

TO : Frank A. Berry, Head Civil Engineer (Site Development, Highway, and
and Bridge Design), V&P C-4
FROM : E. J. Murray, Civil Engineer (Site Development, Highway, and Railroad
DESIGN)
DATE : September 22, 1961

KINGSTON STEAM PLANT - ANNUAL ASH DISPOSAL AREA INSPECTION

HRB

On September 7, 1961, Joel Parks of TVA and Dr. L. Glover and I of TVA
inspected the ash disposal areas of Kingston Steam Plant. We were accompanied
on the inspection by Coy Wood, Yard Operations Supervisor.

The last annual inspection was made on September 28, 1960 (COB 31 8925 500).
An interim inspection was made on April 15, 1961 (COB 31 8925 500).

On the attached print of drawing 100430, the different areas are designated.

Changes in Dikes Since Last Inspection

There has been no significant change in dikes since last year's annual
inspection.

All dikes appear to be stable. The tops of all dikes are smooth and close
to the grade with a good crushed stone surface. A good vegetative cover
exists on the outside slope (picture 1) in most areas (see accompanying
dike shapes were free of any excessive erosion.

Change in Pond Operation Since Last Inspection

There has been no change in pond operation since last year's inspection.

Condition of Spillways, Skimmers, and Gullies

The standard spillways and skimmers in the stilling pool area appear to
be in good condition and functioning properly (picture 2). Two of the
spillway outlets into the plant intake channel (pictures 3) are discharging
equally. One spillway has been raised and is not discharging. The
and will be in good condition. The riprap outfall at the intake channel
appears to be in good condition with no sign of erosion. There was
of loss of riprap in the intake channel.

The spillway through the divider dike to the stilling pool has been abandoned
and filled with ash. The floating boom across this abandoned spillway
has been removed.

At the time of last year's annual inspection, three potential water
a short spillway/runner was used to discharge pipe skimmer
disposal area to the stilling pool. When that time, a second circular
skimmer (vertical skimmer) with a submerged metal pipe skimmer) was
through discharge into the stilling pool has been constructed by plant
personnel. These spillways/runner and the pipe skimmer
area to the stilling pool appear to be in good condition and functioning
properly (picture 4). The discharge from these spillways/skimers into
stilling pool was in good condition (pictures 5 and 6).

Frank D. Stansberry
September 24, 1951

EMERSON DAMS PLANT - ANIMAL AND VEGETAL AREA INSPECTION

The outlets of the plugged and abandoned spillways in the southern portion of dike C were submerged by Watts Bar Lake and could not be inspected for leakage.

Action on Recommendations of Last Inspection

Sparsely vegetated areas of dike slopes have been resodded and fertilized with very poor results due to the dry weather (see recommendations).

Recommendation

Fertilize and resod all areas of the dike slopes where an adequate vegetative cover has not been established, with type C, mixture E, in accordance with sections 182 and 183 of the T-1 Specifications.

J. L. Moore
for R. D. Ramsey

WAS MEMPHIS

Attachments

Encs:

Frank D. Stansberry
Frank D. Stansberry
G. L. Buchanan
G. L. Buchanan

9/24/51 - MEMPHIS

cc: G. L. Buchanan, WSC125 C-2 (Attachments)

9/24/51 - MEMPHIS

cc: R. G. Barnett, WSD234 C-2 (Attachments)

