

March 5, 2001

Gary R. MacDonald, Manager of Yard Operations
LP 5H-C

KINGSTON FOSSIL PLANT - ANNUAL INSPECTION OF WASTE DISPOSAL AREAS

Attached is the annual inspection report from Civil Engineering on Kingston's disposal areas. The report includes a list of recommendations and we concur with those.

The plant Program Administrator (Environmental) will be provided a copy of this report in order to prepare a final report for certification by the Plant Manager and submission to the state as appropriate.

If you have questions or need additional information, please contact me at (423) 751-6846 or John Albright at (423) 751-3981.



Victor W. Davis
Manager, Yard Systems
LP2T-C

Attachments

JGA jga:jga

cc(attachments):

J. G. Adair, LP 2L-C
Linda F. Campbell, KFP 1A-KST
Earl L. Deskins, KFP 1A-KST
J. D. Preslar, LP 3K-C
Scott Sims, KFP 1A-KST
EDMS, EDMSVC

December 12, 2000

Victor W. Davis, LP 2T-C

KINGSTON FOSSIL PLANT (KIF)—ANNUAL ASH POND DIKE
STABILITY INSPECTION

Attached is a report from Sherman G. Garrett concerning the inspection of
Kingston Fossil Plant's ash disposal areas.

This report includes recommendations for corrective work. I concur with these
recommendations.

Please make any additional copies as required and return originals for filing with
other inspection reports.

Ron

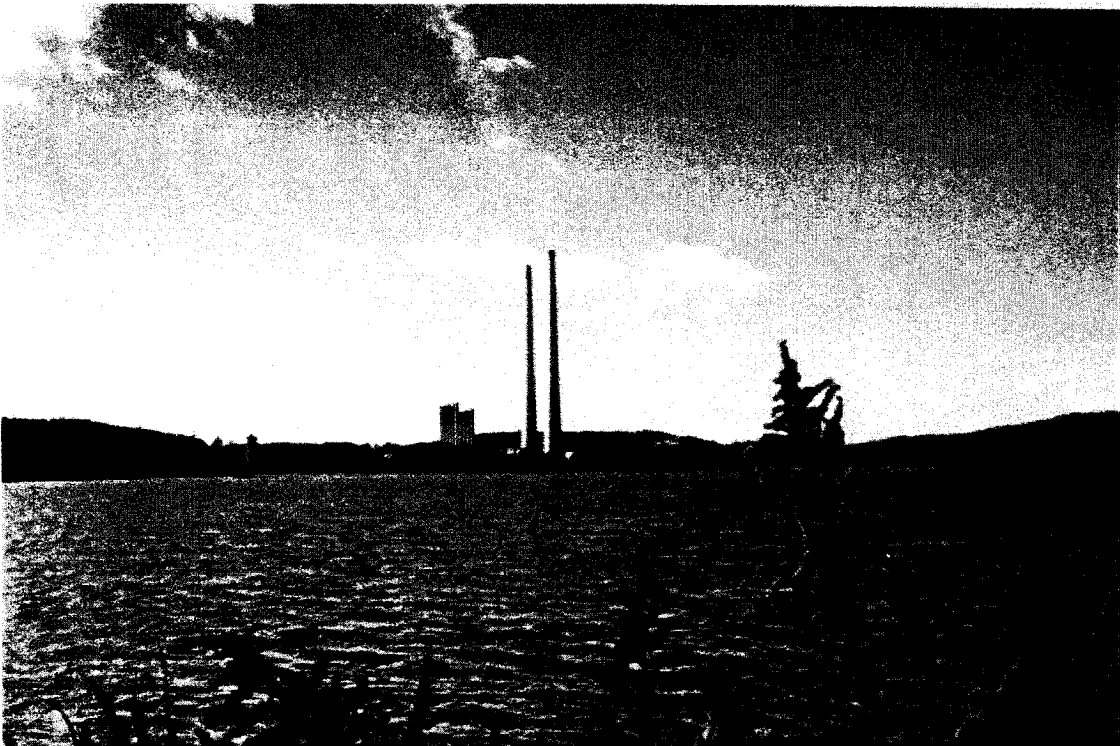
9/28
Ronald E. Purkey
Manager, Civil Engineering
LP 2G-C

Attachment

REP:SGG

TENNESSEE VALLEY AUTHORITY
KINGSTON FOSSIL PLANT

ANNUAL ASH POND DIKE
STABILITY INSPECTION



Prepared by: Sherman G. Garrett
Date: December 12, 2000

**KINGSTON FOSSIL PLANT
NPDES PERMIT NO. TN0005452
ANNUAL ASH POND DIKE STABILITY INSPECTION
2001**

The waste disposal areas at Kingston Fossil Plant were inspected for dike structural stability on November 21, 2000. The inspection was performed by Sherman G. Garrett of TVA Fossil Engineering Services, Project & Discipline Engineering, and John G. Albright of TVA Fossil Engineering Services, Yard Systems. They were accompanied by James T. Settles of TVA Kingston Fossil Plant. The previous annual inspection had been performed on March 1, 2000.

