

US EPA ARCHIVE DOCUMENT

MEMORANDUM

SUBJECT: EPA Comments on "Assessment of Dam Safety of Coal Combustion Surface Impoundments: GenOn New Castle Power Plant, West Pittsburg, PA"

DATE: **October 21, 2013**

1. The report states for both the North and the South Impoundments: "is primarily incised, with diked embankments varying in height from 1 to 3 feet around the perimeter to provide vehicle access drives above the surrounding grade." Checklists indicate embankment height of 8' for both North and South Ash Ponds. Please correct the height of each impoundment in the appropriate place.
2. Throughout the report please replace "inspection" with "assessment" as it relates to O'Brien & Gere's activities (particularly in Section 4).
3. In Table 3.1, please indicate that the RFI for the first listed item is generated from EPA's Office of Water.
4. Please include the additional information found in your email from Gary Emmanuel to Patrick Kelly dated October 17, 2013 in the following statements in Section 5 for each impoundment:
 - o "In addition to the physical deficiencies, we also noted that no geotechnical data or associated slope stability analyses are on record for the impoundment. Given the nature of this impoundment as primarily incised, with the operating water level maintained below the level of the surrounding natural grade, there do not appear to be any critical slopes requiring a stability analysis in the immediate future. Completion of a slope stability analysis should be considered if modifications to the impoundment structure or significant alterations in the normal water level are proposed in the future."
5. Response to the following three questions was not included in the checklist sheets for each of the impoundments, please add to the report:
 - o Concerning the embankment foundation, was the embankment construction built over wet ash, slag, or other unsuitable materials? If there is no information just note that.
 - o Did the dam assessor meet with, or have documentation from, the design Engineer-of-Record concerning the foundation preparation?
 - o From the site visit or from photographic documentation, was there evidence of prior releases, failures, or patchwork on the dikes?

From: [Caylor, Douglas](#)
To: [Englander, Jana](#)
Cc: [Adams, Roger](#); [Hall, Ryan](#); [Cox, Ken](#); [rogers, rick](#); [Conover, Clark](#); [Hoffman, Stephen](#); [Dufficy, Craig](#); [Kelly, PatrickM](#)
Subject: RE: Comment Request on Coal Ash Site Assessment Round 12 Draft Report - GenOn's New Castle Power Plant
Date: Friday, November 22, 2013 10:33:36 AM

Dear All:

Pennsylvania DEP Dam Safety has reviewed the draft assessment report for GenOn's New Castle Power Plant North Ash Pond and South Ash Pond as prepared by O'Brien & Gere Engineers, Inc. and concurs with the findings. As noted in the report, PA DEP Dam Safety does not regulate the North Ash Pond nor South Ash Pond as they do not fall under our jurisdiction under 25 PA Code §105.

Please let me know if you need additional information.

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From: [Frank, Stephen](#)
To: [Englander, Jana](#); [Hoffman, Stephen](#)
Subject: Comments Request on Coal Ash Site Assessment Round 12 Draft Report -New Castle Generating Station
Date: Friday, December 13, 2013 9:30:36 AM
Attachments: [Revised PRNT Figure 2 Page from New Castle - Draft Dam Safety Assessment Report 2012-11-30.pdf](#)
[New Castle Bottom Ash Pond Discharge Piping 2006.pdf](#)

Dear Mr. Hoffman and Ms. Englander,

As requested, NRG has reviewed and is providing the following comments on the Draft Report for New Castle Generating Station:

- The station owner and operator is NRG Power Midwest LP (NRG), a subsidiary of NRG Energy, Inc. and should replace "GenOn Energy" throughout the report.
- Page 2, note that while fly ash is dry handled, the ash is moistened to control dust prior to transport to the onsite landfill.
- Page 6, Section 2.3.3 Outlet Works. (See Revised Figure 2 and attached drawings)