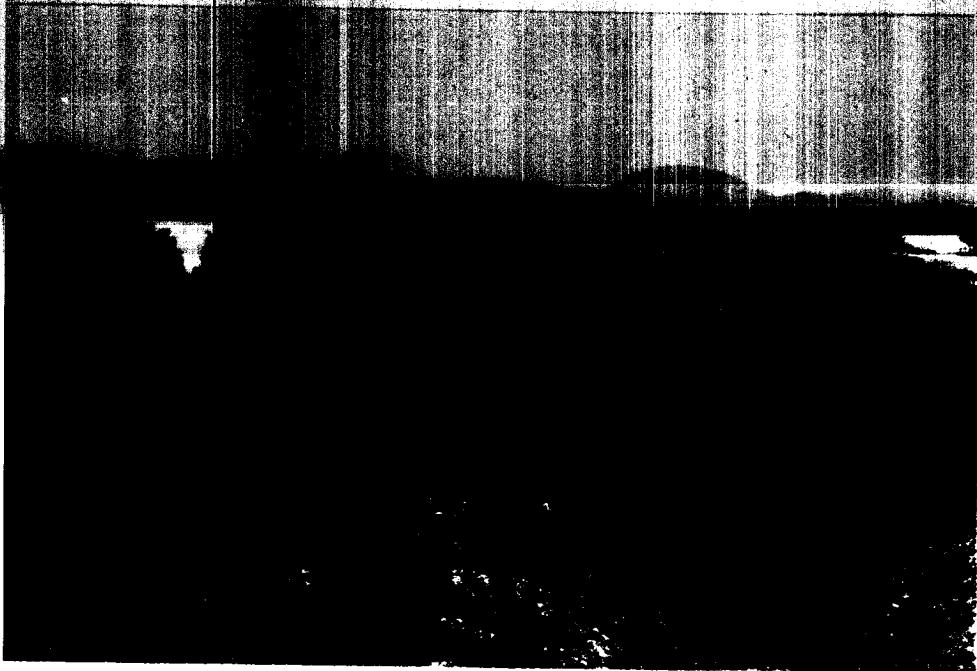
S. E. Jack, 5109 MFD-2 (Attachments)

MEMS, 120 US-2 (Attachments)

