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April 26, 1996

R. M. Cole, Kingston Fossil Plant

KINGSTON FOSSIL PLANT (KIF) - ANNUAL INSPECTION OF WASTE DISPOSAL AREAS

Attached is a report from C. M. Minghini to K. W. Burnett dated April 24, 1996, concerning the inspection of KIF's ash disposal areas.

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

Ralph G. Johnson
Manager, Fossil Engineering
LP 2G-C

KWB:CMM:SRH
Attachment
cc (Attachment):
J. S. Baugh, LP 5H-C
RIMS, CST 13B-C

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April 24, 1996

R. M. Cole, Kingston Fossil Plant

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R. G. Johnson
Manager, Fossil Engineering
LP 2G-C

KWB:CMM

cc(attachment): J.S. Baugh, LP 5H-C
RIMS, CST 13B-C (w/o drawings)

April 24, 1996

K. W. Burnett, LP 2G-C

KINGSTON FOSSIL PLANT- ANNUAL INSPECTION OF WASTE DISPOSAL AREAS

INTRODUCTION

An annual inspection of the ash pond dikes and toe areas at KIF to ensure structural stability was conducted April 2, 1996. The inspection was conducted by Cherie Minghini of Fossil Engineering and Jim Huber of Fossil Fuels. The previous stability inspection was conducted on April 13, 1995.

ACTIVE ASH DISPOSAL AREA

There has been no change in operation of the active ash pond since last inspection. Bottom ash continues to be sluiced into a channel at the southwest end of the pond. Bottom ash falls out and is removed by dragline. Fly ash is sluiced into a trench parallel and to the west of the bottom ash channel. The bottom ash and fly ash waters flow through the ash pond and through two field spillway/skimmers to the stilling pool. The plant constructed spillways/skimmers were discharging at the time of inspection and appear to be in good condition. Discharge to the intake channel is through five of six standard spillways and skimmers. At the time of the inspection, five outlet pipes were discharging with no visible loss of ash. The spillway on the west end has been raised and is not discharging. The riprap at the spillway outlets appeared to be in good condition with no signs of erosion.

The dikes appear to be stable and did not exhibit any notable changes in the exterior dikes since the last inspection. A good vegetative cover was present on all exterior slopes. There is a good crushed stone surface on the dike roads. There are several areas of standing water along Dike "C" where the ditch is not draining. There is a 150' long area of rutting and standing water on the east side of the active ash pond. There is an erosion gully caused by discharge from a dike storm drain about 150 feet north of the stilling pool. The concrete around the monitoring wells 5B and 5C along Dike "C" is cracked up and in poor condition. The inside of Dike "C" has a few areas of minor erosion on the east side of the stilling dike caused by wave erosion. The ditch on the south dike is not draining in areas. This is partially due to one of the drains in the toe ditch that is clogged and not draining. There is a 25' long minor surface sluff on the south dike of the active ash pond. This sluff does not appear to be a threat to the stability of the dike. The divider dike at the stilling pool appears to be stable; however, there is some erosion due to wave action evident on the north side of the stilling pond. Some of this area has been filled and covered with earth; however, erosion still persists in this area. When earth is placed, the area should be seeded and mulched so that a good vegetative cover is established to prevent additional erosion. There is some minor accumulation of floating ash in the southeast corner of the stilling pool.

Seepage persists along the exterior slope of the southeast dike. The seepage is collected in an interceptor ditch and routed to an engineered wetland. The water is then pumped to the ash pond. Cattails and other aquatic growth continue to increase in the wetland and removal is not warranted at this time.

The fly ash continues to be sluiced into a rubber-lined ditch. The lining has deteriorated. Plant personnel have cleaned out the ditch and placed earth fill and riprap on the slopes for approximately 150 feet of the ash sluice ditch.