The results of the annual stability inspection are listed below according to location within the ash disposal area.

Active Ash Disposal Area

Plant operations continues to manage this area the same as during the last inspection. Bottom ash is sluiced into a channel southwest of the disposal area where it settles out and is removed by drag line, approximately once a week, to be used for dike construction. Fly ash is sluiced into a channel northwest of the bottom ash channel. Both channels flow northeast into the active ash pond where the fly ash settles out and accumulates. The fly ash is periodically dredged into one of two cells located in the western half of the disposal area. The dikes of these cells are raised using fly ash and bottom ash to provide more capacity for dredged fly ash as needed. The sluice water flows into the stilling pool through one of two plant constructed spillways. From the stilling pool the water discharges into the plant intake channel via six standard spillways. At the time of the inspection, five of the six spillways were operating. The western spillway was raised above the level of the other five and was not discharging.

All exterior dike slopes around this area were in sound condition with excellent vegetative cover. On the eastern side of the dikes extending to the area of Swan Pond Road, the vegetation along both the upper and lower portions of the slope had been mown; but the central portion had some small trees present and needed mowing. No sloughs or seepages were detected. The divider dike between the active pond and the stilling pool had some areas of rill erosion and gullies. Some clay material had been added on the dike, but there are some areas where no vegetation is present, and erosion continues to persist. The dike roads were in good condition with a good ash or crushed stone surface.

The engineered wetland along the southeast dike receives seepage that collects in the anoxic limestone drain at the toe of the slope. The wetland appeared saturated and there were indications of redwater in the ditch that runs just south of the wetland.

Dredge Cells

Dredge cells No. 2 and 3 have been combined by no longer raising the dike separating the two cells. The top of dike elevation for Cell 2 and Cell 3 for Lift C1 is elevation 800. When construction of Lift C2 is complete, the new top of dike elevation for Cell 2 and Cell 3 will be

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elevation 805. The dike for Cell No. 1 is currently at elevation 805. This cell was being dredged into at the time of inspection.

The dike slopes around this area were all stable with some rill erosion in places. Most areas had recently been seeded and mulched. Most of the Stage C1 lift has a vegetative cover; however, there are some areas where minor erosion is occurring and reseeding will need to be done. At completion of Lift C2, plant operations will seed and mulch Lift C2 to establish vegetation. Dike slopes with sparse vegetation should continue to be reseeded and mulched until a good vegetative cover is apparent. Plant operations continue to do a commendable job of mowing the slopes.

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I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. See 18 U.S.C. Section 1001 and 33 U.S.C. Section 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

SIGNATURE OF PRINCIPAL/EXECUTIVE OFFICER OR AGENT

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CURRENT RECOMMENDATIONS / PHOTOGRAPHS

Chemical Treatment Ponds

The chemical treatment ponds are located southwest of the active ash pond. Both ponds were excavated and have no exterior slopes. The internal dike slopes are covered with riprap. These slopes were in good condition.

Coal Yard Drainage Basin

The coal yard drainage basin is located at the southwest corner of the coal pile. This basin was excavated below grade; therefore, there are no exterior dikes. All discharge from this basin is pumped into the fly ash discharge ditch which flows to the active ash disposal area. At the time of inspection, water in the pond was at a low level. The slopes appeared to be in satisfactory condition. (photo #1) Currently, there is a project underway to excavate more sediment from this pond.

Actions on Recommendations of Last Inspection

- Dike slopes with sparse vegetation should continue to be reseeded and mulched until a good vegetative cover is present.
- Rutted areas at the southeastern end of the ditch adjacent to Cell 1 have been repaired by placing riprap in eroded areas.
- Additional riprap should be placed along slopes of stilling pool and divider dike
- Trees have been removed from northeast corner of ash disposal pond.
- Fill should be added and riprap placed to prevent further erosion at a few outlet drains on the eastern slope of the stage A dike.
- The ditch along Swan Pond Road has been improved and maintained, preventing erosion from occurring. (photo #2)
- The area between the perimeter ditch and dike "C" has been graded to eliminate low spots and insure drainage.

Current Inspection

The dikes surrounding the stilling pool and ash disposal area, including the divider dike, are in good condition. No animal activity was observed in this area. The riprap placed on the inside slopes of the stilling pool is effective in preventing erosion of the slopes. However, there are additional areas that would benefit from riprap on the slopes. Inspection of the exterior slope of Dike "C" (the eastern side of the ash disposal areas) did not reveal any seeps or sloughs. There

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are several small trees along this dike that should be removed before their size presents any problems.

On the northeastern slopes of Dike "C," there are areas of small trees and high vegetation that should be cleared.

On the eastern slope of the stage A dike, there are areas where the outlet drains are starting to erode. Along the stage B lift, there were signs of erosion (photo #3).