H. H. Spruce, W1145 C-2

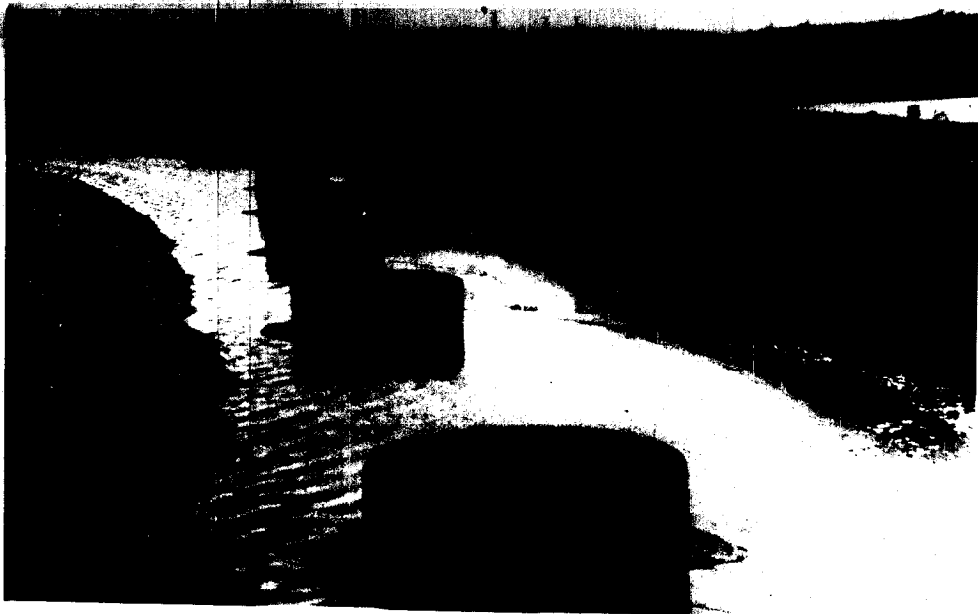
KINGSTON STEAM PLANT

1981



①

Vegetative growth
on dike slopes



②

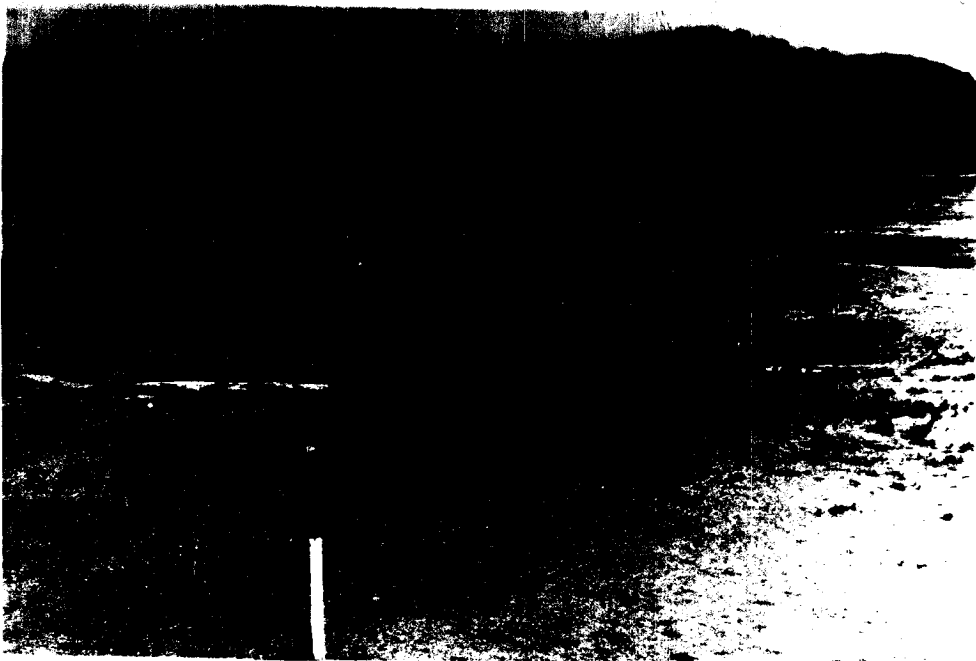
Standard spillways/
Skimmers in stilling
pond

KINGSTON STEAM PLANT
1981



③

Outlet structure-
ash pond discharge
to plant intake
channel

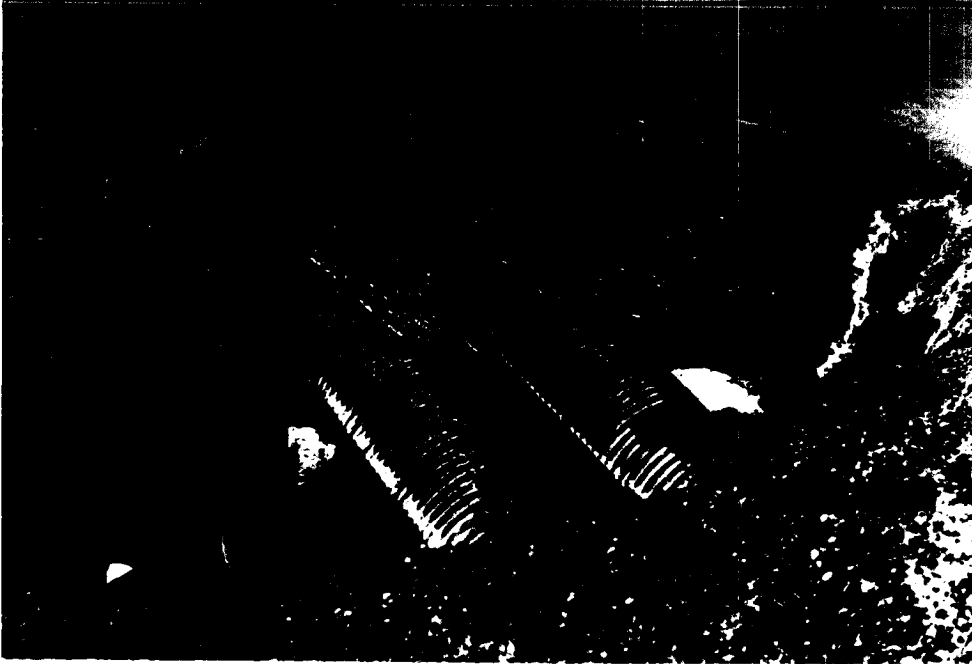


④

Plant constructed
spillways/skimmers

KINGSTON STEAM PLANT

1981



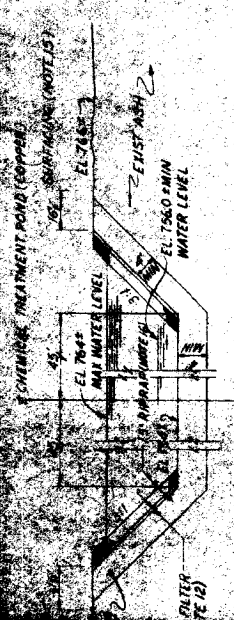
⑤

Discharge from
sheet metal
skimmer/spillway
into stilling pond



⑥

Discharge from
circular skimmer/
spillway into
stilling pond



D-0
 NORTH 30°
 SCALE: VERT. 1" = 10'

