Water (gm)	10.05	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	131.14	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**7.7**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	131.14
Dry Weight - 3/4" Sample (gm)	121.6	Weight of minus #200 material (gm)	9.50
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	121.64
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	6.32	4.82	4.82	95.18	**95.18**
3/8"	9.50	17.38	13.25	18.07	81.93	**81.93**
#4	4.75	16.69	12.73	30.80	69.20	**69.20**
#10	2.00	14.00	10.68	41.47	58.53	**58.53**
#20	0.850	9.18	7.00	48.47	51.53	**51.53**
#40	0.425	11.40	8.69	57.17	42.83	**42.83**
#60	0.250	11.83	9.02	66.19	33.81	**33.81**
#140	0.106	26.99	20.58	86.77	13.23	**13.23**
#200	0.075	7.85	5.99	92.76	7.24	**7.24**
Pan	-	9.50	7.24	100.00	-	**-**

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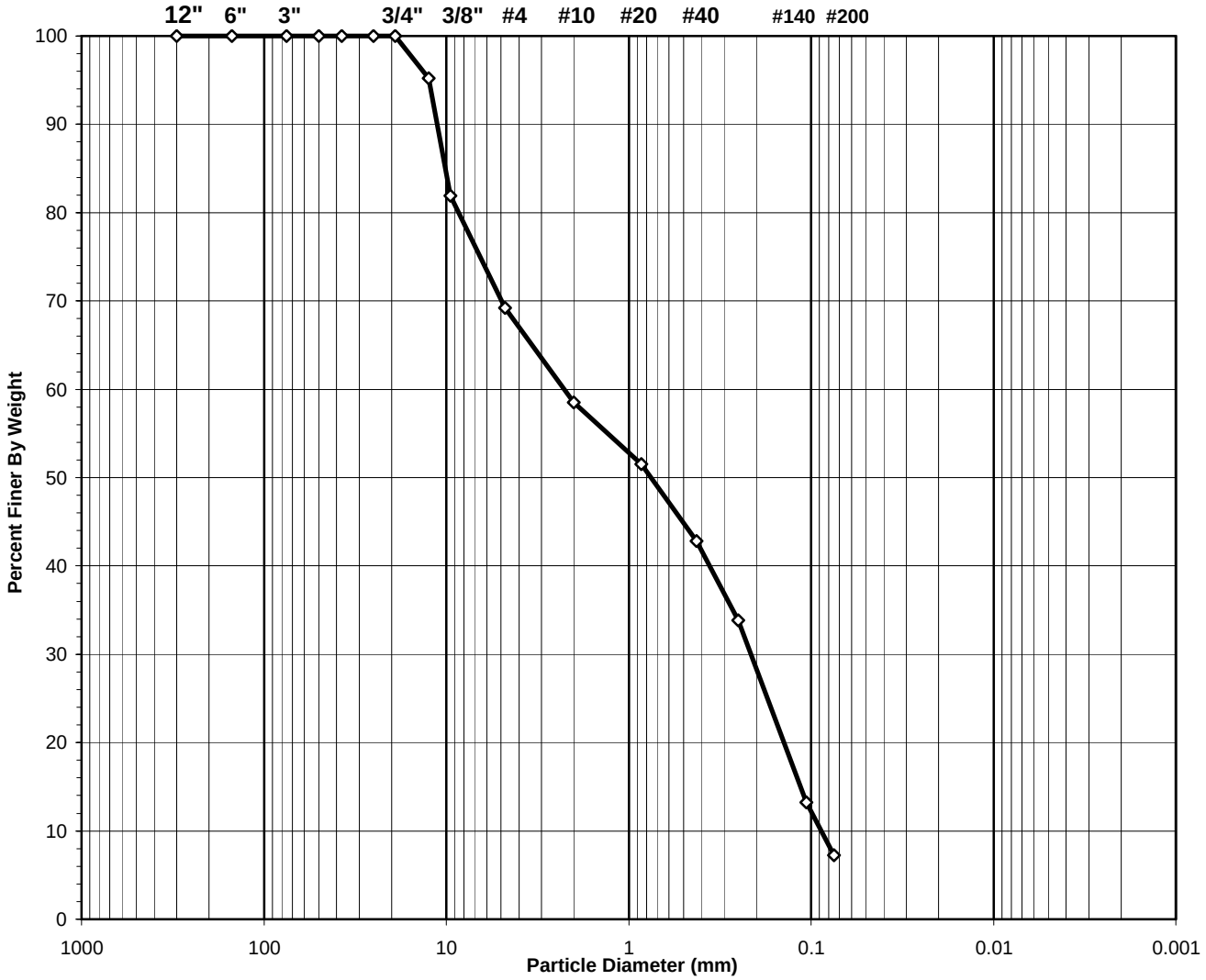
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-L-122706-2-4
Lab ID	2007-255-01-48	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol	***sp-sm, ASSUMED***	**D60 =**	**2.3**	**CC =**	**0.2**
USCS Classification	***POORLY GRADED SAND WITH SILT AND GRAVEL***	**D30 =**	**0.2**	**CU =**	**25.6**
UNABLE TO RUN HYDROMETER		**D10 =**	**0.1**		

