Report of Geotechnical Investigation
Dam Safety Assessment of Coal Combustion Surface Impoundments
Georgia Power
Plant Yates, Newnan, GA

AMEC Project No. 3-2106-0174.0400

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I certify that the management units referenced herein:

Southern Company, Georgia Power, Plant Yates: Ash Pond 1, Ash Pond 2, Ash Pond 3, Ash Pond A, Ash Pond B, Ash Pond B', Ash Pond C, and Gypsum Solid Waste Facility, were assessed on May 10th and 11th, 2010.

Signature _____

Douglas Tate, PE
Senior Geotechnical Engineer

List of AMEC Participants who have participated in the assessment of the management units and in preparation of the report:

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1.0 INTRODUCTION AND PROJECT DESCRIPTION

1.1 Introduction

AMEC was contracted by the United States Environmental Protection Agency (EPA) contract BPA EP09W001702, to perform assessments of selected coal combustion byproducts surface impoundments. As part of this contract with EPA, AMEC was assigned to perform an assessment of Georgia Power Company's Plant Yates, which is located near Newnan, Georgia as shown on Figure 1, the Project Location Map.

A site visit to Plant Yates was made by AMEC on May 10 and 11, 2010. The purpose of the visit was to perform visual observations, to inventory coal combustion waste (CCW) surface impoundments, assess the containment dikes, and to collect relevant historical impoundment documentation.

AMEC engineers, Douglas Tate, P.E. and James Black, P.E., were accompanied during the site visit by the following individuals:

Table 1. Site Visit Attendees

Company or Organization	Name and Title
U.S. Environmental Protection Agency	Jim Kohler, P.E., Office of Solid Waste and Emergency Request
Georgia Power Company	Michael Burroughs, Plant Manager
Georgia Power Company	Eddie Borders, Compliance and Support Manager, Plant Yates
Georgia Power Company	David D. Parks, Senior Compliance Specialist, Plant Yates
Georgia Power Company	Rachel Mudd, P.E., Geotechnical Engineer, Plant Yates
Georgia Power Company	Tanya Blalock, Environmental Affairs Manager
Southern Company	Larry B. Wills, P.E., Principal Engineer, Dam Safety, Hydro Services
Southern Company	Hugh Armitage, P.E., Senior Engineer, Hydro Services
Southern Company	Gary McWhorter, P.E., Earth Science and Environmental Engineering
Troutman Sanders	Hollister Hill, Attorney

1.2 Project Background

Coal fired power plants, like Georgia Power's Plant Yates, produce CCW as a result of the power production process. At Plant Yates, impoundments (dams) were designed and constructed to provide storage and disposal for the CCW that is produced. Georgia Power refers to the CCW impoundments at the Plant Yates facility as Ash Ponds 1, 2, 3, A, B, B', C, and the Gypsum Solid Waste Facility. A waste pond located at the Gypsum Solid Waste Facility contains gypsum slurry and ash mix. Due to the presence of ash in this pond, it was assessed during AMEC's site visit per direction from EPA. The Gypsum Facility pond will be referred to in this report singularly as the 'Gypsum Pond'.

The National Inventory of Dams (NID), administered by the U.S. Army Corps of Engineers (USACE), provides a hazard rating for many dams within the United States. Ash Ponds 2 and 3 are included in the database but are not rated on the NID. The remaining ash ponds and Gypsum Pond are not listed on the NID.

The Safe Dams Program is the body within the Georgia Department of Natural Resources Environmental Protection Division (EPD) that defines the term dam, as well as regulates dam design, construction and repair. The Safe Dams Program also evaluates dams to assign a dam category classification to each structure. Each dam within the state that is over 25 feet in height or has at least 100 acre-feet of storage capacity is assigned either a Category I or Category II classification. The Category I classification is assigned to structures "where improper operation or dam failure would result in probable loss of human life. Situations constituting probable loss of life are those situations involving frequently occupied structures or facilities, including, but not limited to, residences, commercial and manufacturing facilities, schools, and churches." A Category II classification indicates that "improper operation or dam failure would not expect to result in probable loss of human life." These definitions are from the Rules of Georgia EPD Chapter 391-3-8 Rules for Dam Safety, Section 391-3-8.02(d) and (e). Ash Pond 2 and Ash Pond 3 at Plant Yates have been classified by the EPD's Safe Dams Program as Category II dams. We understand the remaining ash ponds have not been classified by the Georgia EPD Safe Dams Program. According to the Safe Dam Rules, Category I dams are permitted and monitored regularly, while Category II dams are not permitted, but are re-inventoried every 5 years. The re-inventory procedure is conducted to determine if adjacent or downstream development has changed or has been proposed to change in a manner that would necessitate a reclassification to a Category I dam.

As part of the observations and evaluations performed at Plant Yates, AMEC completed EPA's Coal Combustion Dam Inspection Checklists and CCW Impoundment Inspection Forms. Inspection forms for each ash pond and the Gypsum Pond are presented in Appendix A. The Impoundment Inspection Forms include a section that assigns a "Hazard Potential" that is used to indicate what would occur following failure of an impoundment. "Hazard Potential" choices include "Less than Low," "Low," "Significant," and "High." Based on the site visit evaluation of the impoundments, AMEC engineers assigned the following hazard potentials to each pond.

- "Significant Hazard Potential" classification: Ash Pond 2,
- "Low Hazard Potential" classification: Ash Ponds 1, 3, B', and the Gypsum Pond
- "Less than Low Hazard Potential" classification: Ash Ponds A, B, and C

As defined on the Inspection Form, dams assigned a "Significant Hazard Potential" are those dams where failure or misoperation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. "Significant Hazard Potential" classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure." "Low Hazard Potential" classification definition is reserved for dams where "failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property." "Less than Low Hazard Potential" classification is reserved for dams where "failure or misoperation results in no probable loss of human life and no economic or environmental losses."

1.2.1 State Issued Permits

The Georgia Department of Natural Resources has issued Georgia EPD National Pollutant Discharge Elimination System (NPDES) Permit No. GA0001473 to Georgia Power Company. This NPDES Permit authorizes the Georgia Power Company to discharge from Plant Yates to the Chattahoochee River. The permit became effective on September 1, 2006 and is set to expire on August 31, 2011.

The state of Georgia issues operating permits for those impoundments that are given the Category I classification. There are no Category I impoundments at Plant Yates; therefore the state has not issued operating permits for this facility.

1.3 Site Description and Location

Georgia Power's Plant Yates is located on nearly 2,400 acres alongside the Chattahoochee River in Coweta County, Georgia, approximately 7 miles northwest of the city of Newnan. Plant Yates is located approximately 40 miles southwest of central Atlanta and is near Interstate 85. The area surrounding the plant boundary is primarily rural. The Chattahoochee River is located directly adjacent to the facility's north side. The distance between the closest point of the ash ponds and the river ranges between less than 10 feet in the case of Ash Pond 2, to 2,800 feet in the case of Ash Pond 3. A railroad is located on the north-northeast side of the plant. The railroad line is between Ash Ponds 1 and the Gypsum Solid Waste Facility ponds near the northwest corner of the plant and is to the east of Ash Pond A and B' near the northeast corner of the plant . The tracks sit on top of their own (separate) embankment. The Aerial Site Plan, included as Figure 2, provides a view of the eight ash ponds, their proximity to the river, and the railroad.

Figure 3, the Critical Infrastructure Map, provides an aerial view of the region and indicates the location of the Plant Yates ash ponds in relation to schools, hospitals, and other critical infrastructure that is located within approximately 5 miles down gradient of the ash ponds. A table that provides names and coordinate data for the infrastructure is included on the map.

1.4 Ash Ponds

Plant Yates utilizes coal in the production of electricity. In this process, two types of ash are generated: fly ash and bottom ash. Bottom ash, the heavier and coarser of the two, and fly ash, are wet sluiced to Ash Pond 2. Ash dredged from Ash Pond 2 is transported to Ash Pond B', where it is dewatered, excavated, and transported to the R6 Dry Ash Landfill for dry stacking. The R6 Facility is a permitted, private industry, solid waste disposal facility. Water from the dewatering process in Ash Pond B' is decanted into a channelized area in Ash Pond 3 and flows ultimately, into Ash Pond 2. Water from Ash Pond 2 is recycled back to the plant for use in ash sluicing. Excess water, above the amount used for sluicing, may be discharged through permitted NPDES outfalls. Gypsum, produced as a byproduct of flue gas desulfurization, is transported to the Gypsum Solid Waste Facility. The remaining ponds, Ash Ponds 1, A, B, and C, are inactive and do not currently receive CCW. Although inactive with respect to CCW, Ash Pond 1 does control runoff for the adjacent Coal Pile. A more detailed plan view of the plant, which illustrates the locations of each pond and their corresponding dike location, is provided on Figure 4, the Site Map.

The ash handling summary detailed above was based on review of provided documentation as well as communication with Southern Company (Georgia Power's parent company) engineers who are responsible for design and evaluation of the Plant Yates facility operational processes.

Design and communication documents provided to AMEC by Southern Company and Georgia Power indicate the following general background for the eight ash ponds at the facility.

- Each of the eight ash ponds at Plant Yates contain fly ash, bottom ash, boiler slag, pyrites, and low volume waste as defined under 40 CFR 423.11. Gypsum slurry with ash mix) is contained in the Gypsum Pond. Flue gas emission control residuals are contained solely in Ash Pond 2.
- Ash Ponds 1, 2 and 3 were designed internally by the Georgia Power Chief Engineer. YAT-API-0031 indicates that Ash Ponds A, B, C, and B' were designed by professional engineers with Lawrence Dabney & Assoc. for AMAX Fly Ash Company. Likewise, the Gypsum Solid Waste Facility and ponds was designed by professional engineers with Tribble & Richardson Inc. for Georgia Power.
- A professional engineer supervised the construction of Ash Ponds 2 and 3. The status of whether a professional engineer supervised the construction of the other ash ponds was not reported.
- Inspection of Ash Ponds 1, 2, 3, and the Gypsum Pond is currently performed by a professional engineer.
- No record of inspections were provided for Ash Ponds A, B, C, or B`.

Plan views and typical embankment cross sections are illustrated for Ash Ponds 1, 2, and 3 on Figures 5 through 8. Limited documentation was provided for the remaining ash ponds, therefore plan and cross section figures are not available. Additional information that is specific to each ash pond is presented in the following sections. Current descriptive information resulting from the site visit, as well as photographic references, is provided in Section 2, Field Assessment.

1.4.1 Ash Pond 1

Ash Pond 1 began operation in 1950 at the same time the first plant units (1 and 2) were put online. This pond was originally constructed with a total storage capacity of 297,000 cubic yards (CY), a corresponding surface area of 17.1 acres, and a maximum embankment height of 25 feet. Figure 5 illustrates the typical cross section of Ash Pond 1. The pond is currently in service as the coal pile runoff pond, but does not receive any other liquid-borne material. The volume of stored material is estimated to be 297,000 CY. Based upon YAT-API 063 and 069, the current maximum embankment height is about 15 feet due to subsequent construction of a cooling tower downstream of the embankment about 2001. Figure 5 provides a cross section of the Ash Pond 1 dike.

1.4.2 Ash Pond 2

Ash Pond 2, originally referred to as the "new ash pond" and also known as the "common pond", was commissioned in 1966. The pond had a total storage capacity of 1,778,913 CY, a corresponding surface area of 50 acres, a top of dike elevation of 721 feet, and a maximum embankment height of 39 feet.