DREDGE CELLS

Dredge Cell No. 1(southern cell) is partially full and inactive. The dike elevation is at 795. At the time of inspection, ash from the active ash disposal area is being dredged into Dredge Cell No. 3(center cell). The dike elevation is at 795. The dikes of Cell No. 2(northern cell) are currently being raised to elevation 783 (first lift) in accordance with closure plans and design drawings. Bottom ash, which is removed from the discharge channel, is being used to construct the dikes. The raised dike along the north side of the cell is located approximately 200 feet from Dike "C" for stability safety. The field-constructed return spillways for the dredge cells are located in the southeastern end of each cell.

The dikes appear to be stable. There is a good crushed stone surface on the dike roads. A good vegetative cover is present on the dike slopes; however, there are a few bare areas on the slopes of the north dike. Any bare areas should be seeded and mulched to establish a good vegetative cover and prevent any additional erosion. Runoff water from the top of Dredge Cell No. 1 dike is forming gullies down to the eastern end of the north dike drainage ditch. Riprap has been placed in the eroded area, but additional riprap is necessary to prevent additional erosion. The drainage ditch along the north dike is still eroded, primarily on the eastern end. There is an area of ponded water on the western end of the north dike. The dike adjacent to Swan Pond Road has a few areas of ponded water, primarily at the northernmost end of the dike. The 50' sluff identified in previous ash pond inspections located on the west end of Dike "C" about 150 feet from Swan Pond Road was still present, but does not appear to be worsening and does not appear to be a stability problem.

CHEMICAL TREATMENT PONDS

The chemical treatment ponds (iron and copper) are located between North Access Road and the fly ash discharge trench. The chemical ponds are excavated below grade and there are no exterior dikes. Both chemical pond internal dikes are covered with riprap. They appear to be in good condition.

The copper and iron pond water is discharged periodically by pumping to the bottom ash discharge channel which flows into the active ash disposal area. The iron pond and copper pond will be pumped out at a later date.

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 pumped very low.

The ditch to the drainage basin has been reworked to allow all runoff to drain to the pond.

KINGSTON FOSSIL PLANT
NPDES PERMIT NO. TN0005452
ANNUAL ASH POND DIKE INSPECTION/QUARTERLY RED WATER REPORT
1996

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

ACTIONS OF RECOMMENDATIONS OF LAST INSPECTION

Plant personnel have continued to repair ruts and monitor the exterior dike slopes for seepage, soft wet spots, animal burrowing, etc.

Riprap has been placed in areas where wave erosion has undercut the inside of the ash pond dike and stilling pond dike; however, plant personnel should continue to monitor for wave erosion and add riprap if necessary.

Plant personnel have not repaired the concrete around the monitoring wells.

Plant personnel have placed some riprap in the erosion gullies of the north dike; however, more riprap should be placed in the gully.

Plant personnel have not replaced the rubber liner; only the first 150' of the fly ash discharge ditch has been replaced with rip rap.

Plant personnel have continued to periodically skim floating ash out of the stilling pond and should continue to do so.

Plant personnel have reworked the ditch to allow all ponded water in the coal yard runoff area to drain to the basin.

Plant personnel have monitored riprap at the outlet end of the existing dike storm drains; however, erosion is present at the outlet end of one of the drains and riprap should be placed in the gully.

RECOMMENDATIONS

Plant maintenance should continue to periodically mow grass and remove small trees and brush from all dike slopes.

Plant personnel should repair any ruts and continue to monitor the exterior dike slopes for seepage, soft wet spots, animal burrowing, etc. and report any change to Fossil Engineering.

Plant personnel should monitor the sluffs identified on Dike "C" and the south dike for any movement and report any changes to Fossil Engineering.

Riprap should be placed in areas where wave erosion has undercut the inside of the stilling pool dike.

The concrete around the monitoring wells should be replaced.

Plant personnel should clean out the pipe on the south dike to allow drainage from the toe

ditch.

Plant personnel should repair the erosion on the divider dike by placing bottom ash or earthfill in eroded areas. If earthfill is placed in eroded areas, personnel should seed and mulch to establish vegetative cover.