The North Ash Pond has two outlet structures located along the eastern bank. The northern primary outlet structure consists of a concrete box with a rectangular weir equipped with stop logs to govern the water level in the pond. A steel slide gate serves as a baffle to exclude floating debris from the discharge. The top consists of an open steel grate. The effluent discharges into an 18" ~~corrugated metal pipe (CMP)~~ concrete pipe which extends below the bottom of the pond to the southern secondary outlet structure. ~~The concrete pipe was inspected in 2006 and found to be in good condition.~~ The secondary outlet structure consists of a concrete box with two separate rectangular weirs equipped with stop logs and slide gate baffles. The secondary outlet stop logs are set at a higher elevation than the primary outlet structure's stop logs and are used for overflow control. The effluent discharges into an 18" ~~CMP~~ HDPE pipe which extends ~~beneath the bottom of the Northern Ash Pond, through the embankment separating the North and South Ash Ponds, beneath the South Ash Pond along the access road~~ and discharges into ~~Manhole #1 a manhole~~ located ~~between the Coal Pile Sedimentation Basin and the South Ash Pond.~~ ~~on the southern crest of the South Ash Pond.~~ From ~~Manhole #1 this manhole~~ the effluent is conveyed by a 24" high-density polyethylene (HDPE) pipe, ~~transitioning to a 24" HDPE pipe for the last segment prior~~ to the outfall at the Beaver River. This outfall is permitted as Outfall 004 under NPDES Permit #PA0005061.

- Page 7, Section 2.3.3 Outlet Works.

The effluent, if any, discharges into an 18" ~~CMP~~ HDPE pipe which extends below the bottom of the pond to ~~Manhole #1 a manhole~~ located ~~between the Coal Pile Sedimentation Basin and the South Ash Pond on the southern crest of the South Ash Pond~~. From this manhole the effluent is conveyed by ~~an 18" a~~ 24" HDPE pipe, ~~transitioning to a 24" HDPE pipe for the last segment prior~~ to the outfall at the Beaver River. This outfall is permitted as Outfall 004 under NPDES Permit #PA0005061.

The former corrugated metal pipe (CMP) associated with ~~Although~~ this basin experienced a release of material ~~due to corrosion in 2006, there was no apparent evidence of the repair to the southern embankment~~. The CMP from the North Pond's southern outlet structure, the South Pond's outlet structure, and remaining CMP to the river was replaced with HDPE pipe later in 2006 in response to the release.

- Page 9, last paragraph of Section 3.1 regarding Station status:

NRG plans to bring natural gas to the station, convert the boiler to install natural gas burners, and at that point in the future begin operating on natural gas. Work is expected to be completed in May 2016.

- Page 9, Section 3.1.3,

North Ash Pond – (Note that the CMP was replaced with HDPE pipe from the secondary outlet structure to the river in 2006.)

South Ash Pond

Based on the records review and discussions with plant personnel, the only significant modification to the South Ash Pond was the repair and relocation of the discharge pipe in 2006 related to the ~~failure of the former CMP at the South Pond outlet structure and adjacent embankment failure~~. Operationally, the impoundment of CCW within the South Ash Pond ceased in 2006.

- Page 13 – North Ash Pond Second Bullet and South Ash Pond Forth Bullet

These bullets should be deleted. The corrugated metal pipe is no longer utilized and was filled with flowable fill where present under the roadway to prevent collapse. Corrugated metal discharge piping was replaced in 2006 in response to the release. The old piping alignment was generally along the same path as the new

HDPE piping as depicted on the attached drawings.

- Page 15 – North Ash Pond and South Ash Pond Additional Studies

The first bullet of both recommendations regarding the CMP should be deleted.

- As recommended, NRG will increase maintenance activities to inspect and correct erosion and control heavy vegetation to facilitate visual inspections of the embankments for signs of erosion, movement, seepage or animal burrows.

- Page 16 – Section 6.4

The recommendation regarding the CMP should be deleted. The plant deactivation status should be updated based on Bullet 5 above.

Please do not hesitate to contact me with any questions or comments.