The embankment height was increased to elevation 729 feet during 1969 and 1970 by the construction of an additional embankment on the upstream side of the existing dike structure. Additionally, as part of that construction, a bench was created (on the downstream slope of the new structure) by removing a portion of the top of the existing dike structure to elevation 710 feet. The bench is approximately 475 feet in length and 23 feet in width. Construction of the

embankment height increase also necessitated relocating the primary pond discharge structure approximately 20 feet to the east to make way for the new upstream slope toe. Figures 6 and 7 provide a plan view of the original and additional dikes, as well as typical cross sections of the original structure and the additional structure, in both berm and non-berm areas.

A diversion dike was constructed in Ash Pond 2 in 1976, essentially splitting the pond into two areas. The pond areas are hydraulically connected via an open channel ditch which flows from the eastern (upper) section, to the western (lower) section. This pond is currently used as a dewatering facility for fly ash and bottom ash, with dewatering operations occurring primarily in the upstream portion where the sluiced ash is deposited. Ash is dredged and sluiced to Ash Pond B` for dewatering and then transported to the R6 permitted dry stacking area, located north of Dyer Road. According to reports from Georgia Power, the volume of material stored in Ash Pond 2 as of April 2009 was 1,198,000 CY. The regular and emergency permitted NPDES discharges from Ash Pond 2 are located in the lower portion of the pond.

1.4.3 Ash Pond 3

Ash Pond 3 was commissioned in 1976 as an "emergency" ash pond when Georgia power realized that Ash Pond A would be rapidly filled by AMAX, a private contractor. Ash Pond 3 has a total storage capacity of 700,000 CY, a corresponding surface area of 69 acres, and a maximum embankment height of 37 feet. This pond is currently full, inactive, and no longer receives liquid-borne material; however, the pond does act as a sediment control for flow from Ash Pond B'.

1.4.4 Ash Pond A

Ash Pond A was constructed by AMAX as a temporary pond in 1975, during the transition to Ash Pond 3, and filled in 1977. According to document YAT-API 063, the reported surface area is 19.2 acres, but the maximum embankment height, as well as total storage capacity and current volume of stored material are unknown. However, during the site visit, plant personnel stated that the embankment height is approximately 30 feet. This ash pond is currently inactive, covered, no longer receives liquid-borne wastes and the dam is breeched so it cannot contain water.

1.4.5 Ash Pond B

Ash Pond B was constructed by AMAX as a temporary pond in 1976, during the transition to Ash Pond 3, and has an unknown storage volume. The reported surface area is 6.3 acres. The current maximum embankment height is less than 10 feet due to fill placement downstream of the dam. Ash Pond B no longer receives CCW and appears incapable of retaining any water.

1.4.6 Ash Pond B`

Ash Pond B` was constructed in 1976 by AMAX with a top of dam elevation of 770 feet, a total storage volume of 480,000 CY, and a surface area of 29.8 acres. The dam elevation was raised to elevation 780 feet during the summer of 1977 (YAT-API 053). Further construction occurred during October of 1977, when this pond was sub-divided to create areas for ash dewatering operations. Beginning in early 1978, dry ash from the Ash Pond B' dewatering process was stored at the R6 Solid Waste Facility. Provided documentation suggests that the northern portion of the original area of this pond is closed with a minimum of two feet of earthen cover (YAT-API 0033). Additional provided documentation (YAT-API 069) indicates that the

Ash Pond B' embankment was increased "at some point" to elevation 790 feet. In addition, based on the March 2010 borings, it appears that compacted ash was used to gain the additional height. The current storage volume is estimated to be 240,000 CY; however, the date of the last measurement is unknown. The current maximum embankment height is estimated to be about 40 feet based upon YAT-API 035 and YAT-API 069. Currently, the two active areas of Ash Pond B', acting alternately, serve to dewater dredged ash from Ash Pond 2. Decant water from this process is routed into an overland drainage channel, through Ash Pond 3, and into Ash Pond 2.

1.4.7 Ash Pond C

Ash Pond C was constructed as the third temporary pond by AMAX about the same time as Ponds A and B and has an unknown storage volume. The reported surface area is 12.4 acres. The current maximum embankment height is less than one foot due to fill placement downstream of the dam. Ash Pond C no longer receives CCW, seems incapable of retaining any water, and appears to have been covered with about two feet of clay. Ash Pond C was incorporated into the R6 dry stack storage area and, in 1999, the R6 facility was expanded to cover Ash Pond C.

1.4.8 Gypsum Pond

The Gypsum Solid Waste Facility was commissioned in 1992. Gypsum is a by-product of the flue gas desulfurization process (FGD), more commonly known as 'scrubbing'. The scrubbing process is used to remove sulfur dioxide and fly ash particulate matter from flue gases that are created during the coal combustion process. A primarily liquid product, containing gypsum and mixed ash, results from the scrubbing process. The pond at the facility serves to dewater the scrubbing product. The Pond at the facility has a total storage capacity of 218,319 CY, a corresponding surface area of 16 acres, and a maximum embankment height of 14 feet. This pond is currently used as a dewatering facility for gypsum, with dewatering operations primarily in the upstream portion. Dewatered gypsum is excavated and sold off-site. According to reports from Georgia Power, the volume of material stored in the Gypsum Pond, as of January 2010, was 53,746 CY.

1.5 Previously Identified Safety Issues

Discussions with plant personnel and review of provided documentation indicate that there are no current or previously identified safety issues from the previous 5 years at Plant Yates.

1.6 Site Geology

The Plant Yates facility is located in the Piedmont Geological Region. In general, piedmont soil is weathered from partially to fully metamorphosed bedrock of the type described above. There is usually no distinct or abrupt change from soil to bedrock, but there is a general increase in strength and consistency with increasing depth. An intermediate phase (between bedrock and soil) is known as saprolite, which is chemically weathered rock that is mostly soft or friable and commonly retains the structure of the parent rock since it is autochthonously formed in place. Piedmont soil is most usually composed of silt, clayey silt, or sandy silt but can be sand or clay as well.

1.7 Inventory of Provided Materials

Southern Company and Georgia Power provided AMEC with several documents pertaining to the design and operation of Plant Yates. These documents were used in the preparation of this report and are listed in Appendix C, Inventory of Provided Materials.

2.0 FIELD ASSESSMENT

2.1 Visual Observations

AMEC performed visual assessments of Plant Yates's Ash Ponds 1, 2, 3, A, B, B', C and the Gypsum Pond on May 10th and 11th, 2010. Assessment of the ash ponds was completed in general accordance with *FEMA's Federal Guidelines for Dam Safety, Hazard Potential Classification System for Dams, April 2004*. The EPA Coal Combustion Dam Inspection Checklist and Coal Combustion Waste (CCW) Impoundment Inspection Form were completed for each ash pond during the site visit and provided to the EPA via email five business days following the site visit. Appendix A contains copies of the completed checklist forms. Photo location site maps for each ash pond, as well as descriptive photos, can be found in Appendix B. Rainfall data for the Atlanta, Georgia area was collected for April, 2010 and the days in May prior to the site visit. The rainfall for April was about an inch below average. A rather sizeable rain of 2.8 inches fell seven days before the visit. Table 2, below, summarizes the rainfall data for the days and month immediately preceding AMEC's site visit.

Table 2. Plant Yates Rainfall Data

Rainfall Prior to Site Visit	
Date	**Rainfall (in.)**
May 1, 2010	Trace
May 2, 2010	0.0
May 3, 2010	2.81
May 4, 2010	0.0
May 5, 2010	0.0
May 6, 2010	0.0
May 7, 2010	0.0
May 8, 2010	0.0
May 9, 2010	0.0
Total (7 days prior to visit)	2.81
April Rainfall	2.56
Total (30 days prior to visit)	5.37

2.2 Visual Observations - Ash Pond 1

Ash Pond 1 is the oldest ash pond at Plant Yates. This pond is located in the northwest area of the plant and adjacent to the coal pile. This ash pond has not been covered, currently serves as a run-off pond for the existing coal pile, and appeared to have approximately 3 feet of free board between the ash/water level and the top of dike.

2.2.1 Ash Pond 1 - Embankments and Crest

Ash Pond 1 has a cross-valley configuration, and according to site visit operations and design drawings (YAT-API 10), the embankment was constructed on the west side in a north to south alignment. An asphalt to gravel road is located on the downstream embankment along the west side of the pond. Minor rutting and trees growing on the embankment slope were observed on the slope above the road (photo 1-1). Toward the north end of the west side of Ash Pond 1, there is a flatter area of the downstream embankment next to the road. Piles of debris and bare to sparsely vegetated areas were observed in this area (photo 1-6). The downstream embankment slopes west of the road and to the north of the cooling towers were noted to be steep with bare/sparse areas of vegetation (photo 1-7). A new piezometer was noted on the south end of the west side of the pond, where the downstream embankment meets the road (photos 1-13 and 1-16). We understand a seep problem was encountered by a maintenance crew excavating in this area. The seep was investigated and addressed by installation of a "graded aggregate reverse filter" (YAT-API-67). The upstream embankment and portions of the interior of the pond were densely wooded with trees that ranged in size from generally less than 2 inches to 18 inches in diameter. Several larger trees were observed in these areas (photos 1-17 and 1-18).

2.2.2 Ash Pond 1 - Outlet Control Structure

The original outlet control structure for Ash Pond 1 was a 48-inch square concrete riser structure (YAT-API 10). The riser discharged to a 48-inch concrete pipe that extended through the embankment. The top of the structure was visible, but plant personnel stated that the outlet was no longer in service. Ash Pond 1 is full, receives no liquid-borne material and currently serves as the coal pile runoff pond (photo 1-3). The coal pile is located adjacent to and southeast of the pond. The outlet for the coal pile runoff (photo 1-2) is a 48-inch diameter corrugated metal pip (CMP). Ash Pond 1 discharges to Ash Pond 2 through a low volume collection sump that is located on the southwest corner of Ash Pond 1. The coal pile run-off emergency overflow (NPDES Outfall 07) and the low volume collection sump emergency overflow (NPDES Outfall 04) discharge to the river.

2.3 Visual Observations - Ash Pond 2

Ash Pond 2 (shown as Ash Pond 1 on the NID list), is currently the main CCW receiving pond at the plant. Ash Pond 2 is located at the southwest end of the plant directly adjacent to the Chattahoochee River. The pond is divided into an upper and lower portion. The upper pond is used to receive liquid borne CCW's and other wastes from the plant and storm water drainage for a large portion of the site. Water from the upper portion of Ash Pond 2 is directed through a dredged channel to the lower portion of the pond. The lower portion of Ash Pond 2 provides reuse water for plant processes and is the location of Plant Yates' final primary and emergency discharge points, NDPES Outfalls 01 and 02, respectively.

2.3.1 Ash Pond 2 - Embankments and Crest

The Ash Pond 2 dam is a cross-valley structure that exhibited approximately 5 feet of freeboard during the site visit. The visible upstream embankment and crest of the dam (photo 2-10) was assessed as being in good condition. The downstream embankment slope has two benches and three slopes. The upper slope is covered with grass. Ruts and hummocks apparently caused by lawn-mowing equipment were observed along the upper slope (photo 2-5). A depression, possibly caused by drainage, was observed at the toe of the upper slope at the left

abutment (photo 2-7). The upper bench is generally covered with grass and no deficiencies were observed (photo 2-5 and 2-6). The middle slope was covered with stone. The stone was noted to have a wide range of sizes from small, 1-1/2 inch diameter gravel to 12 inch rocks. The shape of the slope was irregular in areas as the placement of the sizes on the slope appeared random with the stone mixed or grouped and others dumped over the slope (photos 2-6 and 2-9). At the toe of the middle slope near the right abutment, a wet area was observed (photo 2-9). We understand this area has been investigated and is being monitored by Georgia Power. No other wet areas or seeps were observed on the middle slope. On the lower bench/slope at the left abutment, a silted-in drainage pipe outlet was observed (photo 2-8). The lower bench was noted to be silted over from recent heavy rains (photo 2-6). The lower slope extends into the Chattahoochee River (photo 2-6 and 2-9) and is armored with stone filled gabion baskets as an erosion protection blanket to the top of the slope. A couple of small holes were observed at the top of the slope behind the blanket. We understand repairs, for undercutting behind the river bank armor due to animal burrows and flooding, are part of the on-going routine maintenance for the dam.