Riprap should be placed in erosion gullies along the north dike. Earthfill should be placed and compacted along the north dike drainage ditch in eroded areas. These areas should be seeded and mulched to help prevent additional erosion.

Plant personnel should replace the rubber liner in the fly ash sluice ditch or continue to clean out the ditch and fill with earth liner and riprap as required.

Plant personnel should periodically skim floating ash out of the stilling pond.

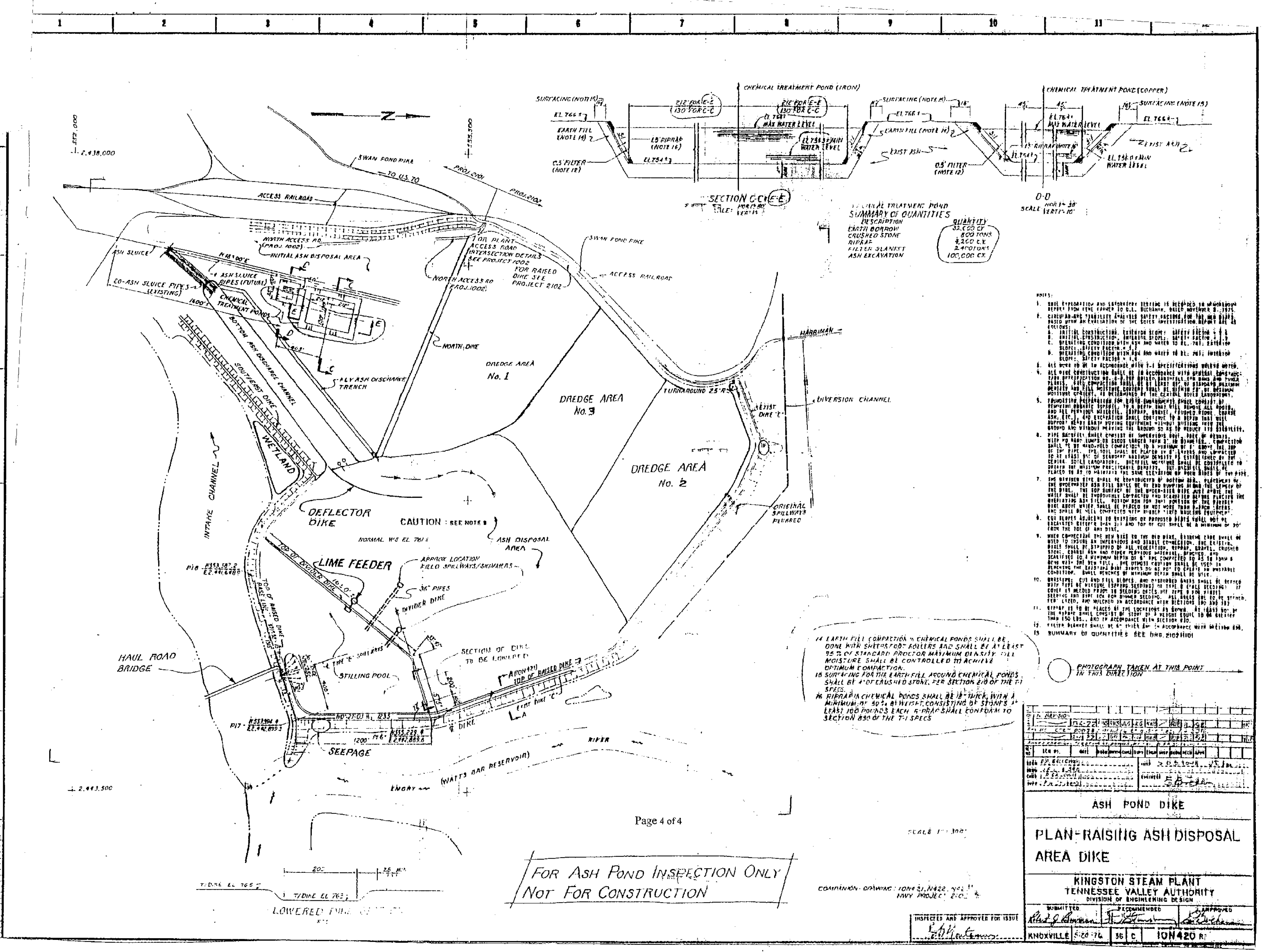
Plant personnel should continue to add and monitor riprap at the outlet end of the existing dike storm drains. Riprap should be added to the outlet end of the drain located approximately 150 feet north of the stilling pool.

