

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

CDB '80 1002 002

TO : H. S. Fox, Director of Fossil and Hydro Power, 716 EB-C

FROM : M. N. Sprouse, Manager of Engineering Design, W11A9 C-K

DATE : October 2, 1980

SUBJECT: CUMBERLAND STEAM PLANT - ANNUAL ASH DISPOSAL AREA INSPECTION

*APB  
Cumberland  
Ash Disposal*

Attached is a report from Alan E. Hunley to Frank D. Stansberry dated October 1, 1980 (CDB 801002 001), of the joint inspection at Cumberland Steam Plant which includes recommendations for corrective work. I concur in these recommendations.

Original Signed By

R. G. Domer

M. N. Sprouse

GLB:AEH:TLT

Attachment

- cc: R. O. Barnett, W9D224 C-K
- D. B. Bowen, 6204 MIB-K
- G. L. Buchanan, W3C126 C-K
- J. P. Darling, 403 KB-C (Attachment)
- MEDS, E4B37 C-K
- E. F. Thomas, 550 CST2-C (Attachment)

RECEIVED			
OCT 7 '80			
CIVIL ENG. & DES. BRANCH			
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✓		CLB	
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✓ 8 1 RWB 8 100

## Memorandum

TENNESSEE VALLEY AUTHORITY

CDB '80 1002 001

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

FROM : Alan E. Hunley, Civil Engineer (Site Development, Highway, and Railroad Design), W3A66 C-K

DATE : October 1, 1980

SUBJECT: CUMBERLAND STEAM PLANT - ANNUAL ASH DISPOSAL AREA INSPECTION

HRB  
Cumberland -  
Ash Disposal

On September 11, 1980, Larry Wall of F&H PR, Don Galloway of EN DES, and I inspected the ash disposal area at Cumberland Steam Plant. We were accompanied on the inspection by Walter Veal, Yard Operations Supervisor. Findings were discussed with Nathan J. Lewis, Plant Operations Supervisor.

Last year's annual inspection of these dikes was made on September 18, 1979 (CDB 790926 002).

The ash disposal area is shown on the attached print of drawing 10N212.

Changes in Dikes Since Last Year's Inspection

Since last year's inspection, CSB has continued construction on raising the dikes 15 feet (elevation 380 to elevation 395). CSB has raised the dikes of the southern portion (see drawing 10N212) of the pond approximately 9 feet with compacted earth. CSB has also completed lining the northern portion of the pond on the inside with bottom ash and earth spoil material and has raised the dikes of the northern portion approximately 3 feet with compacted earth. The dike has been raised the full 15 feet in the vicinity of the haul bridge across Wells Creek. Raising of the dikes has been stopped temporarily due to lack of suitable borrow material.

The dikes appear to be in good condition. There is an excellent vegetative cover on the original dike slopes.

The area of seepage along the relocated Wells Creek channel was inspected. Plant employees report that seepage has decreased since the inside of the pond was lined in preparation for the dike raising.

Change in Pond Operation Since Last Year's Inspection

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

Condition of Spillways, Skimmers, and Outlets

The floating skimmer in the divider dike was badly out of position (see picture 3) allowing floating fly ash to get into the stilling pool. The entire stilling pool area was covered with floating ash on the day of the inspection. According to plant employees, most of the floating ash entering the stilling pool builds up behind the skimmer causing the skimmer to sink. The floating ash then flows over the skimmer.

Frank D. Stansberry  
October 1, 1980

CUMBERLAND STEAM PLANT - ANNUAL ASH DISPOSAL AREA INSPECTION


The standard type B spillways and skimmers appear to be in good condition. There is no erosion at the pipe outlets or in the outlet channel. There are no signs of loss of ash.

Action on Recommendation of Last Year's Inspection

Plant employees have periodically removed floating ash from the stilling pool.

Recommendations

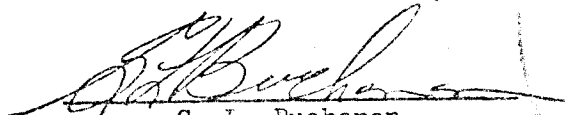
1. Plant employees should continue to remove floating ash from the stilling pool as it accumulates.
2. Adjust the floating skimmer in the divider dike. Lower the channel approximately 2 feet if necessary to reduce the velocity of water flowing past the skimmer or raise the spillways 2 feet.
3. Seal all joints between timbers at wood barriers in divider dike with bituminous filler.