2.3.2 Ash Pond 2 - Outlet Control Structure

The primary discharge structure at Ash Pond 2 is located on the northeast corner of the lower pond and consists of a channel that leads to a concrete holding tank (photo 2-11). A pump transfers water from the tank to the plant for recycling, if necessary. The pump may discharge through a 30-inch diameter fiberglass lined steel pipe to the river. At the time of the field assessment, flow was not discharging from Ash Pond 2 to the River. The pump was not viewed, but a pit containing dual 30-inch discharge pipes, valves, and meters was visible (photo 2-12), indicating possible pumping redundancy. The primary discharge from Ash Pond 2 is equipped with a control system designed to automatically maintain the ash pond water level within a specified range. The emergency discharge, open channel spillway for Ash Pond 2 is located on the right abutment. The spillway entrance includes a concrete control structure and rip-rap on the upstream slope (photo 2-1). The spillway channel through the abutment is lined with concrete filled Fabri-form® erosion protection blanket (photo 2-2). The spillway outfall is constructed with stair-stepping gabion baskets with concrete on the top surface (photo 2-3). The spillway outlet bottom is comprised of bedrock, while the side slopes are armored with gabion baskets (photo 2-4).

2.4 Visual Observations - Ash Pond 3

Ash Pond 3, located at the east end of the site, is full, inactive, and no longer receives liquid-borne CCW materials. Currently, Ash Pond 3 receives decant water from the ash dewatering process that occurs in Ash Pond B'. All discharges from Ash Pond 3 flow to a ditch that flows around the perimeter of the R6 Landfill and ultimately into Ash Pond 2.

2.4.1 Ash Pond 3 - Embankments and Crest

Ash Pond 3 has a cross-valley configuration. A freeboard of approximately 3.5 feet was visible during the site visit. The upstream embankment is covered with grass. Small minor woody vegetation, about 1-inch in diameter, was observed at the base of the downstream slope (photo 3-7). The crest of the dam was surfaced with crushed stone (photo 3-7). The surface of the downstream embankment was covered with grass (photo 3-6). Except for the minor brush on the upstream embankment, the embankments and crest of Ash Pond 3 appeared to be in good condition.

2.4.2 Ash Pond 3 - Outlet Control Structure

The inlet of the primary outlet structure for Ash Pond 3 consists of a 42-inch diameter CMP with a metal trash rack (photo 3-1). The outlet is located beyond the toe of the downstream embankment and discharges to a drainage ditch that ultimately discharges to Ash Pond 2 (photos 3-4 and 3-5). The emergency spillway for Ash Pond 3 is located at the right abutment. The spillway is a grass-lined channel that drains to a ditch around the perimeter of the R6 landfill (photos 3-2 and 3-3).

2.5 Visual Observations - Ash Pond A

Ash Pond A, located north of Ash Pond B in the eastern portion of the site, is currently inactive, covered and receives no liquid-borne material.

2.5.1 Ash Pond A - Embankments and Crest

Ash Pond A has a cross-valley configuration. The upstream and downstream embankments and crest of Pond A are covered with grass (photo A-1). The interior surface of the pond is grassy with wooded areas (photo A-2). The right end of the embankment is breeched, and the pond cannot retain water.

2.5.2 Ash Pond A - Outlet Control Structure

Ash Pond A is breeched at the right abutment by an open channel ditch. Severe erosion of the ditch was noted in the embankment area and downstream (photo A-3). Due to this open-channel breach at the right abutment, Ash Pond A was considered to not have any freeboard. There was not visible outlet control structure.

2.6 Visual Observations - Ash Pond B

Ash Pond B, located in the east section of the site between Ash Pond A, Ash Pond B', and the R6 Landfill, is currently full, inactive and receives no liquid-borne material.

2.6.1 Ash Pond B - Embankments and Crest

Ash Pond B has a cross-valley configuration. A photograph (photo B-1) was taken at the toe of Ash Pond B' looking across Ash Pond B. The remnant of the Ash Pond B dike, which is barely visible, is in the background.

2.6.2 Ash Pond B - Outlet Control Structure

Ash Pond B is full and does not have an outlet control structure. The pond appears incapable of retaining any water.

2.7 Visual Observations - Ash Pond C

Ash Pond C, located in the south central portion of the site, is currently full, inactive, receives no liquid-borne material. The pond is included in the Private Industry Solid Waste Permit for the R6 Dry Ash Landfill.

2.7.1 Ash Pond C - Embankments and Crest

Although Ash Pond C was constructed with a cross-valley configuration, there were no visible signs of the pond's dike at the time of the site visit (photos C-1 and C-2).

2.7.2 Ash Pond C - Outlet Control Structure

Ash Pond C is full, incorporated into theR6 Landfill permit and does not have an outlet control structure. The pond appears incapable of retaining any water.

2.8 Visual Observations - Ash Pond B'

Ash Pond B', located in the northeast section of the site between Ash Pond B and Ash Pond 3, is currently active and utilized to dewater ash dredged from Ash Pond 2. The pond has been divided into 3 cells. While the north cell of the pond is full and inactive (photo B'-6), the two remaining cells are active are referred to as the middle and south cells. The ash dewatering process cycle is alternated between these two active cells. Dredged ash from Ash Pond B' is taken to the R6 Landfill Facility.

2.8.1 Ash Pond B' - Embankments and Crest

Ash Pond B' has a cross-valley configuration, The crest and interior embankments of the cells are covered with ash (photos B'-1, B'-2, B'-6, and B'-7). The downstream slope toward Ash Pond B is covered with grass and separated by a middle bench (photo B'-5). Erosion rills were observed at the toe on the north side of the lower slope (photo B'-3). Plant maintenance personnel began repairs for the rills on the slope after the site visit. Georgia Power provided photos of the repairs (YAT-API 11 and YAT-API 14 through YAT-API 16).

2.8.2 Ash Pond B' - Outlet Control Structure

Water is discharged from Ash Pond B' by gravity flow into Ash Pond 3, where additional sedimentation occurs, then toward and into Ash Pond 2. The emergency spillway for Ash Pond B' consists of an open-channel trapezoidal ditch. The ditch is 13 feet deep with a bottom and top width of 20 and 100 feet, respectively.

2.9 Visual Observations - Gypsum Pond

The Gypsum Solid Waste Facility is located northeast of Ash Pond 1, the coal pile, and the railroad, is currently active, and receives liquid-borne material (gypsum slurry with ash mix) generated from the flue gas scrubbing process. The Gypsum Solid Waste Facility is currently under a Private Industrial Solid Waste Permit.

2.9.1 Gypsum Pond - Embankments and Crest

The gypsum facility has two gypsum dewatering cells that drain into a sediment pond. Each cell is a side-hill and combination incised/dike configuration. The freeboard in the sediment pond at the time of the field visit was 3.5 feet. The crests and embankments of the upper and middle cells were covered with ash and/or gypsum (photos GP-1 and GP-2). No deficiencies were observed on the crests or embankments. The slopes below and to the east of the sediment pond are generally covered with grass and contain areas with small brush/trees (photos GP-3 and GP-4). The sediment pond is lined with HDPE (photo GP-7). Brush and pine trees up to

four inches in diameter were observed on the embankments to the north and east of the pond (photo GP-8).

2.9.2 Gypsum Pond - Outlet Control Structure

Water levels between the ponds are maintained by pumps and a piping system (photos GP-4 and GP-5), which includes a permitted NPDES “emergency” outlet. Excess or recycle water can be piped to Ash Pond 2. Environmental monitoring wells are located down-slope and adjacent to the facility (photos GP-3 and GP-6). The gypsum pond has no open channel emergency outlet.

2.10 Monitoring Instrumentation

There are six existing piezometers located at Ash Pond 3. A total of ten new piezometers were installed at Ash Ponds 2, A, and B in March of 2010 to determine piezometric levels within and below the embankments for the 2010 Stability Analyses (YAT-API-44). Piezometer installation locations are shown on Figure 9 (YAT-API 044). Typical well construction for 2010 piezometer installations consisted of a 2-inch diameter PVC pipe, 10-foot slotted screen, silica sand filter pack and a Bentonite seal. Plant personnel indicated that piezometer levels are read each month.

3.0 DATA EVALUATION

3.1 Design Assumptions

AMEC has reviewed provided documentation related to design assumptions regarding both hydraulic adequacy and dike stability. However, some design assumptions were not available in the documentation, and have been listed as not provided where necessary.

3.2 Hydrologic and Hydraulic Design

No hydrologic information was provided for current conditions at the facility. Historic hydrologic information was provided for Ash Pond 2, 3, and Ash Pond B'. A summary of the provided historic information is described in the sections below.

3.2.1 2001 Analysis of Ash Pond 3 with Proposed Ash Stack

A 2001 *Analysis of Ash Pond 3 with Proposed Ash Stack* calculation (YAT-API 057) was completed by Southern Company engineers. The purpose of this calculation was to evaluate the impact of proposed ash stacking within Ash Pond 3 on volumes and discharge from that pond, as well as to analyze the effects of those volumes and discharge on Ash Pond 2.

At the time the calculations were performed, conditions were such that Ash Pond 3 was discharging "through the Emergency Spillway at a rainfall event of less than 2 inches" and was "overtopping the dike at the 50-year storm." It was also noted that Ash Pond 2 was discharging "through the emergency spillway at a rainfall event of approximately 2.6 inches (more frequently than a 1-year storm event)."

Proposed modifications included dredging of the southern end of Ash Pond 3 to create more storage volume that would "make up for the volume lost by stacking the ash," lowering the 42-inch standpipe "to reduce the peak outflow and volume from current conditions," and widening the spillway base to 15 feet while maintaining the elevation at 752 feet. Regarding Ash Pond 2, the calculation also noted that, although the pond had been dredged sometime between 1997 and 2001 and the modifications to Ash Pond 3 would reduce peak flows and volumes into the pond, "approximately 150 acre-feet of additional storage" would be required to provide adequate volume for co-treatment purposes.

Review of provided documentation did not locate any reference to construction activities or implementation of these proposed hydraulic and hydrologic modifications regarding Ash Ponds 2 and 3.

3.2.2 1977 Ash Pond B' Embankment Height Increase

A study entitled *AMAX Resource Recovery Systems, Inc. Plant Yates Project, Report for Hydrology Evaluation and Storm Drainage Routing Scheme for Ash Pond B'* (YAT-API 050), was written by Harry Hendon and Associates in April 1977 "to evaluate the site hydrology, design the storm and diversion channels, and to do the site surveying for the proposed construction" involved in raising the pond embankment from elevation 770 to 780 feet. Atlanta Testing and Engineering Company completed design of the structural evaluation and design of the proposed embankment alterations and height increase in a report entitled *Subsurface Exploration Modifications to B' Dike and Pond*, dated April 1977 (YAT-API 051).