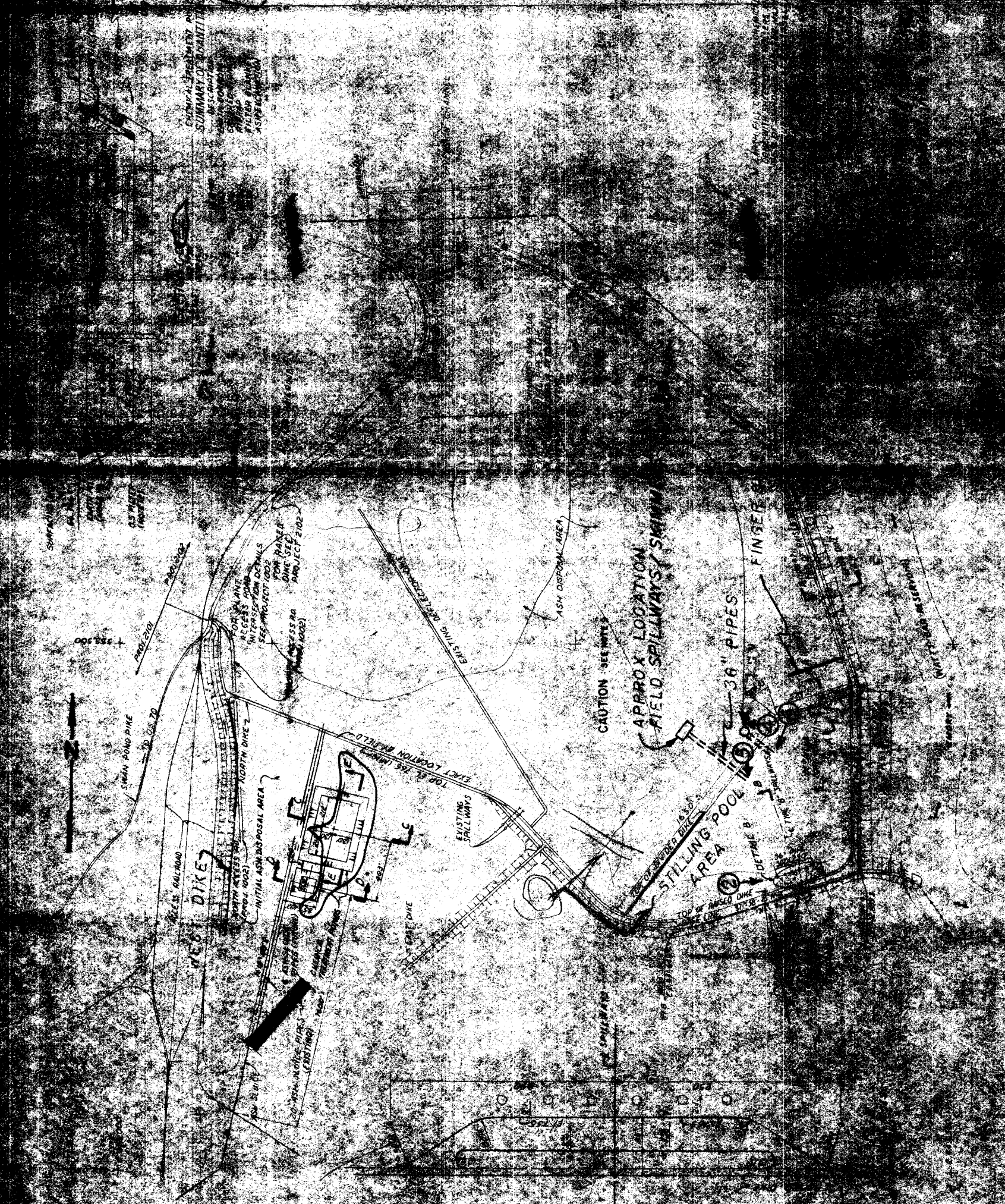
QUANTITY
 32,000 CY
 8,000 TONS
 4,200 CY
 2,400 TONS
 100,000 CY