Plant personnel should clean out and regrade the drainage ditches in areas with standing water. Establish vegetation in any disturbed areas.

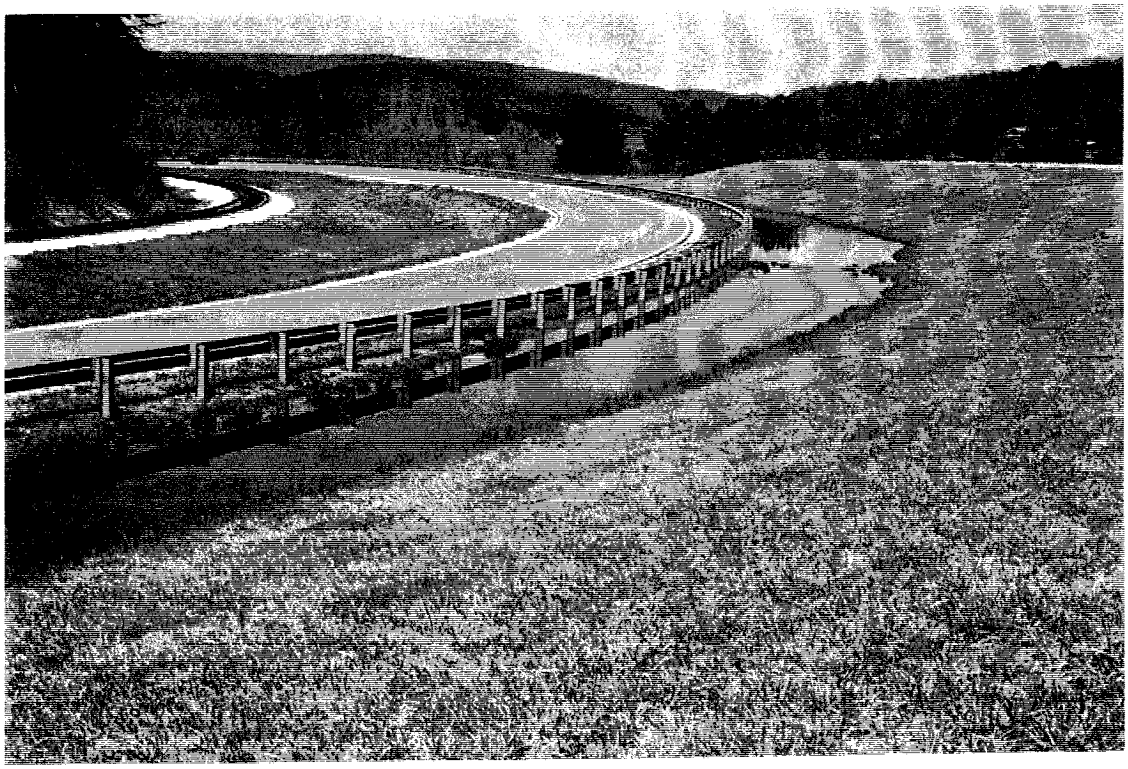
CM Minghini