According to the hydrology report, approximately 74 acres would be tributary to Ash Pond B' once the embankment was raised to elevation 780 feet; however, the tributary area of the existing condition was not provided. Part of the tributary area, the region located to the northeast of Highway 27 Alt., fed existing storm drainage culverts located beneath the roadway and an existing railroad. The construction, in addition to raising the embankment height, involved the following modifications;

- construction of a dike, in the northern portion of Ash Pond B', and a connected diversion channel, to receive flow from the storm culverts under the roadway and railroad and to route that tributary flow around the perimeter of the Ash Pond B', respectively;

- construction of a new Ash Pond B' overflow channel, since the existing channel in use at elevation 770 feet would be eliminated;

The proposed diversion channel, in addition to routing the runoff from the northeast portion of the tributary acreage, was designed, according to the hydrology report, to intercept and carry flow from the ash pond's newly constructed overflow channel as well. Both channels were designed to convey the "100-year re-occurring storm" flow which was calculated to be approximately, 252 cubic feet per second (cfs). Actual hydrologic and hydraulic calculations were not provided with the documentation that AMEC was given, as a result is was unclear whether the flow rate of 252 cfs solely reflected the 74 acres outside the pond or if runoff from the pond's surface area (29.8 acres) was also included. Additionally, the duration of the '100-year re-occurring storm' was not defined. The report stated that the channel was designed to carry the "flow at a minimum water depth due to the surrounding condition."

The diversion channel dimensions included a bottom width of approximately 12 feet, a side slope ratio of 1:1, a bottom slope of 0.5 percent, and a 100-year flow depth of 3.8 feet (downstream of the overflow channel). The overflow channel was designed to discharge at the proposed pond water surface elevation of 776 feet. According to the report, "the overflow channel was also designed with a minimum depth of flow to keep the surcharge on the pond at a minimum." A maximum flow depth of 1.5 feet in the overflow channel was estimated for the 100-year storm.

The Ash Pond B' freeboard was set at four feet based on "100 mile per hour wind and a fetch of 0.27 miles." Additionally, the report states that this freeboard amount was "calculated assuming that the overflow channel was constructed to elevation 776 feet initially, which would be a depth of 10 feet of water above the existing ash. The four feet of freeboard should be more than adequate since, as has been previously discussed, the owner intends to raise the pond level in increments of 1 to 2 feet; and also considering that the ash will be hydraulically placed along the upstream side of the dike."

Documentation provided to AMEC indicates that the height of the embankment at Ash Pond B' was raised "at some time" to an elevation of 790 feet (YAT-API 069). No other information was provided regarding hydrologic or hydraulic conditions at the increased dam height.

3.2.3 Other Hydraulic and Hydrologic Information

Only minor references to general drainage conditions exist within the provided documentation. Background information provided for the ash ponds in the June 2010 Stability Analyses (YAT-API 069) and other documentation submitted to AMEC indicates that:

- drainage from Ash Pond 1 (currently acting as a catchment area for coal pile runoff) discharges through a low volume collection sump and is pumped into Ash Pond 2;
- surface drainage originating from the Ash Ponds A & B areas empties into Ash Pond 2 via surface ditches;
- all of Ash Pond C historically and currently drains under Dyer Road to Ash Pond 2;
- Ash Pond 3 serves as a settling basin for decant water from Ash Pond B'. After water is decanted from AP3 it is conveyed in a ditch into Ash Pond 2;
- generally, water from AP 2 is recycled through the plant by pumping; and,
- Plant Yates' NPDES permit allows the primary plant discharge (NPDES Final outfall 01) and the emergency discharge (NPDES outfall 02) from Ash Pond 2 to be sent to the Chattahoochee River.

3.3 Structural Adequacy & Stability

The Georgia Department of Natural Resources Environmental Protection Division outlines rules and regulations for dam safety in Standards for the Design and Evaluation of Dams (391-3-8-.09). The regulations state that all Category I dams must be stable under all conditions of construction and/or operation of the impoundment. Earthen dams, when analyzed using the methods, guidelines, and procedures of the agencies listed in the regulations to determine safety factors, can be considered to have acceptable stability if the analyses yield at least the minimum safety factors shown in Table 3.

To analyze the structural adequacy and stability of the Ash Ponds at Plant Yates, AMEC reviewed the material provided by Georgia Power with respect to the load cases shown in Table 3. Factors of safety documented in the provided material were compared with those factors outlined in Table 3 to help determine whether the impoundments meet the requirements for acceptable stability.

Table 3. Georgia EPD Minimum Required Dam Safety Factors

Load Case	Required Minimum Factor of Safety
End of Construction	1.3
Steady State Seepage	1.5
Steady State Seepage with Seismic Loading	1.1
Rapid Drawdown (Upstream)	1.3
Submerged Toe with Rapid Drawdown	1.3

3.3.1 June 2010 Slope Stability Analyses

A Slope Stability Analyses for Dikes for Ash Ponds 1, 2, 3, A, and B' (YAT-API 069) was completed in June 2010 by Southern Company's Engineering and Construction Services Division (SCECS). A summary of this 2010 Analysis, by Ash Pond, is provided below. Comments and recommendations regarding this analysis are provided in Section 4.0 of this Assessment Report.

Background information for Ash Ponds B and C was provided, however, the dikes for these ponds were not analyzed for stability and no results were published in the 2010 Analyses. SCECS stated that "according to topographic maps and site visits, Ash Pond B dike appears to have been filled in downstream such that it is not more than 10 feet tall in any section." Additionally, "any maximum sections of the dike were very small and inaccessible with conventional drilling equipment due to the amount of overhead transmission lines crossing the dike area." SCECS believes that failure of the dike is unlikely due to the fill placed downstream. Regarding Ash Pond C, SCECS stated that review of records and site visits show that Ash Pond C has been "covered with approximately 2 feet of clay and grassed." The original dike was thought to be no more than 10 feet tall, and at present, the pond has been taken over by the expansion of the R6 Landfill.

SCECS cited the use of GeoStudio 2007 software (Version 7.16, Build 4840), Copyright 1991-2008, GEO-SLOPE International Ltd. and Bishop, Ordinary, Janbu and Morgenstern-Price analytical methods. Only the Morgenstern-Price method results were reported in this recent 2010 Analysis.

Various criteria and assumptions, used by SCECS to produce the slope stability results, are as follows:

- A peak horizontal acceleration (2% probability of exceedence in 50 years) of 0.1 was used. This value was rounded from the value of 0.09522, which was provided for that probability and exceedence for the Plant Yates vicinity on 2002 USGS earthquake acceleration probability maps.

- The source for current minimum criteria values, factors of safety, was USCOE EM 1110-2-1902 (2003).

- Five soil and one ash Shelby tube intact samples were collected during March 2010 drilling operations. Triaxial testing, reported by SCECS to be based on procedures outlined in ASTM D 47675, was performed on those samples to determine soil properties. That ASTM number does not exist; most likely, the correct reference is ASTM D 4767. Table 4 provides soil properties for the stability analyses, including unit weight, friction angle, and cohesion, that were provided in the 2010 Analyses.

- Although Shelby tube samples of ash were collected, the results of the triaxial tests performed on the ash showed that the samples may have been too disturbed to provide reliable ash properties data. As a result, ash properties provided SCECS, and listed in Table 5, were based on remolded samples of ash from various facilities and on past experience.

- Groundwater levels use in the 2010 Analyses include data from several existing piezometers located in Ash Pond 3, as well as newly installed (March 2010) piezometers in Ash Ponds 2, A, and B'.

Table 4 below, summarizes the dikes that were analyzed and any assumptions that were made for individual dikes.

Table 4. 2010 Stability Analyses: Summary of Individual Design Assumptions for Ash Ponds 1, 2, 3, A, and B'

Criteria	Location				
	Ash Pond 1	Ash Pond 2	Ash Pond 3	Ash Pond A	Ash Ponds B'
Cross Section[1]					
Date surveyed	2010	2010	2010	2010	2010
Location	Apparent maximum section; extended to Chattahoochee River	Apparent maximum section; extended to Chattahoochee River	Apparent maximum section; extended from top of dike to apparent toe	Apparent maximum section; extended from top of dike to apparent toe (top of Ash Pond B)	Apparent maximum section; extended from top of dike to apparent toe (top of Ash Pond B)
Borings					
Date Performed	March 2010	March 2010	1997[2]	March 2010	March 2010
Total Completed	1	5	At least 26	2	3[6]
Tiaxial Tests					
Total tests	2	2	No data	No data[3]	3
Material source	fill (1); foundation (1)	fill (1); foundation (1)	No data		Ash (upper 20 feet), crest (1); soil fill (below ash region), crest (1); soil fill, toe (1)
Piezometers					
Date installed	N/A [4, 5]	March 2010	1997	March 2010	March 2010
Total Installed	0	5	11	2	3
Location and Extent	N/A	Crest - 2, fill and foundation; Bench - 2, fill and foundation; Toe - 1 foundation	Crest centerline, abutment, and toe	Center of storage facility -1; Crest (supposed) - 1	Crest - 2, fill and foundation; Toe - 1, foundation

1. Surveyed and developed by Southern Company Services - Civil Field Services. Specific apparent maximum cross section locations were not provided in the 2010 Analyses or any other documentation.
2. Source is 2000 Ash Pond 3 Stability Analysis completed when dike was proposed to be raised from Elevation 755 to Elevation 767. Dike height addition was not completed and top of dike remains at elevation 755.
3. Triaxial tests were not performed. Stored material is ash and dike is composed of compressed ash, neither were recoverable.
4. A water level reading was taken 24 hours after drilling was completed, borings were backfilled with Bentonite.
5. Boring logs from 2001 Cooling Tower geotechnical report were used to estimate soil and groundwater data closer to river.
6. Crest borings were said to be located perpendicular to each of the two dewatering ponds. It was reported that no samples were recoverable in the residuum under the fill.

Soil properties, both historic and recently calculated, used in the 2010 Analyses were reported by SCECS, as shown in Table 5.

Table 5. 2010 Stability Analyses: Summary of Soil Properties

Soil Description	Elevation (ft, approximate)	Unit Weight, ɣ (pcf)	Effective Cohesion, C (psf)	Effective Stress Angle, φ (degrees)
Ash Pond 1				
Clayey Sand Fill	745 - 698	114	115	30
Silty Sand Residuum	724 - 689	117	115	32
Soft Silty Sand Alluvium	715 - 671	117	50	28
Pond Ash	739.5 - 724	80	0	11
Ash Pond 2				
Compacted Clayey Sand Fill	729 - 699	125	144	32
Medium Dense Silty Sand Residuum	706 - 691	125	144	35
Soft ML and MH	696 -669	118	130	30
Soft Clayey Sand Residuum	699 - 675	125	15	28
Pond Ash	724 - 705	80	0	11
Ash Pond 3				
Existing Fill	756 - 718	125.3	280	37.1
Saprolite/PWR	718 - 703	125	0	38
Residual Soil Saturated	728 - 718	121.1	330	29.8
Pond Ash	753 - 728	104.3	0	11
Ash Pond A				
Medium Dense Compacted Ash	780 - 760	105	15	28
Loose Compacted Ash	760 - 743	100	15	24
Dense Silty Sand Residuum	743 - 731	127	70	35
Ash Pond B’				
Compacted Ash	791 - 747	105	15	28
Clayey Sand Fill	770 - 728	125	115	33
Poorly Graded Sand and Silty Sand Residuum	741 - 712	127	72	35

SCECS provided the following summary results of the stability analyses, as shown in Table 6.

Table 6. June 2010 Stability Analyses: Results Summary

Pond and Failure Condition	Computed Factor of Safety	Analysis Method	Required Minimum Factor of Safety[1]
Ash Pond 1			
Steady State	2.1	Grid and Radius	1.5
Seismic	1.7	Grid and Radius	1.1
Ash Pond 2			
Steady State	1.4	Block	1.5
Seismic	1.1	Block	1.1
100-Year Flood Stage El. 711	2.3	Block	
Ash Pond 3			
Steady State	2.8	Grid and Radius	1.5
Seismic	2.1	Grid and Radius	1.1
Ash Pond A			
Steady State	2.1	Block	1.5
Seismic	1.3	Block	1.1
Ash Pond B'			
Steady State	1.6	Grid and Radius	1.5
Seismic	1.2	Grid and Radius	1.1

1 USCOE EM 1110-2-1902 (2003)

Following the tabulation of computed factors of safety, SCECS provided discussion text as well as recommendations for additions to operational inspections conducted by facility personnel.