Recommendations

- Dike slopes with sparse vegetation along the Stage B lift should continue to be reseeded and mulched until a good vegetative cover is present.
- Place additional riprap along slopes of stilling pool and divider dike. Estimated to be approximately 2,000 cy of riprap with minimum thickness of 6" and 50% of the stone with a nominal diameter of 4" or greater.
- Remove trees and other growth along the eastern slopes of Dike C
- Fill should be added and riprap placed to prevent further erosion at a few outlet drains on the eastern slope of the stage A dike.
- Plant maintenance should continue to periodically mow grass and remove small trees and brush from all dike slopes, including the middle portion not mowed last time..
- Plant personnel should monitor the limestone drain area and exterior dike slopes for seepages, soft wet spots, animal burrowing, sloughing, etc., and notify Fossil Engineering Services of any changes.

KINGSTON FOSSIL PLANT

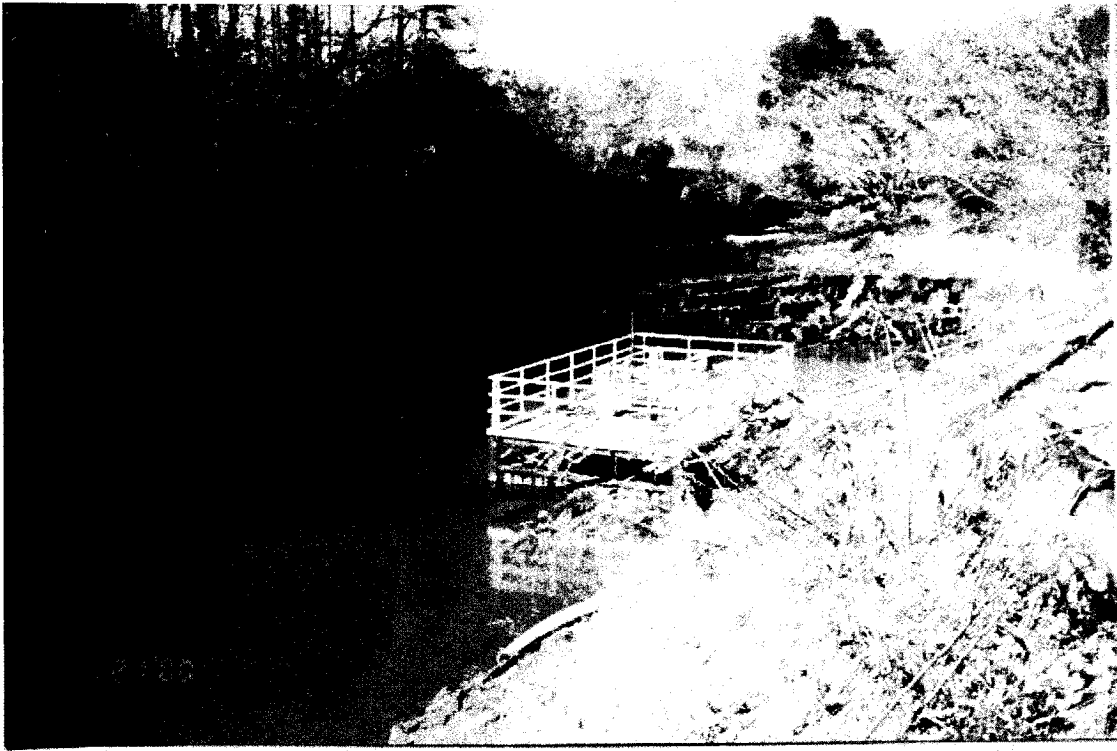


Photo 1—Looking northeast: Coal yard drainage basin



Photo 2—Looking southwest: Slopes and drainage ditch along Swan Pond Road

KINGSTON FOSSIL PLANT

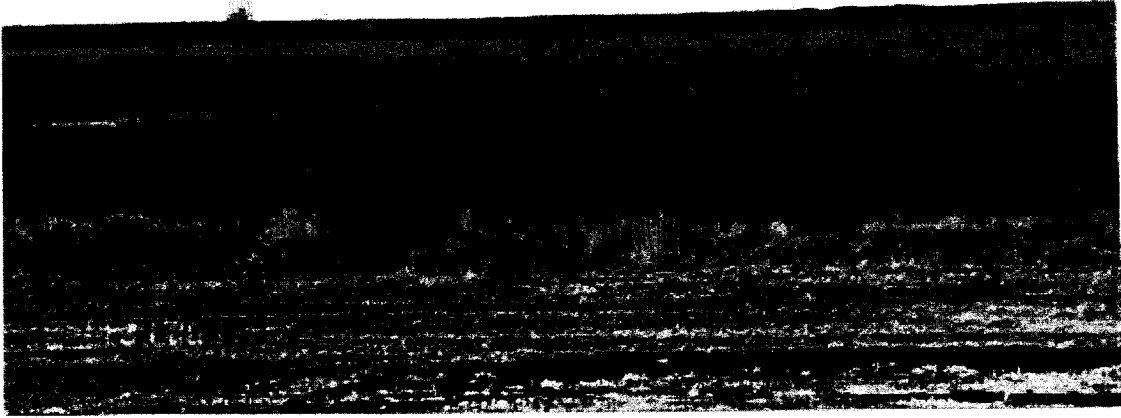


Photo 3—Looking southwest: Erosion on slopes of stage B lift