Tested By PC Date 7/9/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-L-122706-4-6
Lab ID	2007-255-01-49	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	907	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	295.77	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	268.61	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	110.41	Weight of Tare (gm)	NA
Weight of Water (gm)	27.16	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	158.20	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**17.2**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	158.20
Dry Weight - 3/4" Sample (gm)	134.6	Weight of minus #200 material (gm)	23.59
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	134.61
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	2.68	1.69	1.69	98.31	**98.31**
#4	4.75	4.73	2.99	4.68	95.32	**95.32**
#10	2.00	7.35	4.65	9.33	90.67	**90.67**
#20	0.850	8.55	5.40	14.73	85.27	**85.27**
#40	0.425	13.20	8.34	23.08	76.92	**76.92**
#60	0.250	16.60	10.49	33.57	66.43	**66.43**
#140	0.106	61.29	38.74	72.31	27.69	**27.69**
#200	0.075	20.21	12.77	85.09	14.91	**14.91**
Pan	-	23.59	14.91	100.00	-	**-**

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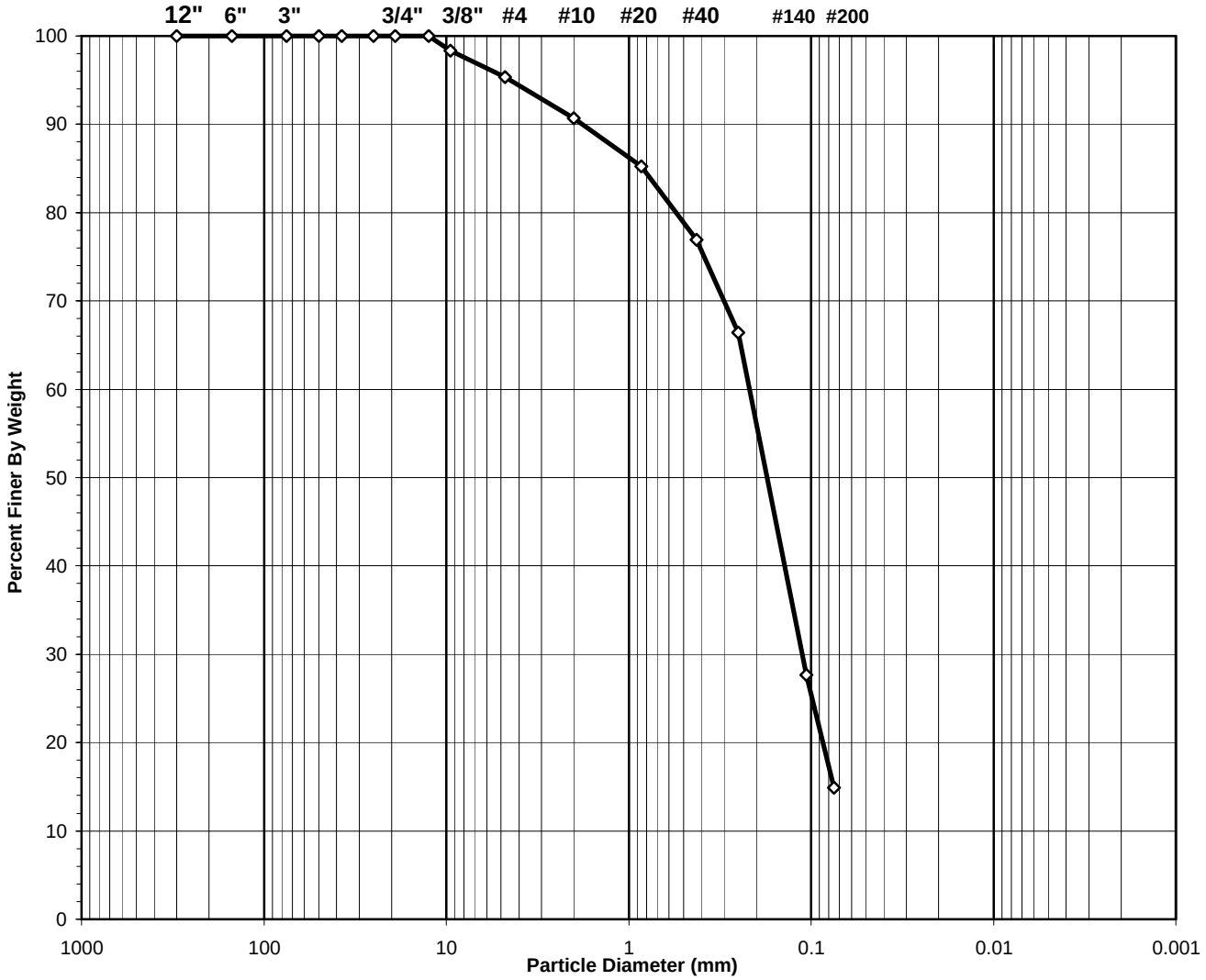
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-L-122706-4-6
Lab ID	2007-255-01-49	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-L-122706-REM
Lab ID	2007-255-01-50	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1128	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	178.41	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	165.18	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	84.04	Weight of Tare (gm)	NA
Weight of Water (gm)	13.23	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	81.14	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**16.3**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	81.14
Dry Weight - 3/4" Sample (gm)	66.0	Weight of minus #200 material (gm)	15.11
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	66.03
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	1.60	1.97	1.97	98.03	**98.03**
#4	4.75	1.28	1.58	3.55	96.45	**96.45**
#10	2.00	2.46	3.03	6.58	93.42	**93.42**
#20	0.850	3.41	4.20	10.78	89.22	**89.22**
#40	0.425	6.53	8.05	18.83	81.17	**81.17**
#60	0.250	10.03	12.36	31.19	68.81	**68.81**
#140	0.106	29.89	36.84	68.03	31.97	**31.97**
#200	0.075	10.83	13.35	81.38	18.62	**18.62**
Pan	-	15.11	18.62	100.00	-	**-**