The first area of results discussion pertained to the riverbank downstream of Ash Pond 2. Based on the stability analysis for this pond, it was determined "that the current soil and slope conditions of the riverbank downstream of Ash Pond 2 should be monitored closely." SCECS stated that a total of three different methods of analyzing the Ash Pond 2 dike were evaluated and included:

- *Grid and Radius Method* - evaluates stability by creating a multitude of potential failure surfaces with specified radii and tangents;
- *Entry and Exit Method* - confines the slope failure to only certain entry and exit points; and
- *Block Method* - allows the user to create a failure surface using specific points on the curvature of the failure surface.

An overall *Grid and Radius* method was used for the riverbank alone and predicted a factor of safety of 0.8. SCECS calculated another factor of safety using the *Entry and Exit* method. This method was applied to the Ash Pond 2 dike only, excluding any effects from the riverbank, and the calculated predicted factor of safety using the Entry and Exit method was 2.4. The *Block* method was also used. SCECS reported that "when the failure surface was forced to expand from the riverbank (where stability is weakest) ***into the toe of the Ash Pond 2 dike*** (where the dike would be affected), the predicted factor of safety was 1.4" (the factor of safety ultimately reported).

SCECS proceeded to provide reasons why the range of stability predictions for Ash Pond 2 did not indicate "immediate danger".

- Conservative assumptions were used to model the riverbank in SLOPE-W because actual survey data, which represented the top of the riverbank to the bottom of the river, was not available at the time of the 2010 Analyses. According to SCECS, "A more intensive survey would need to be done of the entire riverbank before corrective action would be recommended."

- According to results of the SLOPE-W model, indications were "that a failure of the riverbank would not affect the toe of Ash Pond 2 slope." In addition, "immediate" corrective action, to protect the Ash Pond 2 dike itself, would be taken if a failure of the riverbank were to occur.

- The overall factor of safety of 2.4, predicted for the Ash Pond 2 dike alone using the Entry Exit method, indicates the dike itself has enough stability, SCECS feels, that "even if the toe of the dam were undermined, the overall stability of the dam is high enough that corrective measures could be taken before Ash Pond 2 dike would be affected."

- SCECS notes that the factor of safety value of 1.1 for steady state condition that is provided by the USCOE in their document EM 1110-2-1902 (2003) is recommended for new construction. Additionally, SCECS notes, the USCOE document provides information, in section 3-3.c, that states "Acceptable values of factors of safety for existing dams may be less than those for design of new dams, considering the benefits of being able to observe the actual performance of the embankment over a period of time." SCECS notes they believe that 1.4 is an acceptable factor of safety against dike failure "because inspections by plant personnel have not shown any reason for concern over the stability of the Ash Pond 2 dike."

- Since the armored riverbank is currently monitored weekly by plant personnel, SCECS states that "any change in condition of the riverbank would be immediately noted, and corrective action could be taken before the stability of Ash Pond 2 would be compromised."

The second area that SCECS discussed with regard to the results of the 2010 Analyses concerns the flood analysis for the Ash Pond 2 dike. Ash Pond 2 is located within the FEMA 100-year flood plain with a "major flood" elevation of 708.06 feet given for this area. However, NOAA statistics for the Plant Yates vicinity listed a recorded maximum flood elevation of 711.9 feet for the river in this area. Therefore, SCECS completed a *Block* method stability analysis "assuming a flood event of elevation 711 feet." SCECS stated that, "No rapid drawdown analysis was done for this flood event since we believe waters would recede slowly."

SCECS further commented that SLOPE-W models flood event stability as a "static, steady state problem," that does not take embankment scour, the real concern, into account. Erosion control features currently in-place on the riverbank, including armored mats and large rip-rap up to elevation 713 feet, were reported. SCECS recommended that assessment of the condition of these "flood protection devices" should be included in their weekly inspections. AMEC was told that weekly inspections are undertaken, but was not provided with any documentation in support of these inspections.

Lastly, the 2010 Analyses provided discussion pertaining to the ash material that was used in the construction of the dikes for Ash Ponds A and B'. As stated previously, SCECS had difficulty collecting and testing ash samples due to the lack of cohesive properties in ash and the ease in which ash samples can be disturbed. Using historical ash data and engineering judgment to determine ash properties for the SLOPE-W program resulted in outputs that did not predict any stability issues with the ash slopes. SCECS commented that ash, however, is easily eroded and is especially susceptible to runoff. Ash erosion is a fairly quick process, compared to erosion of other soil materials, and can rapidly undermine stability of a structure. Therefore, SCECS recommended that the embankments at Ash Ponds A and B' be included in their weekly inspections and that plant personnel move quickly to repair any noted erosion.

3.3.2 Other Structural Adequacy and Stability Documentation

1969 Ash Pond 2 Stability Analysis

A January 1969 *Report of Subsurface Investigation Addition to Ash Pond Dike*, written by Law Engineering and Testing Company (now MACTEC) for Plant Yates (YAT-API 012) provides a summary of soil properties (total strength properties derived from "Q" or unconsolidated undrained (UU) tests) for the existing embankment at Ash Pond 2 that were calculated from seven borings drilled along the dam's length. These soil properties were used in a 1969 Ash Pond 2 stability analysis that was performed in anticipation of the proposed increase in embankment height. An incomplete stability analysis (YAT-API 0009), which did not include any reference to an author, was provided in the documentation given to AMEC. The two pages that were provided consisted of a rough plan view sketch and a hand drawn cross section indicating the soil parameters used in the analysis, as well as the computed factors of safety. The location of the analyzed cross section was noted as dike Station 3+50. It appears that the laboratory test values were used for stability analysis directly. Typically, design soil strength values are reduced from laboratory values to account for variations in soil properties with the mass of soil that is to be analyzed. This is especially true where a limited number of test values are available. USACE EM 1110-2-1804, Chapter 7-5, a, 4 provides guidance on selection of soil shear strength values.

The factors of safety shown on the 1969 stability analysis (YAT-API 0009) appear to be the "end-of-construction" case and were 2.3 for the upstream face, and 1.6 for the downstream face of the dam.

1977 Ash Pond 3 Stability Analysis

A stability analysis performed in 1977 for Ash Pond 3 (YAT-API 049) includes five stability calculations using an unidentified computer program. Based on handwritten notes at the tops of the computer output pages, modeled scenarios included downstream steady state seepage and two construction conditions with water levels at 717 feet and at 727 feet (saturated below), as well as some other unnamed scenarios. Various soil parameters were listed, but were not organized clearly enough to evaluate. It does seem clear that these soil parameters do not match either the 1969 or 2010 parameters. The document also included hand notes and sketches that were difficult to interpret. The labeled computer output sheets indicated factors of safety to be:

- 1.98 for the steady state seepage condition;
- 1.40 for the construction condition at water surface 727 feet with saturation; and,

- 1.47 for the construction condition with water surface at top of sand layer at elevation 717 feet.

Since the results were not clearly labeled, conclusive statements cannot be made regarding this analysis.

3.4 Foundation Conditions

Ash Pond 1

No documentation was provided regarding foundation conditions for this ash pond.

Ash Pond 2

The January 1969 *Report of Subsurface Investigation Addition to Ash Pond Dike*, written by Law Engineering and Testing Company for Plant Yates (YAT-API 012) and referenced above in Section 3.3.2, describes the soil characteristics in the foundation. Soils collected from borings drilled in the investigation indicated the foundation materials were "hard to very hard fine sandy silts and very dense silty fine to coarse sands."

Ash Pond 3

The *Plant Yates Emergency Ash Pond Geotechnical Report* by the Civil and Mechanical Engineering Department of Georgia Power (YAT-API 052) (approximately 1977) summarized the results of the various material investigations performed with respect to the construction of the Emergency Ash Pond, Ash Pond 3. The foundation conditions beneath the Ash Pond 3 dike structure are described initially by identifying that "the embankment foundation can be divided into two zones: the abutment zone and the flood plain zone." Georgia Power went on to describe an upper and lower horizon in the abutment area. The upper horizon was said to contain "firm to very firm, micaceous, silty, fine to medium sand," while the lower horizon consisted of "very firm to very dense micaceous silty, fine to coarse sand. The horizons lacked a well defined demarcation, and material contained within each horizon likely resulted from "decomposition of the parent crystalline rock beneath." Finer grained material was generally located in the upper horizon, with increased depth bringing a transition from fine to coarse material. Three horizons were used to describe the flood plain portion of the embankment zone. "Highly organic, inter-bedded, silty fine to medium sand, generally classified as 'muck'," was contained in the upper horizon. The intermediate zone contained gravelly sand, while micaceous, silty, fine to coarse sand was found in the lower zone. Like those in the entire abutment zone, soils in the lower horizon of the floodplain zone were said to "derive from decomposition of the crystalline rock below." Soil material found in the upper and intermediate zones "were eroded from the adjacent hillsides and transported and deposited by water-" (i.e., alluvium).

Ash Pond B'

Ash Pond B' dam foundation soils were discussed in Atlanta Testing's April, 1977 report (YAT-API 051), referenced in Section 3.2.1, above. Soils were said to consist of "residual soil with alluvial zones below the fill." The report noted the contact between the fill and alluvial soils appeared "relatively clean with no highly organic material noted," and two to three feet of silty sands with some gravel constituted the alluvium. Thickness of the residual zone, beneath the alluvium or directly beneath the fill, either ranged from four feet to 39 feet, and "consisted

primarily of silty sands at depths, with surface zones of sandy silts with some clay content in the higher elevations. A zone of very high consistency materials, described as partially weathered rock, was found to be beneath the residual zone. A test pit was made in the upper dike foundation area, located in the floodplain of a small stream. The upper 4.5 feet of soil consisted of "very soft dark gray, very clayey sand with organic matter." A one foot layer of "firm sandy clay alluvium" existed below that upper layer. Finally, from 5.5 to 7 feet beneath the existing ground surface, there was a layer of "firm residual soils." It was noted that the thickness of the mucky soft alluvium material became smaller quickly as one moved laterally from the stream location.

Ash Pond A

No documentation was provided regarding foundation conditions for this ash pond.

Ash Pond B

No documentation was provided regarding foundation conditions for this ash pond.

Ash Pond C

No documentation was provided regarding foundation conditions for this ash pond.

Gypsum Pond

No documentation was provided regarding foundation conditions for this pond.

3.5 Operations and Maintenance

Southern Company and Georgia Power perform dam safety surveillance reviews on a semi-annual basis at Plant Yates. A total of seven semi-annual Dam Safety Surveillance Reports (Surveillance Reports) were provided to AMEC for review (YAT-API 037 through 043). The first and last provided reports were for the first half of 2005 and the last half of 2009, respectively. Reports were not submitted for the second half of 2006, the first half of 2007, and the first half of 2008. Information contained on the submitted reports indicates that timely repairs were made of low spots on berms and broken piezometers. Additionally, subsurface drains were installed in at least two locations in the Ash Pond 2 dike during this time period. According to Surveillance Reports, these drains appear to have acted to diminish visible seepage. We note that prior to 2008, only Ash Ponds 2 and 3 were routinely noted in the inspection reports. After 2007, in addition to Ash Ponds 2 and 3, Ash Pond 1 and the Gypsum Pond were included in the inspection reports. None of the routine inspection reports we received included the active Ash Pond B`, or the inactive Ash Ponds A, B and C. Table 7, below, summarizes the document identification number, ash pond coverage, and report date for the Surveillance Reports provided to AMEC.