EMBANKMENT TREATMENT POND
 SUMMARY OF QUANTITIES
 (AS SHOWN)
 EMBANKMENT
 FILTER BLANKET
 FILTER BLANKET
 ASH DISPOSAL

- NOTES:
1. SOIL EXPLORATION AND LABORATORY TESTING IS RECORDED IN MEMORANDUM REPORT FROM GENE FARMER TO G. L. BUCHANAN, DATED NOVEMBER 3, 1975. CIRCULAR-ARC STABILITY ANALYSIS SAFETY FACTORS FOR THE NEW DICES FOLLOWING FOR AN EVALUATION OF THE SOILS INVESTIGATION REPORT ARE AS FOLLOWS:
 2. INITIAL CONSTRUCTION: EXTERIOR SLOPE: SAFETY FACTOR = 1.0
 OPERATING CONDITION: INTERIOR SLOPE: SAFETY FACTOR = 1.0
 OPERATING CONDITION: EXTERIOR SLOPE: SAFETY FACTOR = 1.0
 OPERATING CONDITION: INTERIOR SLOPE: SAFETY FACTOR = 1.0
 3. ALL WORK TO BE IN ACCORDANCE WITH T-3 SPECIFICATIONS UNLESS NOTED OTHERWISE.
 4. ALL DICE CONSTRUCTION SHALL BE IN ACCORDANCE WITH GENERAL CONSTRUCTION SPECIFICATION NO. 2-8 FOR ROLLER FILL FOR DAMS AND OTHER STRUCTURES. THE CONSTRUCTION SHALL BE WITH A MINIMUM OF 10% MOISTURE CONTENT, AS DETERMINED BY THE CENTRAL SOILS LABORATORY.
 5. FOUNDATION PREPARATION FOR EARTH EMBANKMENTS SHALL CONSIST OF EXCAVATION TO A MINIMUM OF 2 FEET BELOW THE PROPOSED FOOTING AND ALL PREVIOUS MATERIAL TO BE REMOVED TO A DEPTH THAT WILL SUPPORT THE LATER CONSTRUCTION WITHOUT SETTLEMENT INTO THE UNDERLYING MATERIAL.
 6. PIPE BACKFILL SHALL CONSIST OF UNWEATHERED SOIL, FREE OF ROCKS, WITH NO HARD LUMPS OR CLUMPS LARGER THAN 3" IN DIAMETER. CONSTRUCTION SHALL BE TO A MINIMUM OF 10% MOISTURE CONTENT AND SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD MAXIMUM DENSITY AS ESTABLISHED BY THE CENTRAL SOILS LABORATORY. BACKFILL MOISTURE SHALL BE CONTROLLED TO AT LEAST 95% OF STANDARD MAXIMUM DENSITY AS ESTABLISHED BY THE CENTRAL SOILS LABORATORY. BACKFILL SHALL BE PLACED IN 6" LIFTS AND PLACED SO AS TO MAINTAIN THE SAME ELEVATION OF BOTH SIDES OF THE PIPE.
 7. THE DIVIDER DIKE SHALL BE CONSTRUCTED OF 24" DIA. ASH, PLACED AT THE UNDERLIER FILL. THE DIVIDER SHALL BE 24" DIA. AND SHALL BE PLACED AT A MINIMUM OF 10% MOISTURE CONTENT AND SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD MAXIMUM DENSITY AS ESTABLISHED BY THE CENTRAL SOILS LABORATORY. THE DIVIDER SHALL BE PLACED AT A MINIMUM OF 10% MOISTURE CONTENT AND SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD MAXIMUM DENSITY AS ESTABLISHED BY THE CENTRAL SOILS LABORATORY.
 8. CUT SLOPES ADJACENT TO EXISTING OR PROPOSED DICES SHALL BE WITH AN EXCAVATED STEEPER THAN 3:1 AND TOP OF CUT SHALL BE A MINIMUM OF 4' FROM EXISTING OR PROPOSED DICES. EXISTING OR PROPOSED DICES SHALL BE WITH AN EXCAVATED STEEPER THAN 3:1 AND TOP OF CUT SHALL BE A MINIMUM OF 4' FROM EXISTING OR PROPOSED DICES.
 9. WHEN CONNECTING THE NEW DICE TO THE OLD DICE, EXISTING OR PROPOSED DICES SHALL BE STRIPPED OF ALL VEGETATION, GRASS, BRUSH, SAND, GRAVEL, STONE, ETC., TO A MINIMUM DEPTH OF 4' AND COMPACTED TO 95% STANDARD MAXIMUM DENSITY AS ESTABLISHED BY THE CENTRAL SOILS LABORATORY. THE NEW DICES SHALL BE PLACED ON TOP OF THE EXCAVATED AREAS AND SHALL BE PLACED ON TOP OF THE EXCAVATED AREAS AND SHALL BE PLACED ON TOP OF THE EXCAVATED AREAS.
 10. GRASSING: CUT AND FILL SLOPES AND DISTURBED AREAS SHALL BE SEEDER WITH TYPE 8 MIXTURE (SPRING SEEDING) OR TYPE 9 (FALL SEEDING). SEEDING AND TYPE 10 FOR SUMMER SEEDING. ALL AREAS ARE TO BE SEEDER, FERTILIZED, AND MACHED IN ACCORDANCE WITH SECTIONS 108 AND 107.
 11. FILTER BLANKET SHALL BE 4" THICK AND IN ACCORDANCE WITH SECTION 108 AND 107.
 12. FILTER BLANKET SHALL BE 4" THICK AND IN ACCORDANCE WITH SECTION 108 AND 107.
 13. SUMMARY OF QUANTITIES: SEE DWG 21021101