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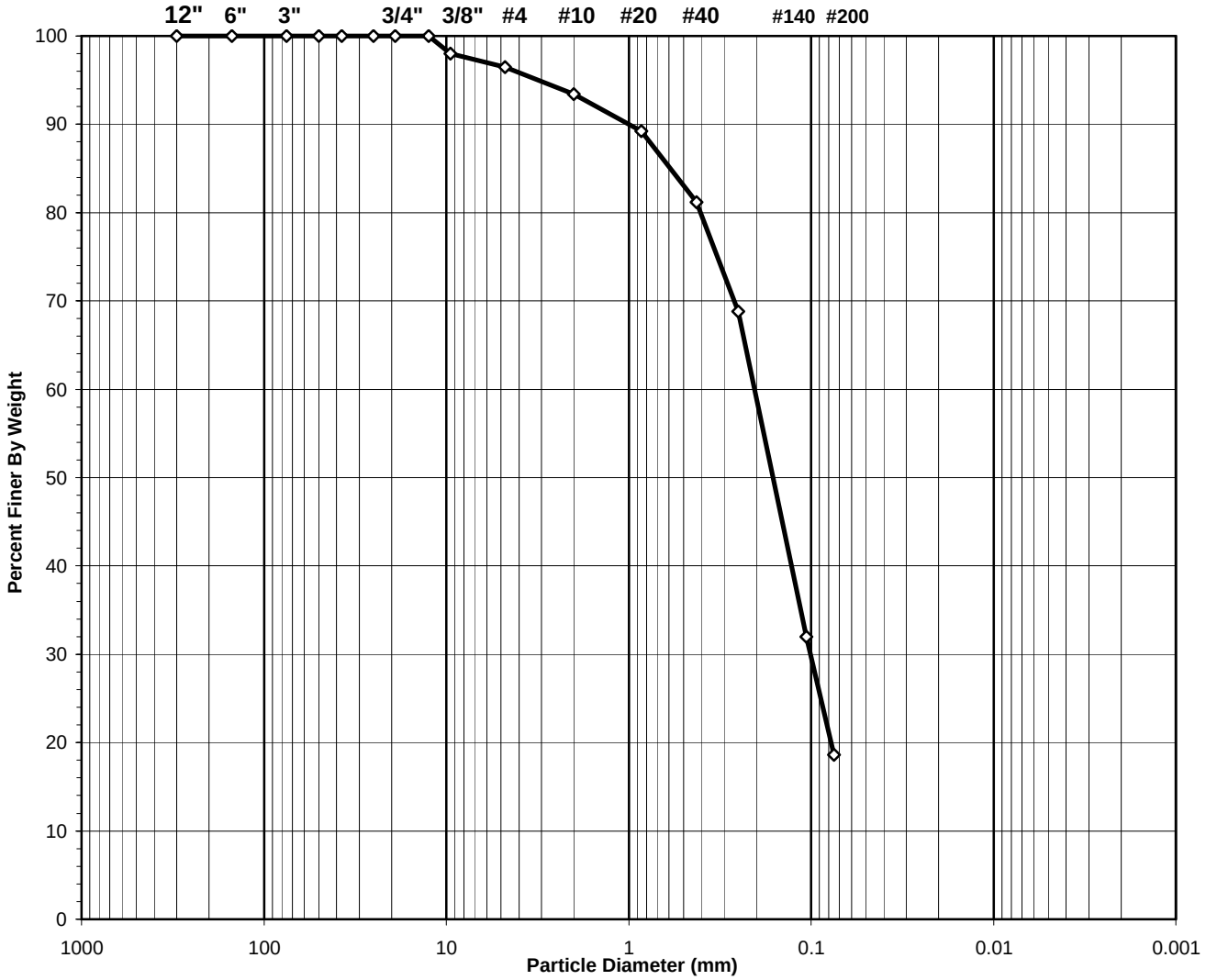
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-L-122706-REM
Lab ID	2007-255-01-50	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-L-122706-TOP
Lab ID	2007-255-01-51	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	610	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	277.13	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	240.46	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	82.23	Weight of Tare (gm)	NA
Weight of Water (gm)	36.67	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	158.23	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**23.2**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	158.23
Dry Weight - 3/4" Sample (gm)	119.4	Weight of minus #200 material (gm)	38.82
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	119.41
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	1.92	1.21	1.21	98.79	**98.79**
#4	4.75	2.83	1.79	3.00	97.00	**97.00**
#10	2.00	2.45	1.55	4.55	95.45	**95.45**
#20	0.850	3.29	2.08	6.63	93.37	**93.37**
#40	0.425	9.30	5.88	12.51	87.49	**87.49**
#60	0.250	14.49	9.16	21.66	78.34	**78.34**
#140	0.106	60.83	38.44	60.11	39.89	**39.89**
#200	0.075	24.30	15.36	75.47	24.53	**24.53**
Pan	-	38.82	24.53	100.00	-	**-**