Table 7. Summary of Provided Dam Safety and Surveillance Reports

Document	Pond Inspected	Date
YAT-API 037	AP2 & AP3	4/22/05
YAT-API 038	AP2 & AP3	7/22/05
YAT-API 039	AP2 & AP3	4/28/06
YAT-API 040	AP2 & AP3	10/23/07
YAT-API 041	AP1, AP2, AP3, Gypsum Pond	12/17/08
YAT-API 042	AP1, AP2, AP3, Gypsum Pond	10/1/09
YAT-API 043	AP1, AP2, AP3, Gypsum Pond	1/15/10

A written summary report (YAT-API 067), dated February 2, 2010, was provided that detailed repair of a minor seepage area on the west dike of Ash Pond 1. Plant personnel installed a "reverse graded aggregate filter" to correct the seepage that was thought to originate from "a wet and saturated condition in the ash materials which had been recently surcharged by an accumulation of rainwater and runoff into the inactive ash pond." A suggestion was included in the report that "an open standpipe piezometer be installed in the backfilled excavation so that the water level could be monitored." However, documentation was not provided to note whether the standpipe had been installed as suggested. The summary report also detailed repair of localized slough areas on the slopes of the diversion dike that is located within Ash Pond 2 (which acts as barrier between upper and lower regions of the pond).

3.5.1 Instrumentation

Historically, minimal impoundment monitoring equipment has been used at Plant Yates. However, provided documentation (YAT-API 056) indicates a total of eleven "temporary" piezometers were installed in the crest and abutments of Ash Pond 3, in 1997. The piezometers were installed as part of what appears to be a preliminary study (YAT-API 054) regarding the creation of a spillway to be located across the top of, and in line with, the existing Ash Pond 3 dike. That study may have been related to year 2000 plans to raise the top of dike to Elevation 767. Documentation was not provided clarifying whether the proposed spillway was created; however, the Ash Pond 3 top of dike elevation was not raised and remains at approximately Elevation 755. A table is provided in the documentation (YAT-API 056) that summarizes piezometer identification numbers (all begin with the letter "D"), reference elevations, as well as groundwater depth and elevation data readings measured in October 1997, November 1997, November 1998, and June 1999 only. The Surveillance Reports, provided for part of the time between 2005 through 2009, reference piezometers as requiring repair of broken units "#4 and #5 in the south end of the dike" (YAT-API 037 and 039) and possibly abandoning those "that are no longer being measured (YAT-API 041)." The October 2009 Surveillance Report (YAT-API 042) indicates that:

- another piezometer was broken,
- existing piezometers "should be preserved should it be necessary to resume measuring them,"
- piezometers "need to be repaired and checked that they are not full of debris," and
- a recommendation was made to install "guard posts" to protect the instrumentation from further damage.

Repairing the broken piezometer, flushing and cleaning of debris filled units and the installation of protective bollards to prevent future damage was recommended again January 2010 Surveillance Report (YAT-API 043). The 2010 Stability Analyses states that no piezometers

were installed at Ash Pond 3 for the analyses since "several piezometers were installed in Ash Pond 3 in 1997." Further, the analyses text indicates historic data from these piezometers was used in the analyses performed for the pond's dike. It appears, based on review of provided documentation, that the four readings referenced above, taken between October of 1997 and June of 1999, comprise the historic data that was referred to for Ash Pond 3. Further, the piezometer location map (YAT-API 044), included as a reference attachment in the 2010 Stability Analyses, identifies a total of six Ash Pond 3 piezometers, labeled EP-1 through EP-6. No other reference was provided that links these six recently referenced "EP" piezometers to the eleven historic "D" piezometers installed in 1997, or to any other documentation.

Table 8 provides summary information for the recently added instrumentation in Ash Ponds 2, A, and B'. Figure 9 illustrates the locations of the impoundment monitoring piezometers. Results from these piezometers do not appear on the submitted reports. Due to the recent installation, a trend cannot be noted at this time.

Table 8. Plant Yates Piezometric Data

Piezometer ID	Location	Date Installed	Material Screened	Surface Elev.	Screen Tip Elev.	Water Surface Elevation (MSL) May 18, 2010
AP2-1 Deep	West Edge Crest	3/8/10	Residuum	729.4	674.5	698.6
AP2-1 Shallow	West Edge Crest	3/9/10	Fill	729.5	707.5	722.5
AP2-2 Deep	West Edge Middle Bench	3/9/10	Residuum	714.4	668.9	697.0
AP2-2 Shallow	West Edge Middle Bench	3/15/10	Fill	715.2	699.2	709.0
AP2-3	Lower Bench	3/11/10	Residuum	698.5	674.6	692.8
APA-1	Crest	3/17/10	Fly Ash	778.4	743.4	758.2
APA-2	Crest at Edge DS Slope	3/18/10	Residuum	780.2	730.7	758.0
APB'-1	North Edge, Center Crest	3/16/10	Residuum	789.2	727.2	756.5
APB'-2	North Edge, East Crest	3/16/10	Fill	789.0	745.5	763.9
APB'-3	East Side Middle Bench	3/17/10	Residuum	768.6	717.0	755.4

3.5.2 State or Federal Inspections

Since the ash ponds at Plant Yates are either Category II structures (Ash Ponds 2 and 3) or uncategorized, as a rule, the state does not inspect the ponds. There was no evidence of past inspections by State or Federal regulatory agencies found in the provided documentation. The state does, however, reevaluate each Category II dam once each 5 year period to determine if adjacent downstream development has increased to a level that would prompt a change in the assigned dam classification category.

4.0 COMMENTS AND RECOMMENDATIONS

Condition assessment definitions, as accepted by the National Dam Safety Review Board, are as follows:

SATISFACTORY

No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions (static, hydrologic, seismic) in accordance with the applicable regulatory criteria or tolerable risk guidelines.

FAIR

No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.

POOR

A dam safety deficiency is recognized for loading conditions which may realistically occur. Remedial action is necessary. POOR may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency. Further investigations and studies are necessary.

UNSATISFACTORY

A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.

NOT RATED

The dam has not been inspected, is not under state jurisdiction, or has been inspected but, for whatever reason, has not been rated.

4.1 Acknowledgement of Management Unit Conditions

I certify that the management units referenced hereinafter were personally assessed by me and was found to be in the following condition:

Ash Pond 1: Poor

AP 1 is rated poor because further critical studies or investigations are needed to identify potential dam safety deficiencies.

Ash Pond 2: Poor

AP 2 is rated poor because further critical studies or investigations are needed to identify potential dam safety deficiencies.

Ash Pond 3: Fair

Ash Pond A: Fair

Ash Pond B: Not Rated

AP B is not rated because it was assessed as “less than low hazard” due to grading activities that, over the years, backfilled over the majority of the embankment, rendering it essentially indiscernible from the surroundings. AP B appears incapable of retaining water.

Ash Pond C: Not Rated

AP C is not rated because it was assessed as “less than low hazard” due grading activities that, over the years, backfilled over the majority of the embankment, rendering it essentially indiscernible from the surroundings. AP C appears incapable of retaining water. Additionally, AP C has been incorporated into the R6 solid waste land fill.

Ash Pond B: Poor

AP B` is rated poor because further critical studies or investigations are needed to identify potential dam safety deficiencies.

Gypsum Pond: Satisfactory.

Additional Information regarding recommendations can be found in Sections 4.2 through 4.8.

4.2 Ash Pond 1

4.2.1 Hydrologic and Hydraulic Recommendations

Ash pond 1 is currently used a sediment control for the coal stockpile. Some of the embankment’s downstream face has been backfilled due to construction of cooling towers. However, the dam is a maximum of 15 feet high and the surface of the ash is sufficiently low to allow accumulation of water. The appropriate design storm rainfall should be applied the impoundment ‘s watershed to assure that the dam can safely store or control the design flow.

4.2.2 Geotechnical and Stability Recommendations

It appears that the stability analyses were performed for the existing loading condition plus a seismic acceleration. It is unclear if the steady state condition includes the peak pool due the design storm event. The analyses presented depicted a grid and radius type search; however, the grid appears to be small and seems to limit the radii of the potential failure circles. The analyses should include an entry and exit type of search that would allow long radius failure surfaces. Furthermore, the failure surfaces appear to be limited to circular surface; the failure surfaces should be optimized.

4.2.3 Monitoring and Instrumentation Recommendations

This ash pond is not actively receiving CCW, but is used for storm water control. There is currently no instrumentation for this structure. However, because the structure is still in use as a sediment pond, it would be prudent to install at least one piezometer to monitor the phreatic surface in the dam.

4.2.4 Inspection Recommendations

This pond has, historically, not had routinely documented inspections. Because this pond is used as a sediment pond and is capable of impounding water, it would be prudent for this pond to have documented formal inspections on a regular basis.

4.3 Ash Pond 2

4.3.1 Hydrologic and Hydraulic Recommendations

Ash pond 2 is currently used for disposal and processing of CCW. This pond also receives almost all the drainage from six of the other ponds at the site prior to recycling the water. The appropriate design storm rainfall should be applied to the impoundment's entire tributary watershed to assure that the dam can safely store or control the design flow.

4.3.2 Geotechnical and Stability Recommendations

It appears that the stability analyses were performed for the existing loading condition plus a seismic acceleration. It is unclear if the steady state condition includes the peak pool due the design storm event. The analyses presented depict several methods of search; however, the extent of the searches appears to be limited and seems to prevent several modes of failure. The failure surfaces should also be optimized to allow for non-circular or non-planer failures.

The analyses discuss the loss of the riverbank, which supports the toe of the dam, and indicates that *"…we feel that even if the toe of the dam were undermined, the overall stability of the dam is high enough that corrective measures could be taken before Ash Pond 2 dike would be affected."* After consideration and review of flood events over the recent past, a prudent engineer could perceive that erosion of the toe of the dam and the riverbank during a flood event may be sufficient to cause total failure of the dam, without allowing protection or repairs to the dam during the event. FEMA's 1% recurrence flood is a flood that has a 1% chance of occurring in any one year; for a dam with a 50 or 100 year design life, the probability of the dam experiencing such a flood is high. It would be prudent to provide scour and erosion protection of the riverbank and toe of the dam to a level sufficient to protect them from a flood event well in excess of the minimum criteria. Such a flood event might include the flood of record or the 0.2% recurrence event for that portion of the Chattahoochee River.

4.3.3 Monitoring and Instrumentation Recommendations

AMEC has reviewed provided information and instrumentation records for Ash Pond 2 and determined that Georgia Power has adequate inspection practices. These instruments were installed only in that last few months, so it would be prudent for Plant Yates to document monitoring more frequently than normal until base line phreatic readings are apparent. AMEC recommends that the current inspection program and practices be continued for this ash pond.

4.3.4 Inspection Recommendations

AMEC has reviewed provided information and inspection records for Ash Pond 2 and determined that Georgia Power has adequate inspection practices. AMEC recommends that the current inspection program and practices be continued for this ash pond.

4.4 Ash Pond 3

4.4.1 Hydrologic and Hydraulic Recommendations

Ash Pond 3 is currently used for processing of CCW. This pond also receives almost all the drainage from Ash Pond B` before discharging into Ash Pond 2. YAT-API 057, from 2001, provided information regarding analyses of design storm events for AP 3. That document appeared to indicate that the dike overtopped during the 2% (50-year) storm event. Since the service life of this facility is generally 50 to 100 years (it is now 33 years old), there is a high probability that the dam will experience a storm event in excess of the "design" storm. AMEC recommends that the design storm be reevaluated in light of current standards and the appropriate design storm rainfall should be applied to the impoundment's entire tributary watershed to assure that the dam can safely store or control the design flow.