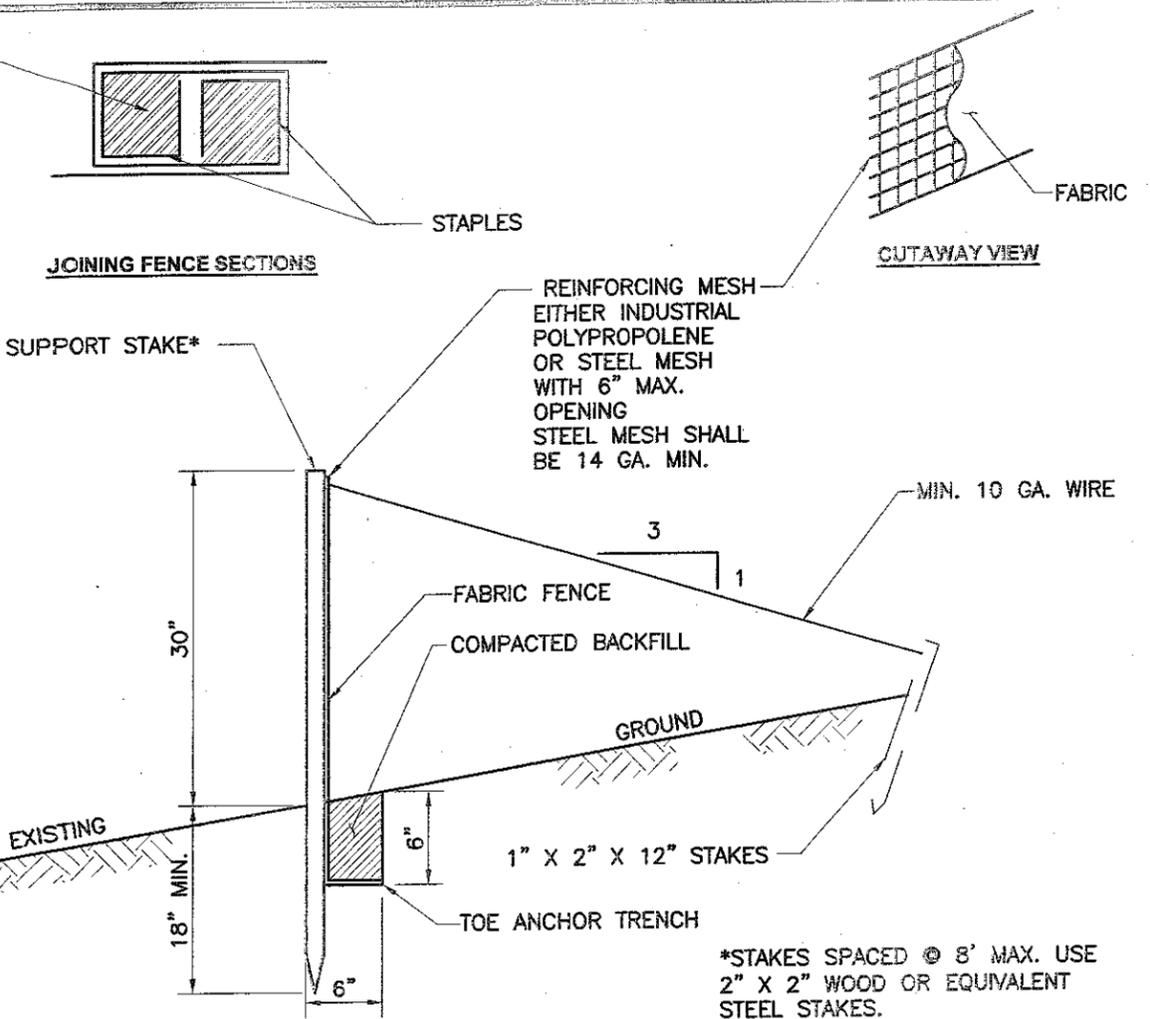
Thank you, Steve

NRG Energy



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