SCALE: 1" = 300'

ASH POND DIKE
 PLAN-RAISING ASH DISPOSAL
 AREA DIKE
 KINGSTON STEAM PLANT
 TENNESSEE VALLEY AUTHORITY
 DIVISION OF ENVIRONMENTAL HEALTH
 MEMPHIS, TENNESSEE



CAUTION - SEE NOTES
 APPROX LOCATION
 FIELD SPILLWAYS SWAMP

36" PIPES

STILLING POOL AREA

CAUTION - SEE NOTES

EXISTING DETENTION DAM

EXISTING SILLWAYS

TOP OF ASH DIKE 1955.0

TOP OF ASH DIKE 1955.0

TOP OF ASH DIKE 1955.0

TOP OF ASH DIKE 1955.0

TOP OF ASH DIKE 1955.0

TOP OF ASH DIKE 1955.0

Memorandum

TENNESSEE VALLEY AUTHORITY

CDB '81 0422 006

NRB

Frank D. Stansberry, Head Civil Engineer (Site Development, Highway, Railroad, and Bridge Design), W3A51 C-K

M : Ronald D. Powell, Civil Engineer (Site Development, Highway, and Railroad Design), W3A25 C-K

E : April 22, 1981

SUBJECT: INTERIM DISPOSAL AREA INSPECTION

Plant: Kingston Steam Plant Area: Ash Disposal Area

Date of last annual inspection: September 18, 1980 (CDB 801014 003)

Date of this inspection: April 15, 1981 Weather: Clear and cool

Inspected by: Ronald Powell (EN DES) Coy Woods (Yard Operations Supervisor)

Terry Manseill (F&H PR)

Virgil Hutchinson (F&H PR)

Discussed with: Coy Woods (Yard Operations Supervisor)

	Excellent	Good	Poor
General condition of perimeter dikes	_____	<u>X</u>	_____
Vegetative cover on slopes	_____	_____	<u>X¹</u>
Condition of standard skimmers and spillways	_____	<u>X</u>	_____
Condition of outlet structure and channel	_____	<u>X</u>	_____
General condition of divider dike	_____	<u>X²</u>	_____

Signs of loss of ash? Yes X No

Has action been taken on recommendations of annual inspection report? Yes X No

Comments: No action has been taken on the recommendation to fertilize and reseed the dike slopes. Mr. Woods plans to act on that recommendation this spring.

Comments: ¹Vegetative cover on the dike slopes is generally sparse with some minor erosion gullies present. Recommendation for repair was made in last annual inspection report.

²The new skimmer (constructed by plant personnel for discharges into the stilling pool) seems to be functioning fully adequate.

R. W. Burnett
for Ronald D. Powell

cc: RDP:TLT

cc: G. L. Buchanan, W3C126 C-K

Memorandum

TENNESSEE VALLEY AUTHORITY

CDB '81 0422 006

HPB

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K. W. Burnett
for Ronald D. Powell

RDP:TLT

cc: G. L. Buchanan, W3C126 C-K