C. M. Minghini
Site and Environmental Engineering

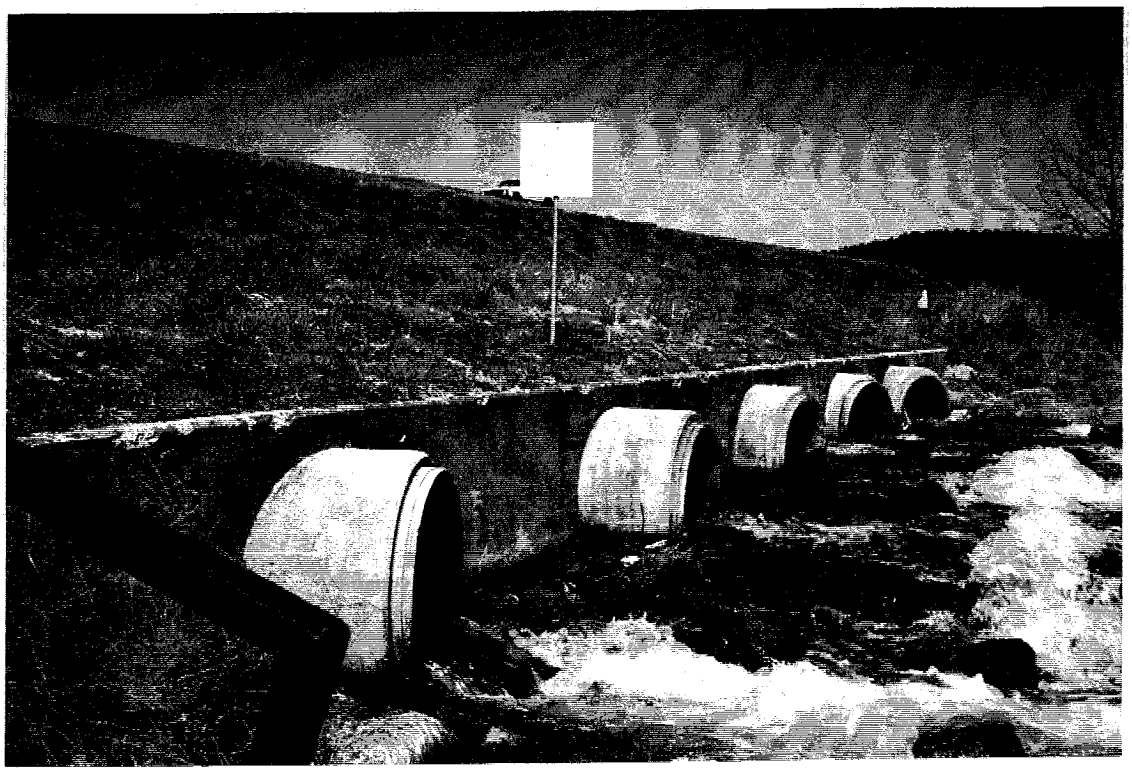
CMM:cmm
Attachment



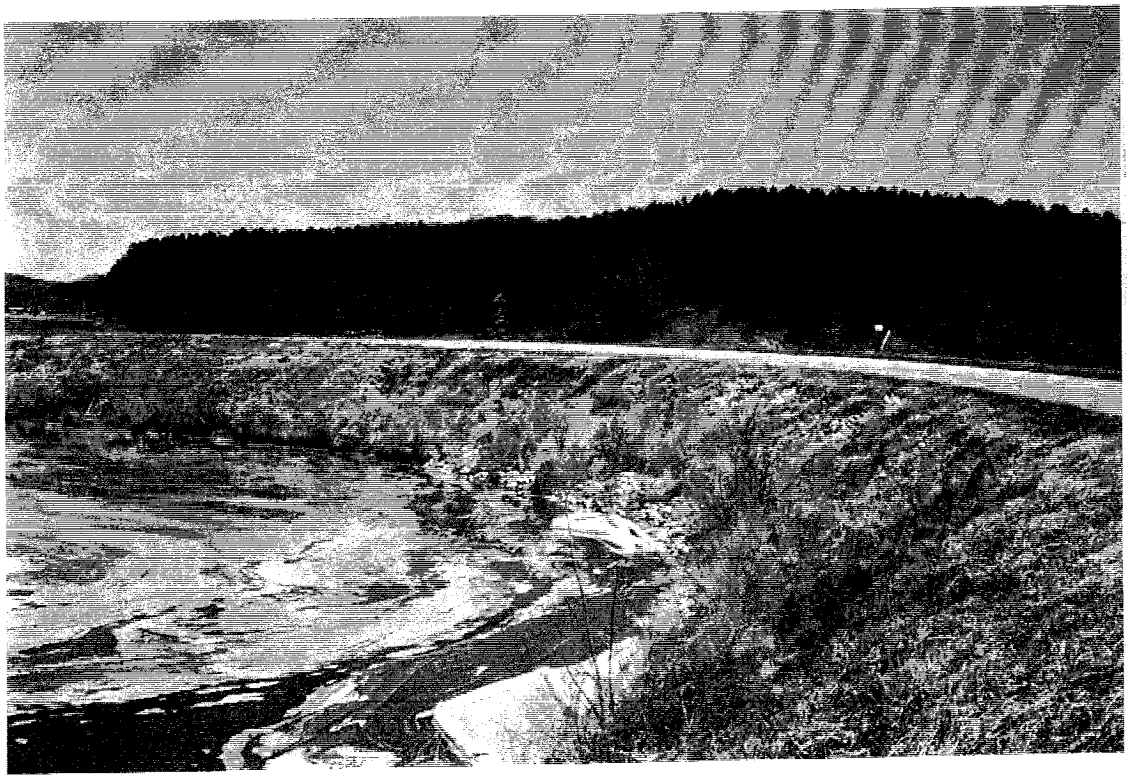
PICTURE 1- GULLIES AND ERODED AREAS ALONG NORTH DIKE