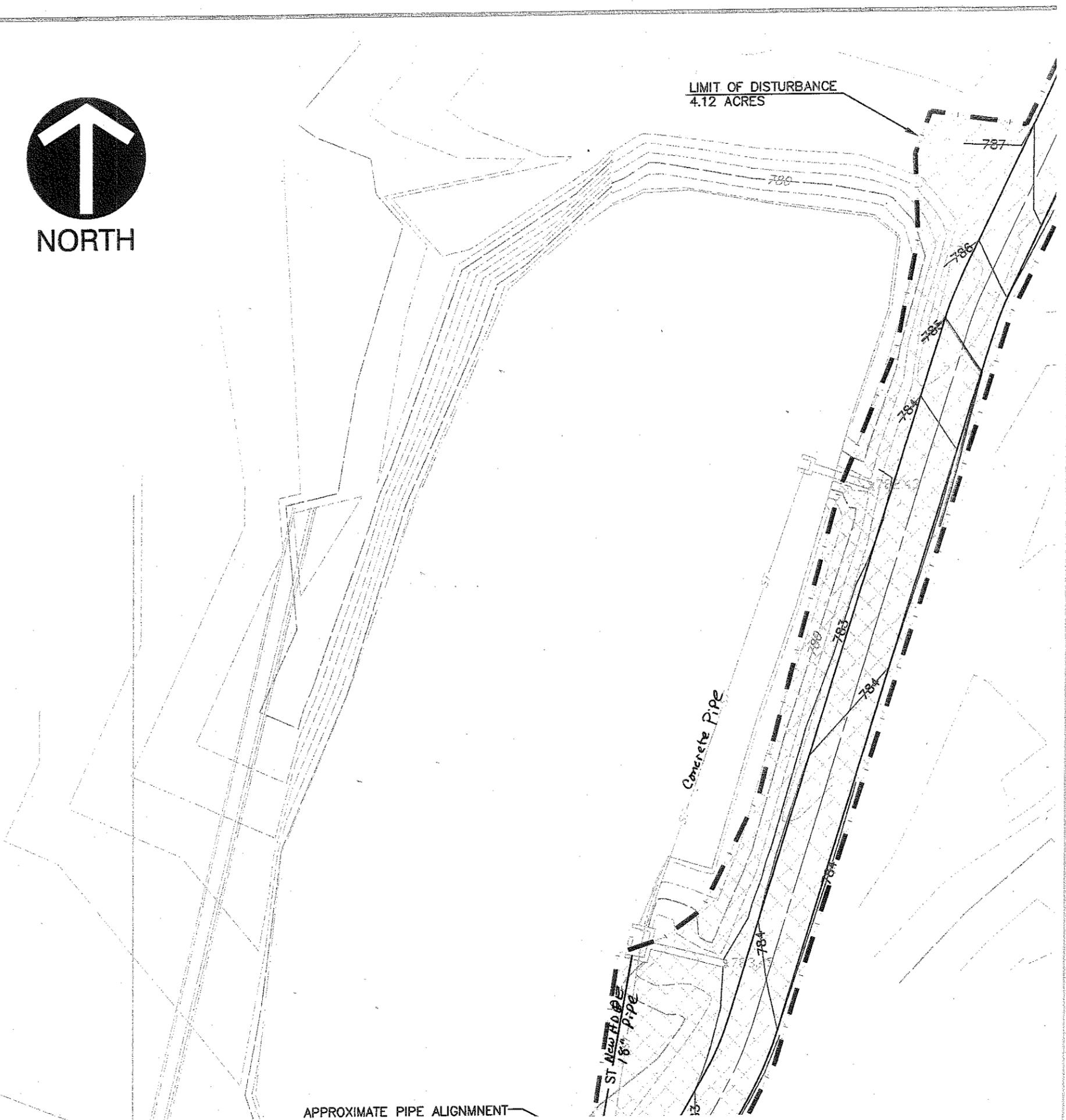
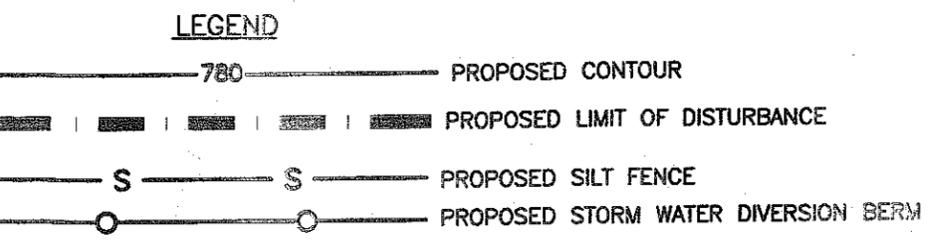
NOTE: SHOW ALL DETAILS AND CONSTRUCTION DIMENSIONS ON PLAN DRAWINGS.