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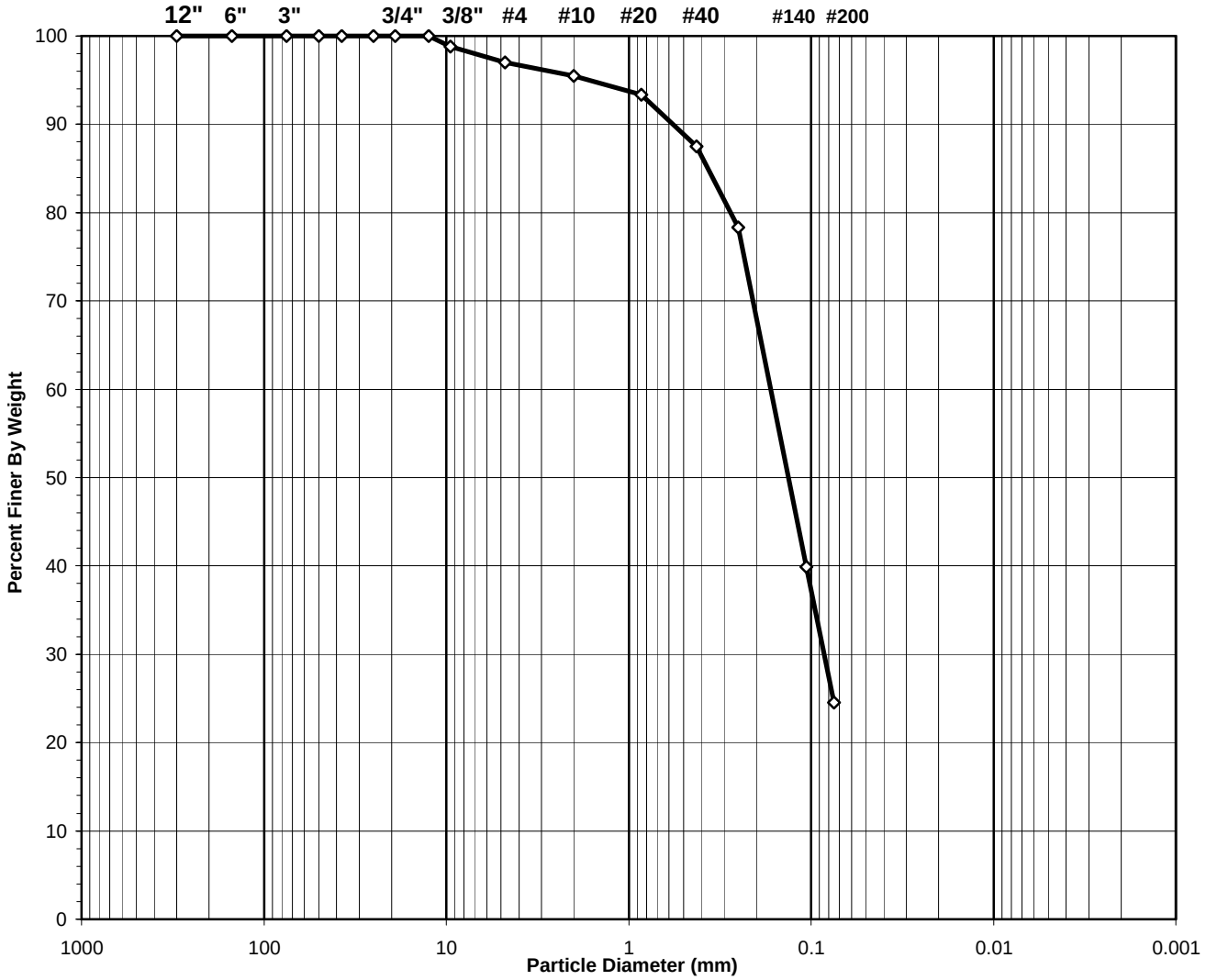
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-L-122706-TOP
Lab ID	2007-255-01-51	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-M-122706-0-2
Lab ID	2007-255-01-52	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	554	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	228.94	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	211.89	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	81.38	Weight of Tare (gm)	NA
Weight of Water (gm)	17.05	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	130.51	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**13.1**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	130.51
Dry Weight - 3/4" Sample (gm)	117.2	Weight of minus #200 material (gm)	13.33
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	117.18
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	3.78	2.90	2.90	97.10	**97.10**
3/8"	9.50	0.77	0.59	3.49	96.51	**96.51**
#4	4.75	4.89	3.75	7.23	92.77	**92.77**
#10	2.00	6.08	4.66	11.89	88.11	**88.11**
#20	0.850	7.29	5.59	17.48	82.52	**82.52**
#40	0.425	15.18	11.63	29.11	70.89	**70.89**
#60	0.250	17.41	13.34	42.45	57.55	**57.55**
#140	0.106	49.09	37.61	80.06	19.94	**19.94**
#200	0.075	12.69	9.72	89.79	10.21	**10.21**
Pan	-	13.33	10.21	100.00	-	**-**