4.4.2 Geotechnical and Stability Recommendations

It appears that the stability analyses were performed for the existing loading condition plus a seismic acceleration. It is unclear if the steady state condition includes the peak pool due the design storm event. The analyses presented depict only the sliding block methods of search; however, the extent of the searches appears to be limited. AMEC recommends that the slope stability analyses be performed so they include design storm peak/surcharge stage water levels that reflect appropriate phreatic surfaces due to pre-saturation by appropriate antecedent precipitation and the limited outflow capacity of the pond. Likewise, the stability analyses should consider all critical stages during the life of the facility, such as maximum pool area and any potential surcharges, as well as likely loading combinations. Furthermore, the previous analyses limit the failure surfaces to linear surfaces; AMEC recommends that the slope stability analyses include entry and exit type searches that would allow long radii failure circles as well as slip surface optimization to allow for non-linear and non-circular failure surfaces.

4.4.3 Monitoring and Instrumentation Recommendations

AMEC has reviewed provided information and instrumentation records for Ash Pond 3. The PZs installed in 1997 appear to have been temporary and don't appear to have been monitored since 1999. AMEC recommends that new PZ(s) be installed and monitored for AP 3.

4.4.4 Inspection Recommendations

AMEC has reviewed provided information and inspection records for Ash Pond 3 and determined that Georgia Power has adequate inspection practices. AMEC recommend that the current inspection program and practices be continued for this ash pond.

4.5 Ash Pond B`

4.5.1 Hydrologic and Hydraulic Recommendations

Ash Pond B` is currently used for processing of CCW and discharges into Ash Pond 3. Based upon YAT API-050, it appears that AshPond B` was designed to safely store or pass the 1% recurrence (100-year) storm, however, the document does not indicate the storm duration. Since the service life of this facility is generally 50 to 100 years (it is now about 33 years old), there is a high probability that the dam will experience a storm event equal to or greater than the "design" storm. AMEC recommends that the design storm be re-evaluated in light of current

standards and the appropriate design storm rainfall should be applied to the impoundment's entire tributary watershed to assure that the dam can safely store or control the design flow.

4.5.2 Geotechnical and Stability Recommendations

It appears that the stability analyses were performed for the existing loading condition plus a seismic acceleration. It is unclear if the steady state condition includes the peak pool due the design storm event. The analyses presented depict only the grid & radius methods of search; however, the extents of the searches appear to be extended. AMEC recommends that the slope stability analyses be performed so they include design storm peak/surcharge stage water levels that reflect appropriate phreatic surfaces due to pre-saturation by appropriate antecedent precipitation and the limited outflow capacity of the pond. Likewise, the stability analyses should consider all critical stages during the life of the facility, such as maximum pool area and any potential surcharges, as well as likely loading combinations. Furthermore, the previous analyses limit the failure surfaces to circular surfaces; AMEC recommends that the slope stability analyses include entry and exit type searches that would allow long radii failure circles as well as slip surface optimization to allow for non-linear and non-circular failure surfaces.

4.5.3 Monitoring and Instrumentation Recommendations

AMEC has reviewed provided information and instrumentation records for Ash Pond B`. These instruments were installed only in that last few months, so it would be prudent for Plant Yates to document monitoring more frequently than normal until base line phreatic readings are apparent. AMEC recommend that the current inspection program and practices be continued for this ash pond.

4.5.4 Inspection Recommendations

This pond has, historically, not had routinely documented inspections. Because this pond is used to receive CCW and is capable of impounding water, AMEC recommends that this pond have documented formal inspections on a regular basis.

4.6 Ash Pond A

4.6.1 Hydrologic and Hydraulic Recommendations

Ash Pond A is currently inactive and the dam appears to be breached. Drainage from this unit appears to flow overland or in ditches to Ash Pond 2. Erosion and vegetation, for the most part, appear to be under control. AMEC recommends that Georgia Power continue to periodically maintain this unit to provide erosion and vegetation control.

4.6.2 Geotechnical and Stability Recommendations

It appears that the stability analyses were performed for the existing loading condition plus a seismic acceleration. The analyses presented depict only the sliding block methods of search. AMEC recommends that the slope stability analyses be performed so they reflect appropriate phreatic surfaces due to pre-saturation by appropriate antecedent precipitation. Furthermore, the previous analyses limit the failure surfaces to linear surfaces; AMEC recommends that the slope stability analyses include entry and exit type searches that would allow long radii failure circles as well as slip surface optimization to allow for non-linear and non-circular failure surfaces.

4.6.3 Monitoring and Instrumentation Recommendations

AMEC has reviewed provided information and instrumentation records for Ash Pond A. These instruments were installed only in that last few months, so it would be prudent for Plant Yates to document monitoring more frequently than normal until base line phreatic readings are apparent. AMEC recommend that the current inspection program and practices be continued for this ash pond.

4.6.4 Inspection Recommendations

This pond has, historically, not had routinely documented inspections. Because this dam exists and is subject to failure or degradation due to erosion, AMEC recommends that this pond have documented formal inspection on a regular basis.

4.7 Ash Pond B

4.7.1 Hydrologic and Hydraulic Recommendations

Ash Pond B is currently inactive and the dam appears to be breached and buried. Drainage from this unit appears to flow overland or in ditches to Ash Pond 2. Erosion and vegetation, for the most part, appear to be under control. AMEC recommends that Georgia Power continue to periodically maintain this unit to provide erosion and vegetation control.

4.7.2 Geotechnical and Stability Recommendations

No stability analyses are available for Ash Pond B. Likewise, it appears that the dam for Ash Pond B has been partially to mostly buried; AMEC rated this unit as less than low hazard. AMEC recommends that only routine maintenance of vegetation and prevention of erosion is necessary for this unit.

4.7.3 Monitoring and Instrumentation Recommendations

No instrumentation was available for review for this unit. It appears that the dam for Ash Pond B has been partially to mostly buried; AMEC rated this unit as less than low hazard. AMEC recommends that only routine maintenance of vegetation and prevention of erosion is necessary for this unit.

4.7.4 Inspection Recommendations

This pond has, historically, not had routinely documented inspections. AMEC recommends that only routine maintenance of vegetation and prevention of erosion is necessary for this unit.

4.8 Ash Pond C

4.8.1 Hydrologic and Hydraulic Recommendations

Ash Pond C has been incorporated into solid waste landfill R6. AMEC recommends that Georgia Power continue to periodically maintain this unit to provide erosion and vegetation.

4.8.2 Geotechnical and Stability Recommendations

Ash Pond C has been incorporated into solid waste landfill R6. AMEC recommends that only routine maintenance of vegetation and prevention of erosion is necessary for this unit.

4.8.3 Monitoring and Instrumentation Recommendations

Ash Pond C has been incorporated into solid waste landfill R6. AMEC rated this unit as less than low hazard. AMEC recommends that only routine maintenance of vegetation and prevention of erosion is necessary for this unit.

4.8.4 Inspection Recommendations

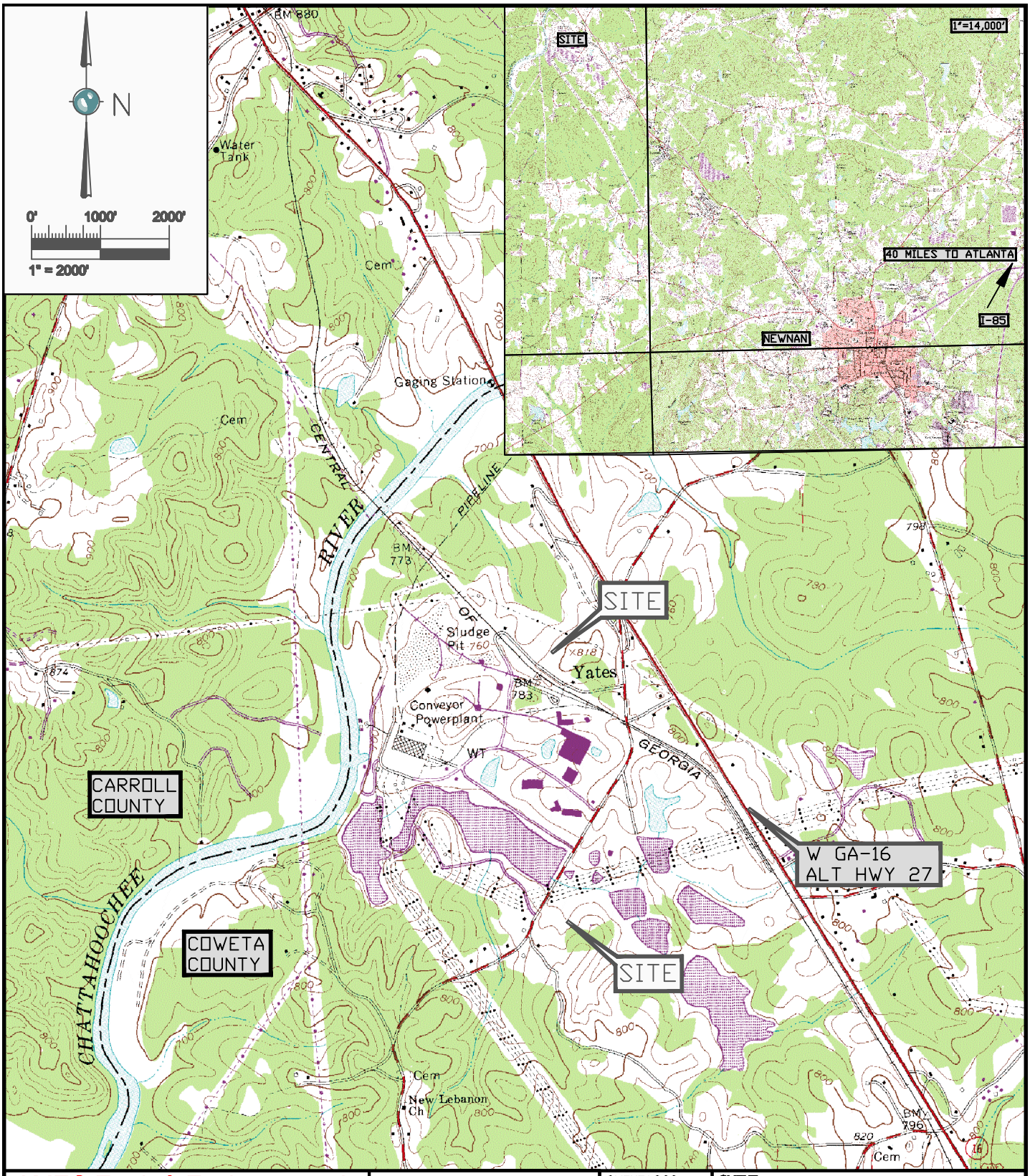
Ash Pond C has been incorporated into solid waste landfill R6. This pond has, historically, not had routinely documented inspections. AMEC recommends that only routine maintenance of vegetation and prevention of erosion is necessary for this unit.

5.0 CLOSING

This report is prepared for the exclusive use of the Environmental Protection Agency for the site and criteria stipulated herein. This report does not address regulatory issues associated with storm water runoff, the identification and modification of regulated wetlands, or ground water recharge areas. Further, this report does not include review or analysis of environmental or regional geo-hydrologic aspects of the site, except as noted herein. Questions or interpretation regarding any portion of the report should be addressed directly by the geotechnical engineer.

Any use, reliance on, or decisions to be made based on this report by a third party are the responsibility of such third parties. AMEC accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

The conclusions and recommendations given in this report are based on visual observations, our partial knowledge of the history of Plant Yates impoundments, and information provided to us by others. This report has been prepared in accordance with normally accepted geotechnical engineering practices. No other warranty is expressed or implied.