FILTER FABRIC FENCE MUST BE INSTALLED AT EXISTING LEVEL GRADE. BOTH ENDS OF EACH FENCE SECTION MUST BE EXTENDED AT LEAST 8 FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE FENCE.

ANY FENCE SECTION WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.

DETAIL 2
REINFORCED SILT FENCE (30" HIGH)
N.T.S.



THIS DRAWING IS ONLY TO BE USED FOR IMPLEMENTATION OF THE EROSION AND SEDIMENTATION CONTROL MEASURES PRESENTED. IF ENCOUNTERED FIELD CONDITIONS REQUIRE THE USE OF ADDITIONAL PROTECTION, CONTRACTOR SHALL INSTALL ADDITIONAL SILT FENCE OR OTHER MEASURES AS NECESSARY.

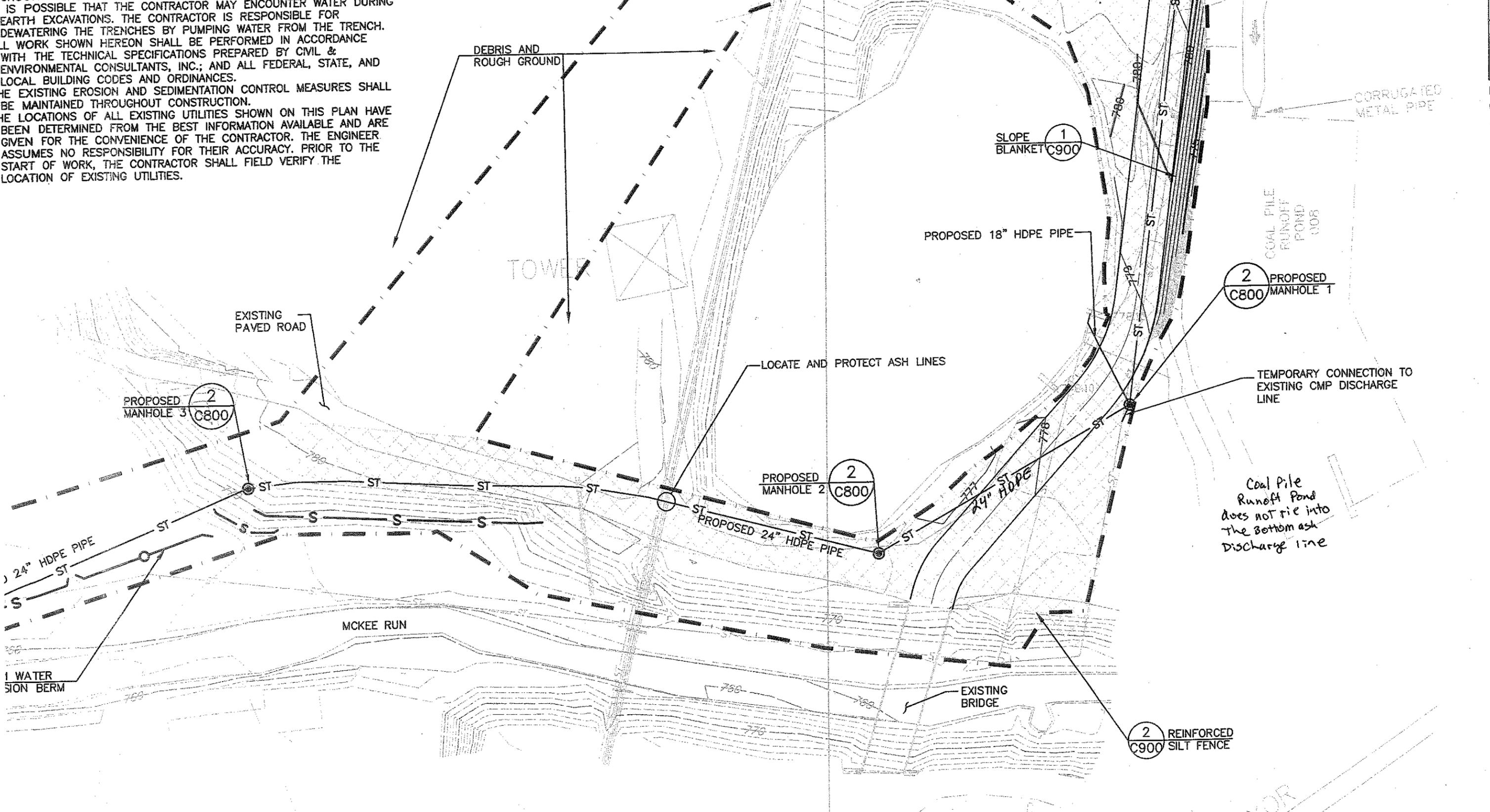
THE CONTRACTOR SHALL MAINTAIN ALL OF THE EROSION AND SEDIMENTATION CONTROL MEASURES UNTIL ALL TRIBUTARY AREAS HAVE BEEN STABILIZED WITH A SATISFACTORY STAND OF VEGETATION. A SATISFACTORY STAND IS DEFINED AS A UNIFORM 70 PERCENT GROUND COVER WITH PERENNIAL VEGETATION.