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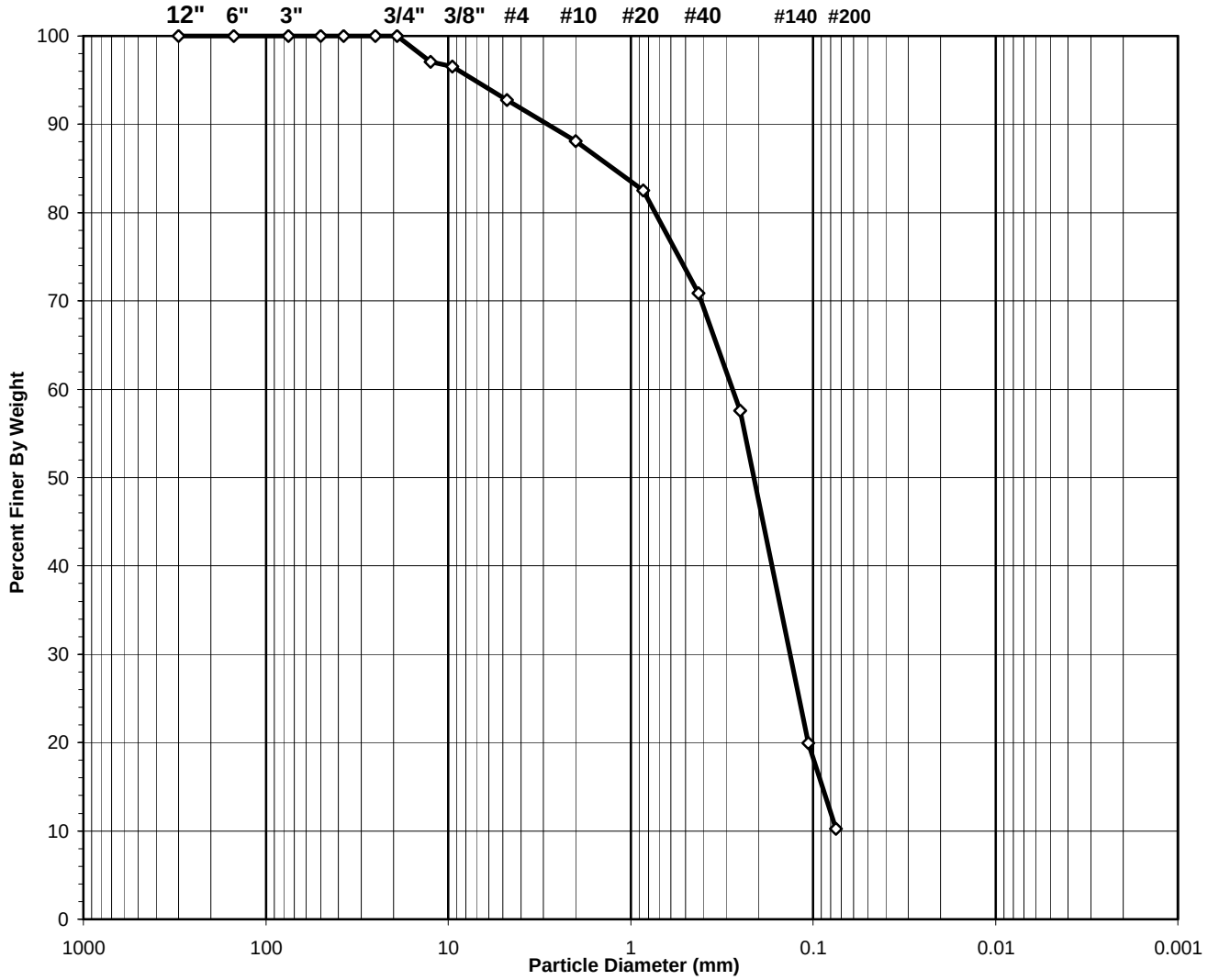
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-M-122706-0-2
Lab ID	2007-255-01-52	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sp-sm, ASSUMED***