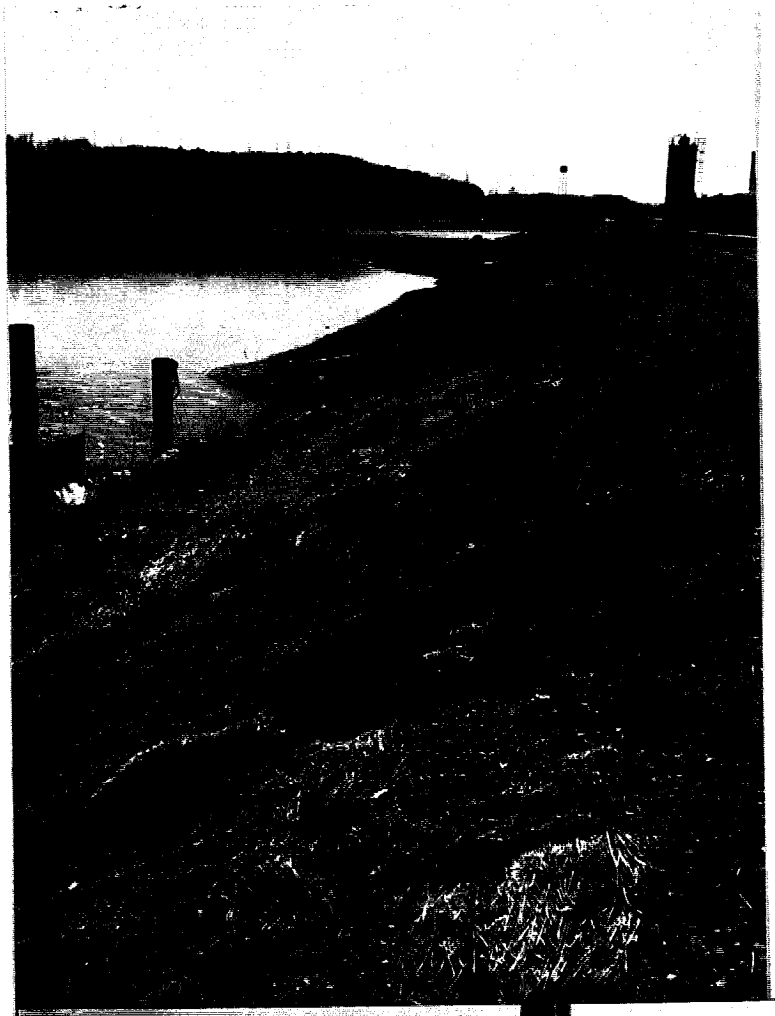
PICTURE 2- STANDING WATER- DIKE ADJACENT TO SWAN POND PIKE



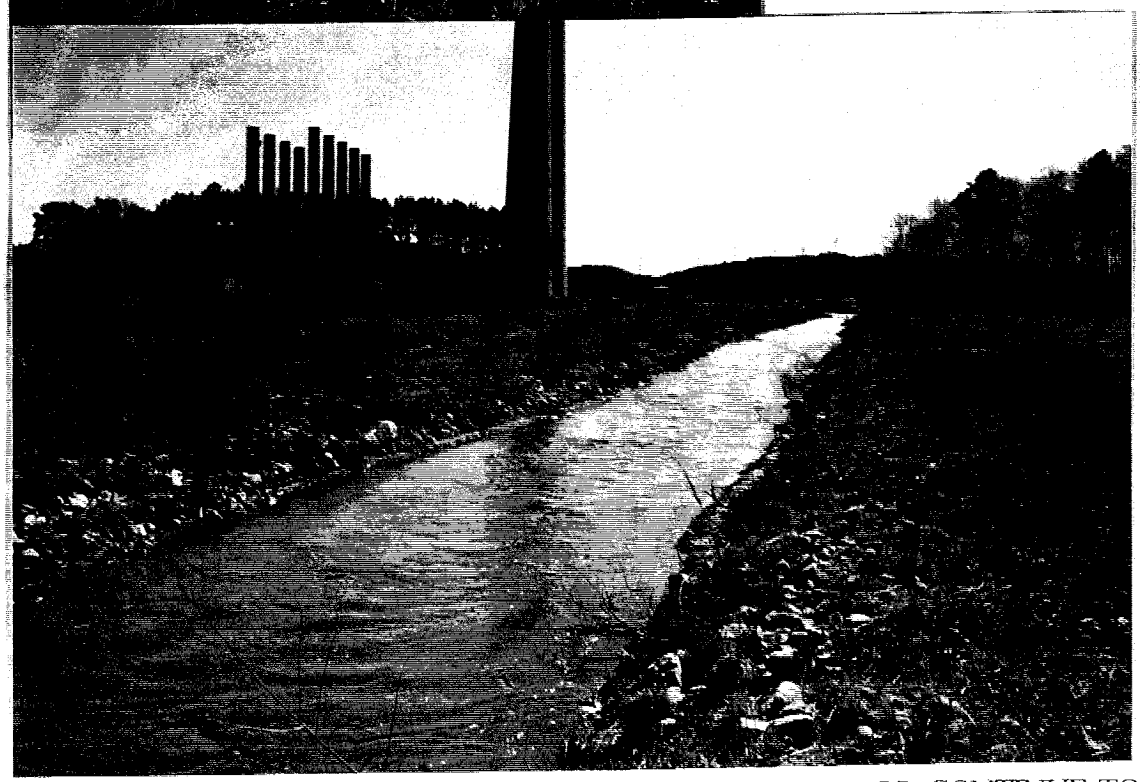
PICTURE 3- SPILLWAY DISCHARGE OUTLETS



PICTURE 4- EROSION IN SOUTHEAST CORNER OF STILLING POOL. NOTE THAT SOME RIPRAP HAS BEEN PLACED.



PICTURE 5- EROSION ON DIVIDER DIKE



PICTURE 6- FLY ASH DISCHARGE TRENCH- RIPRAP SHALL CONTINUE TO BE REPLACED WHEN NECESSARY