  
Alan E. Hunley

KWBAEH:TLT  
Attachments

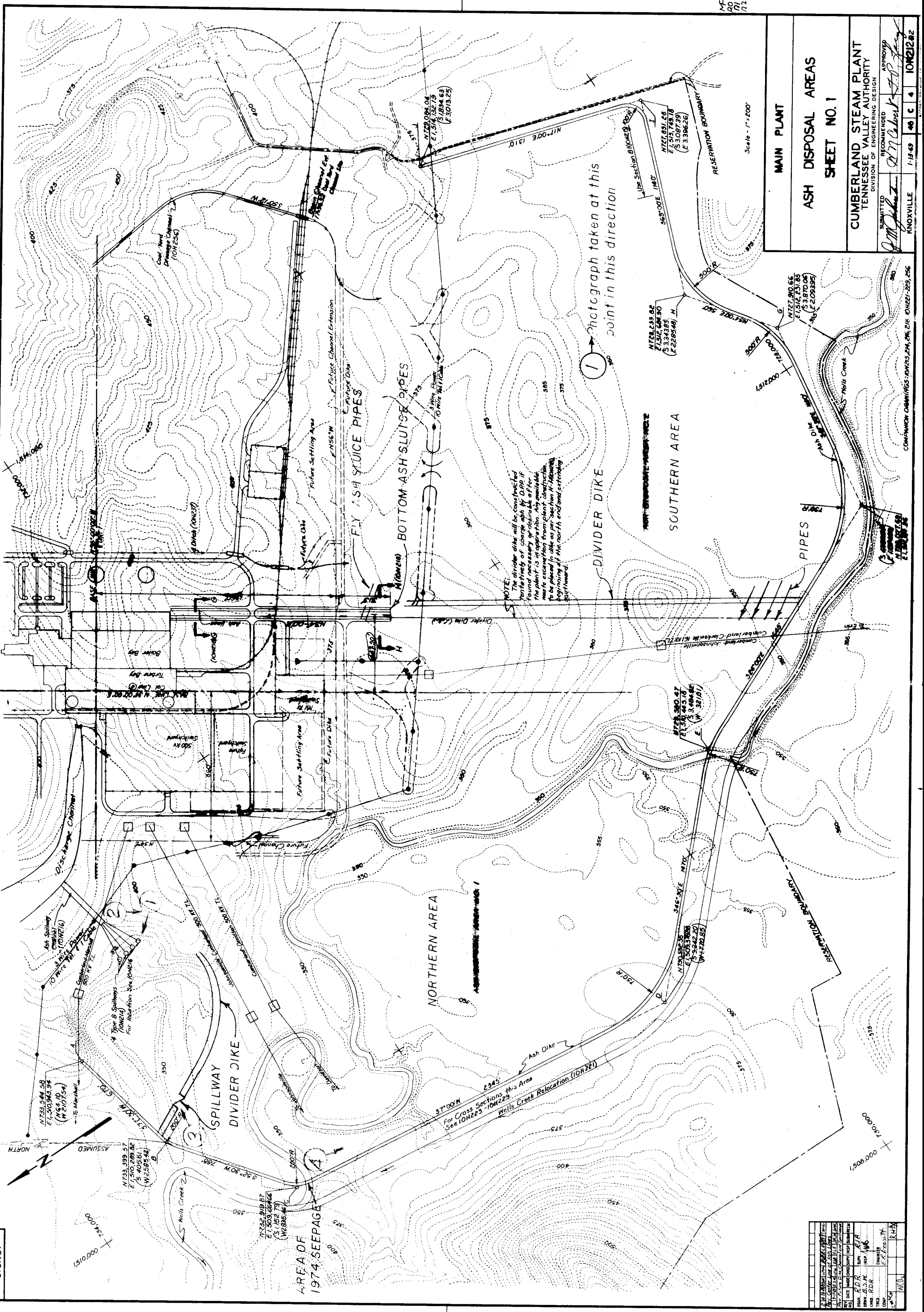
Concur:

  
Frank D. Stansberry

  
G. L. Buchanan

10/1/80 - FDS:TLT  
cc: G. L. Buchanan, W3C126 C-K (Attachments)

10/1/80 - GLB:TLT  
cc: R. O. Barnett, W9D224 C-K (Attachments)  
D. B. Bowen, 6204 MIB-K (Attachments)  
MEDS, E4B37 C-K (Attachments)  
M. N. Sprouse, W11A9 C-K



<b>MAIN PLANT</b> <b>ASH DISPOSAL AREAS</b> <b>SHEET NO. 1</b>	
<b>CUMBERLAND STEAM PLANT</b> TENNESSEE VALLEY AUTHORITY DIVISION OF ENGINEERING DESIGN	
SUBMITTED <i>[Signature]</i>	RECOMMENDED <i>[Signature]</i>
APPROVED <i>[Signature]</i>	APPROVED <i>[Signature]</i>
KNOXVILLE	1-13-59 40 C 4 10M212.R.2

NOTE: The divider dike will be constructed to divert ash to the D.P.P. if found necessary or desirable at the plant is in operation. Any available waste excavation from plant construction to be placed in dike as per section H-100000 beginning at the north end and extending southward.

Photograph taken at this point in this direction

DATE	10/22/58	BY	RJR
CHKD.	B.S.M.	APP.	W.B.
TRCD.		INCHES	1/4"
COMP.		SCALE	1" = 200'

COMPARISON DRAWINGS: 10M212.R.2, 10M212.R.2, 10M212.R.2, 10M212.R.2

CUMBERLAND STEAM  
PLANT  
1980



①

*Standard spillways  
and skimmers.  
Note floating ash*



②

*Divider dike. Note area  
where floating ash has  
been deposited by plant  
personnel.*

CUMBERLAND STEAM  
PLANT  
1980

③

*Spillway through  
divider dike. Skimmer  
is too high on each  
end, sunk in the  
middle.*



④

*Dike showing progress  
of dike raising. Dike is  
at approximate finished  
grade at end of  
construction haul  
bridge (See arrow)*