USCS Classification ***POORLY GRADED SAND WITH SILT***

UNABLE TO RUN HYDROMETER

Tested By PC Date 7/6/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-M-122706-2-4
Lab ID	2007-255-01-53	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1720	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	201.48	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	199.28	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	81.60	Weight of Tare (gm)	NA
Weight of Water (gm)	2.20	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	117.68	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**1.9**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	117.68
Dry Weight - 3/4" Sample (gm)	107.1	Weight of minus #200 material (gm)	10.58
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	107.10
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	2.74	2.33	2.33	97.67	**97.67**
3/8"	9.50	4.83	4.10	6.43	93.57	**93.57**
#4	4.75	13.46	11.44	17.87	82.13	**82.13**
#10	2.00	13.97	11.87	29.74	70.26	**70.26**
#20	0.850	12.07	10.26	40.00	60.00	**60.00**
#40	0.425	10.56	8.97	48.97	51.03	**51.03**
#60	0.250	11.45	9.73	58.70	41.30	**41.30**
#140	0.106	29.69	25.23	83.93	16.07	**16.07**
#200	0.075	8.33	7.08	91.01	8.99	**8.99**
Pan	-	10.58	8.99	100.00	-	**-**

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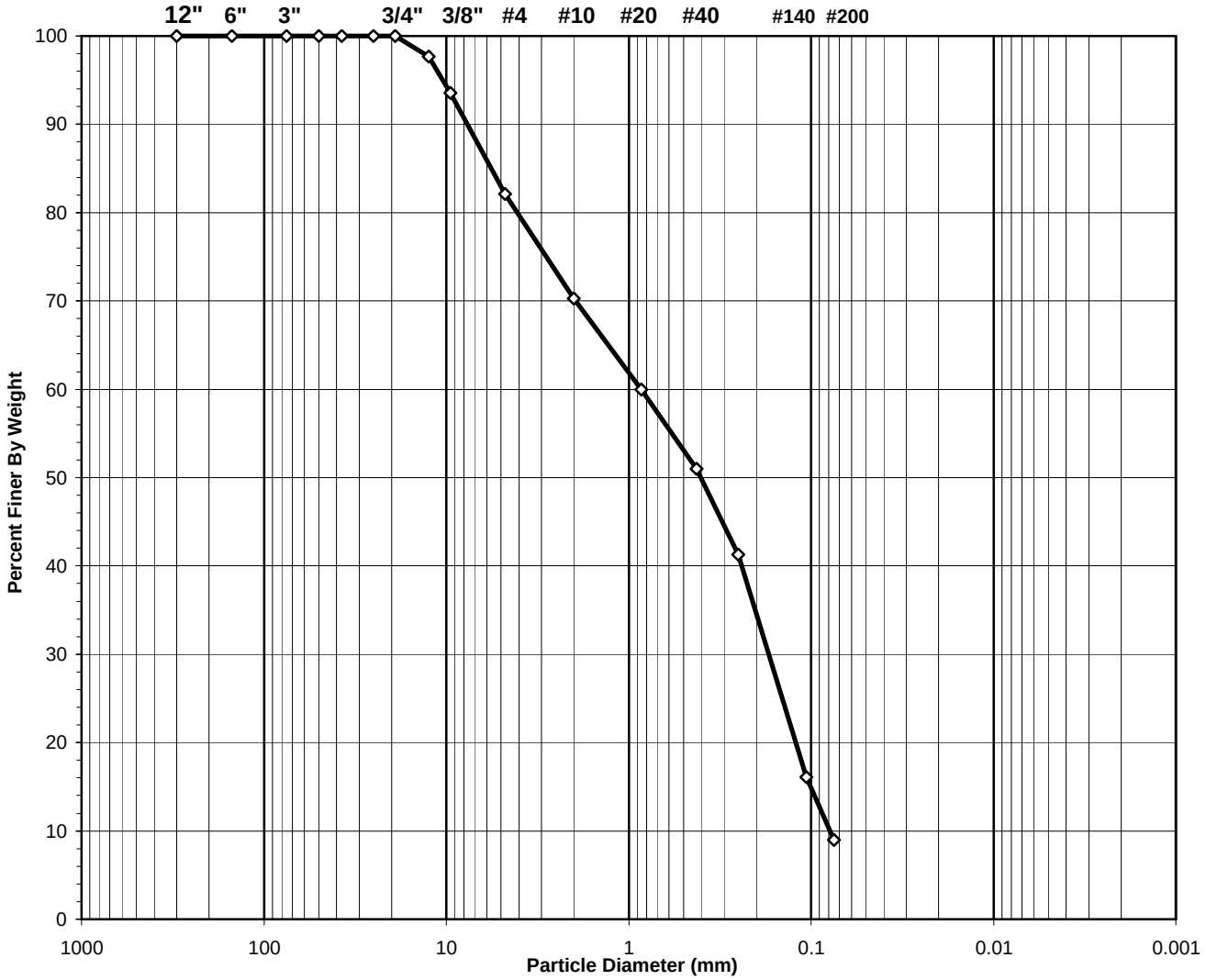
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-M-122706-2-4