IT IS POSSIBLE THAT THE CONTRACTOR MAY ENCOUNTER WATER DURING EARTH EXCAVATIONS. THE CONTRACTOR IS RESPONSIBLE FOR DEWATERING THE TRENCHES BY PUMPING WATER FROM THE TRENCH.

ALL WORK SHOWN HEREON SHALL BE PERFORMED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS PREPARED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.; AND ALL FEDERAL, STATE, AND LOCAL BUILDING CODES AND ORDINANCES.

THE EXISTING EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

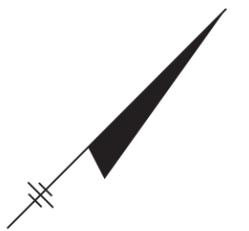
THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF WORK, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES.



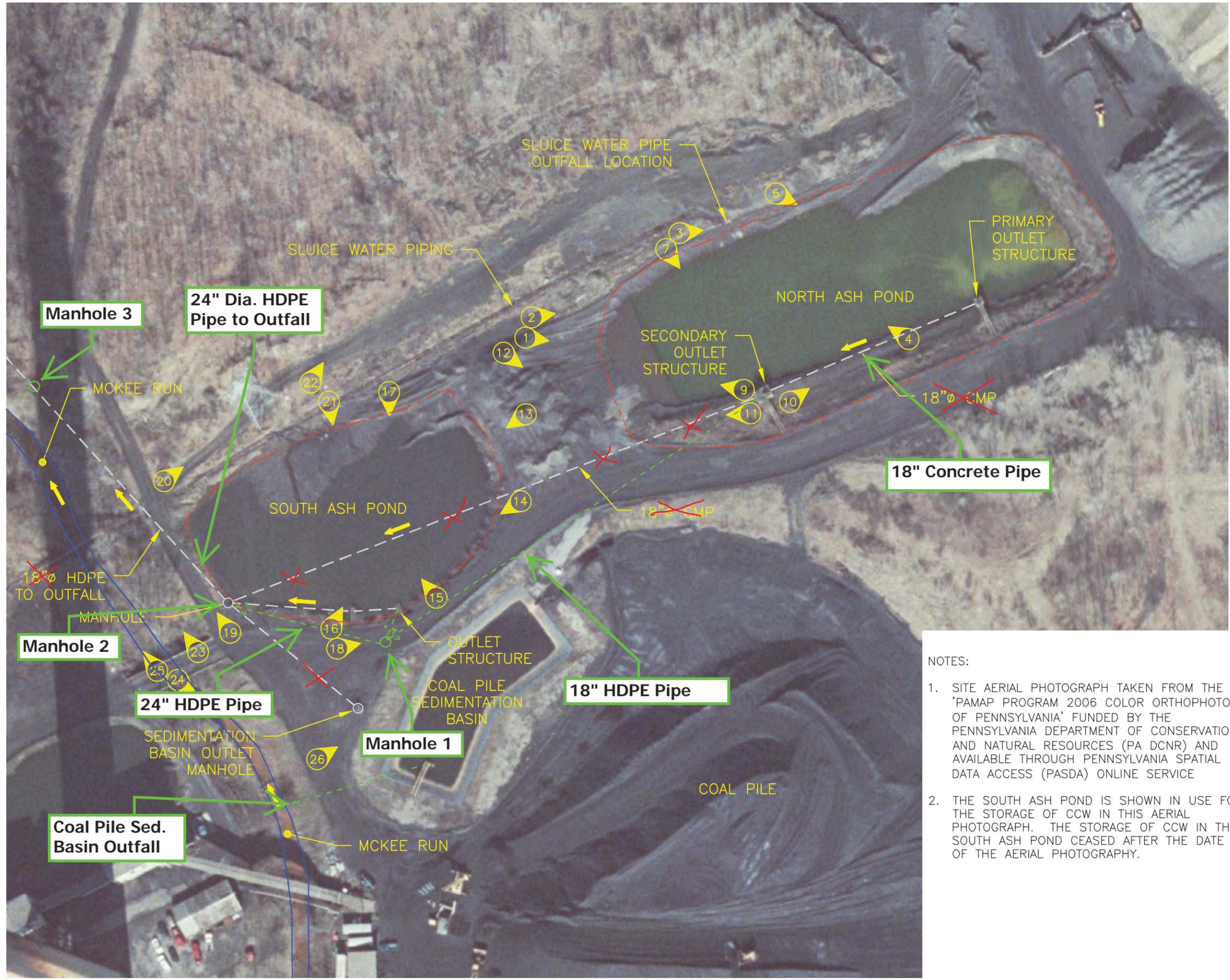
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FIGURE 2



-  PHOTOGRAPH NUMBER AND ORIENTATION
-  APPROXIMATE CREST OF IMPOUNDMENT
-  APPROXIMATE LOCATION OF UNDERGROUND PIPING



NOTES:

1. SITE AERIAL PHOTOGRAPH TAKEN FROM THE 'PAMAP PROGRAM 2006 COLOR ORTHOPHOTOS OF PENNSYLVANIA' FUNDED BY THE PENNSYLVANIA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES (PA DCNR) AND AVAILABLE THROUGH PENNSYLVANIA SPATIAL DATA ACCESS (PASDA) ONLINE SERVICE
2. THE SOUTH ASH POND IS SHOWN IN USE FOR THE STORAGE OF CCW IN THIS AERIAL PHOTOGRAPH. THE STORAGE OF CCW IN THE SOUTH ASH POND CEASED AFTER THE DATE OF THE AERIAL PHOTOGRAPHY.

US EPA
DAM SAFETY ASSESSMENT
OF CCW IMPOUNDMENTS

GenOn ENERGY
NEW CASTLE PLANT

SITE AERIAL PHOTOGRAPH
AND PHOTOGRAPH
LOCATION MAP



FILE NO. 13498.46122.-250
SEPTEMBER 2012