Lab ID	2007-255-01-53	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sp-sm, ASSUMED*** **D60 = 0.8** **CC = 0.4**

USCS Classification ***POORLY GRADED SAND WITH SILT AND GRAVEL*** **D30 = 0.2** **CU = 10.8**

UNABLE TO RUN HYDROMETER **D10 = 0.1**

Tested By BB Date 7/6/2007 Checked By Date

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WASH SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-M-122706-4-6
Lab ID	2007-255-01-54	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1698	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	237.28	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	211.72	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	81.19	Weight of Tare (gm)	NA
Weight of Water (gm)	25.56	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	130.53	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**19.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	130.53
Dry Weight - 3/4" Sample (gm)	111.1	Weight of minus #200 material (gm)	19.42
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	111.11
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	4.23	3.24	3.24	96.76	**96.76**
#10	2.00	11.33	8.68	11.92	88.08	**88.08**
#20	0.850	11.30	8.66	20.58	79.42	**79.42**
#40	0.425	8.55	6.55	27.13	72.87	**72.87**
#60	0.250	13.59	10.41	37.54	62.46	**62.46**
#140	0.106	46.53	35.65	73.19	26.81	**26.81**
#200	0.075	15.58	11.94	85.12	14.88	**14.88**
Pan	-	19.42	14.88	100.00	-	**-**

Tested By BB Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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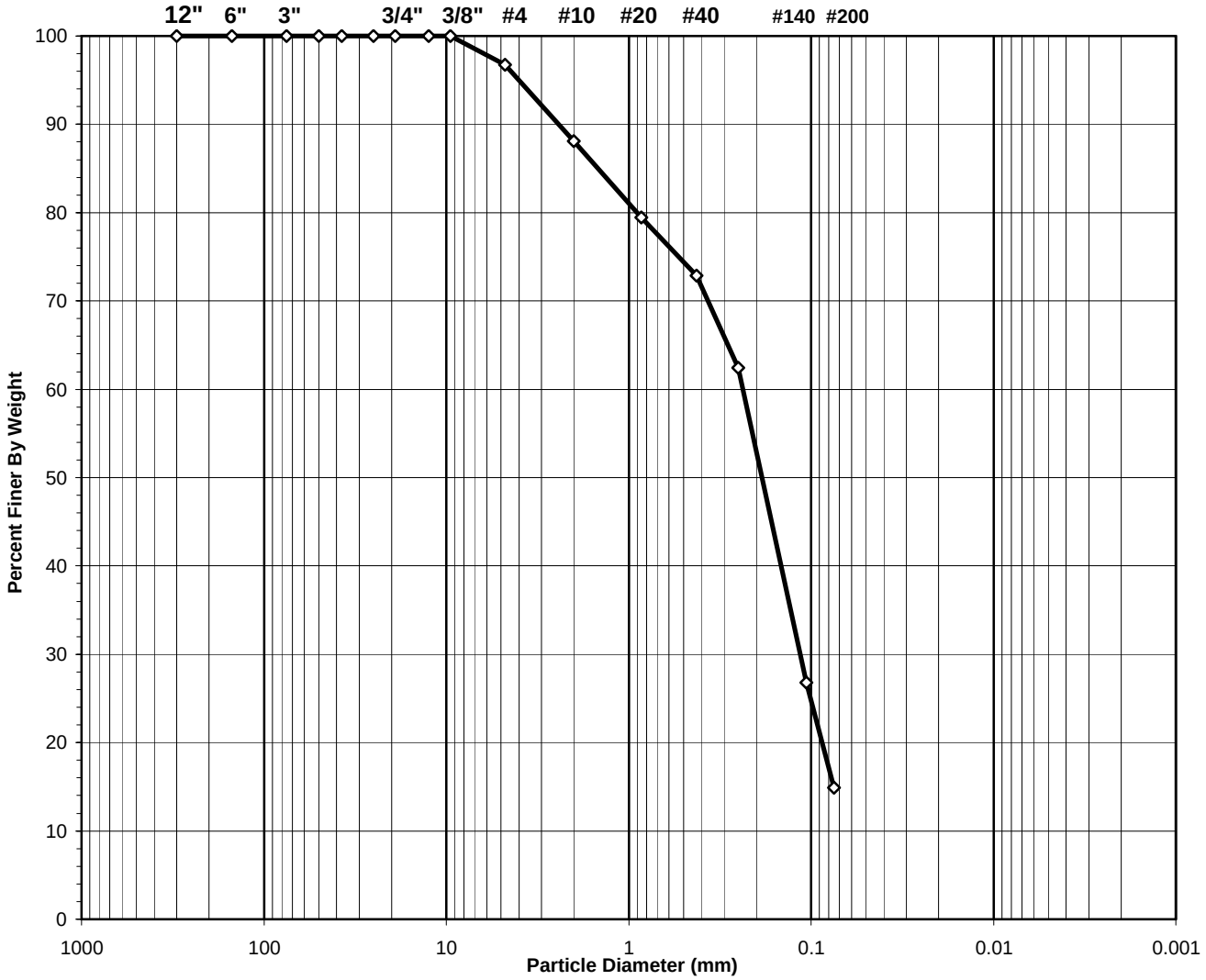
SIEVE ANALYSIS

ASTM D 422-63/AASHTO T88-00 (SOP-S3)

Client	ARCADIS BBL	Boring No.	NA
Client Reference	SILVER LAKE 40152.023	Depth (ft)	NA
Project No.	2007-255-01	Sample No.	SL-M-122706-4-6
Lab ID	2007-255-01-54	Soil Color	**BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***sm, ASSUMED***

USCS Classification ***SILTY SAND***

UNABLE TO RUN HYDROMETER

Tested By BB Date 7/6/2007 Checked By Date

DCN: CT-S3C DATE 6-25-98 REVISION: 2

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