AMEC Earth & Environmental
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Louisville, Ky 40299
(502) 267-0700

CLIENT LOGO

CLIENT: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS	DWN BY: CAE	DATUM:	DATE: 6/2/10
TITLE: GEORGIA POWER PLANT YATES, NEWNAN, GA SITE LOCATION & VICINITY MAP	CHK'D BY: JHB	REV. NO.:	PROJECT NO: 3-2106-0174.0400
	PROJECTION:	SCALE: AS SHOWN	FIGURE No. 1

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

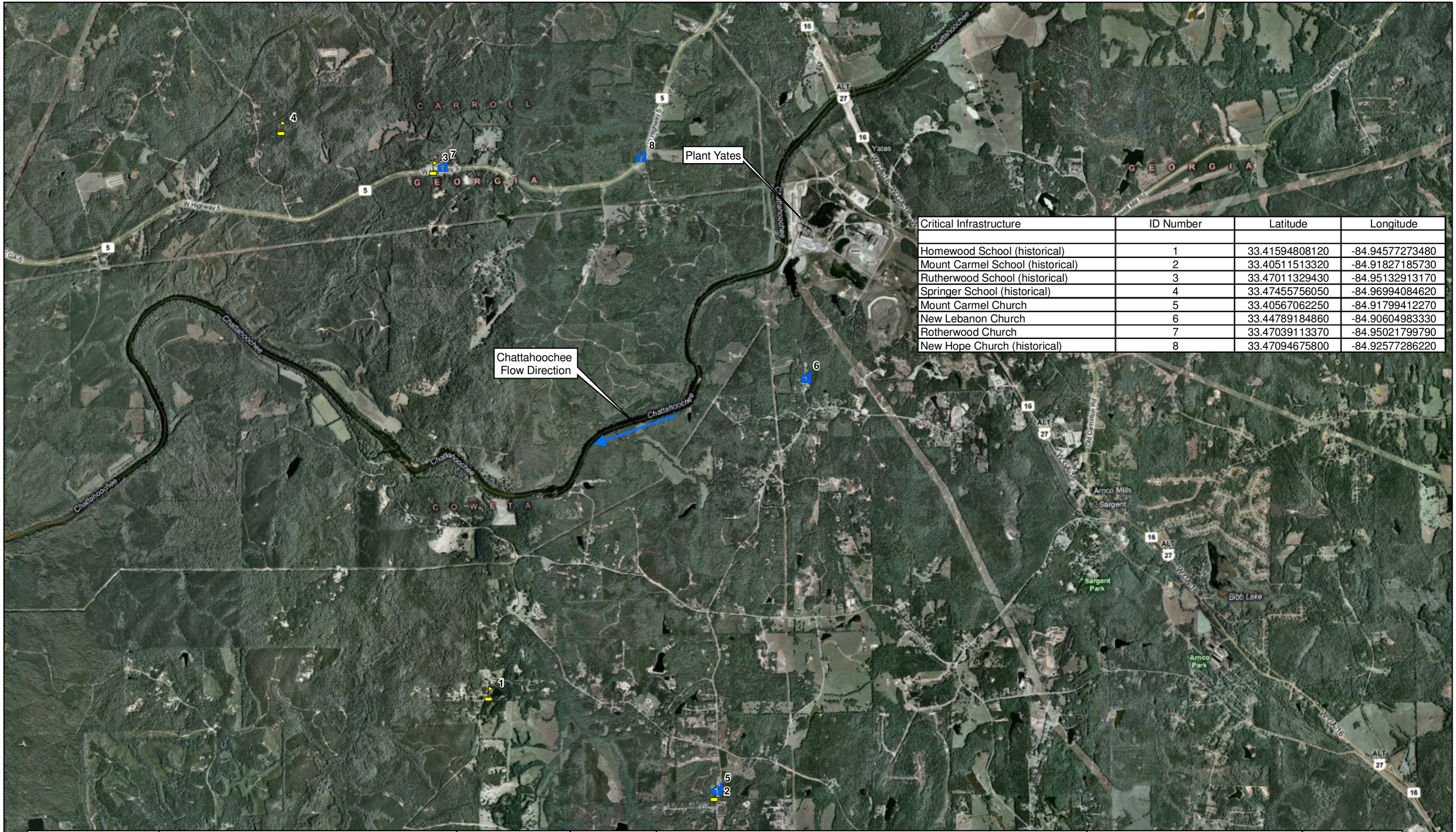
AMEC Earth & Environmental
690 Commonwealth Business Center
11003 Bluegrass Parkway
Louisville, KY 40299

DWN BY: ATJ
DWN BY: MS
Datum: NAD 83
Projection: Albers
Scale: As Shown

ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

GEORGIA POWER
PLANT YATES NEWNAN, GA
AERIAL SITE PLAN

REV. No.: A
Date: 6-22-2010
Project No: 3-2106-0174-0100
Figure No: 2



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Mount Carmel School (historical)	2	33.40511513320	-84.91827185730
Rutherwood School (historical)	3	33.47011329430	-84.95132913170
Springer School (historical)	4	33.47455756050	-84.96994084620
Mount Carmel Church	5	33.40567062250	-84.91799412270
New Lebanon Church	6	33.44789184860	-84.90604983330
Rotherwood Church	7	33.47039113370	-84.95021799790
New Hope Church (historical)	8	33.47094675800	-84.92577286220

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DRAWN BY: ATJ
CHK'D BY: MS
DATUM: NAD83
PROJECTION: Albers
SCALE: AS SHOWN
DATE: 5/21/2010

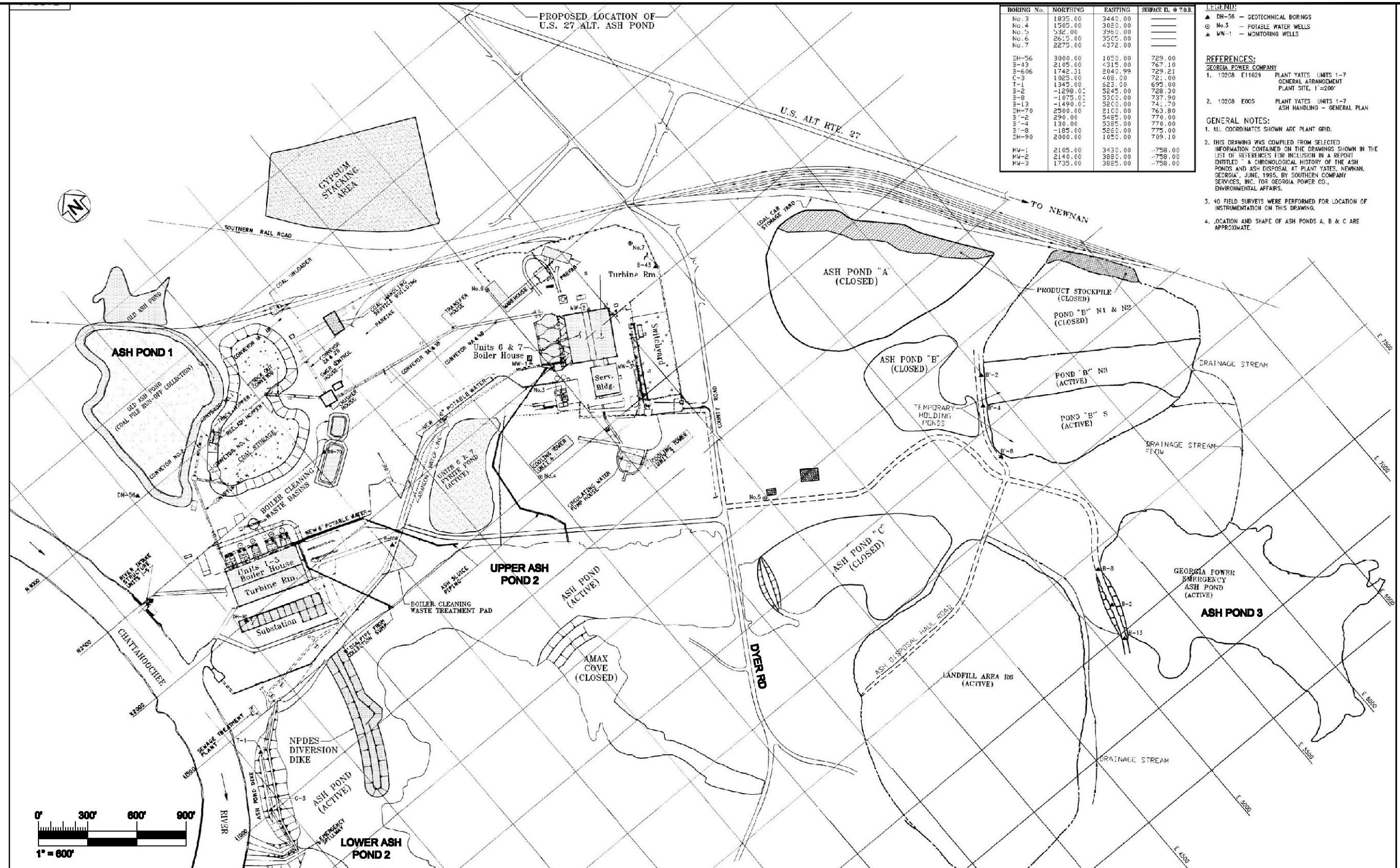
ASSESSMENT OF DAM SAFETY OF
COAL COMBUSTION SURFACE IMPOUNDMENTS

GEORGIA POWER
PLANT YATES NEWNAN, GA
CRITICAL INFRASTRUCTURE MAP

N
0 0.5 Miles
0 1 Kilometers

Notes: Critical infrastructure data provided by ESRI

FIGURE
3



BORING No.	NORTHING	EASTING	SURFACE EL. @ T.O.B.
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No.4	1505.00	3020.00	———
No.5	932.00	3460.00	———
No.6	2615.00	3505.00	———
No.7	2275.00	4372.00	———
DH-56	3000.00	1050.00	729.00
B-43	2105.00	4315.00	767.10
B-606	1742.31	2040.99	729.21
C-3	1925.00	408.00	721.00
T-1	1345.00	823.00	695.00
B-2	-1298.00	5245.00	728.30
B-8	-1075.00	5300.00	737.90
B-13	-1490.00	5820.00	741.70
DH-70	2500.00	2100.00	763.80
B'-2	290.00	5485.00	770.00
B'-4	130.00	5385.00	770.00
B'-8	-185.00	5260.00	775.00
DH-90	2000.00	1050.00	709.10
MW-1	2105.00	3430.00	-758.00
MW-2	2140.00	3880.00	-758.00
MW-3	1735.00	3885.00	-758.00

LEGEND:
- ▲ DH-56 — GEOTECHNICAL BORINGS
- ⊙ No.3 — POTABLE WATER WELLS
- ▲ MW-1 — MONITORING WELLS

REFERENCES:

GEORGIA POWER COMPANY

1. 10208 E11629 PLANT YATES UNITS 1-7 GENERAL ARRANGEMENT PLANT SITE, 1"=200'
2. 10208 E005 PLANT YATES UNITS 1-7 ASH HANDLING - GENERAL PLAN

GENERAL NOTES:

1. ALL COORDINATES SHOWN ARE PLANT GRID.
2. THIS DRAWING WAS COMPILED FROM SELECTED INFORMATION CONTAINED ON THE DRAWINGS SHOWN IN THE LIST OF REFERENCES FOR INCLUSION IN A REPORT ENTITLED "A CHRONOLOGICAL HISTORY OF THE ASH PONDS AND ASH DISPOSAL AT PLANT YATES, NEWNAN, GEORGIA", JUNE, 1995, BY SOUTHERN COMPANY SERVICES, INC. FOR GEORGIA POWER CO., ENVIRONMENTAL AFFAIRS.
3. NO FIELD SURVEYS WERE PERFORMED FOR LOCATION OF INSTRUMENTATION ON THIS DRAWING.
4. LOCATION AND SHAPE OF ASH PONDS A, B & C ARE APPROXIMATE.

NOTE: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC EARTH & ENVIRONMENTAL REPORT

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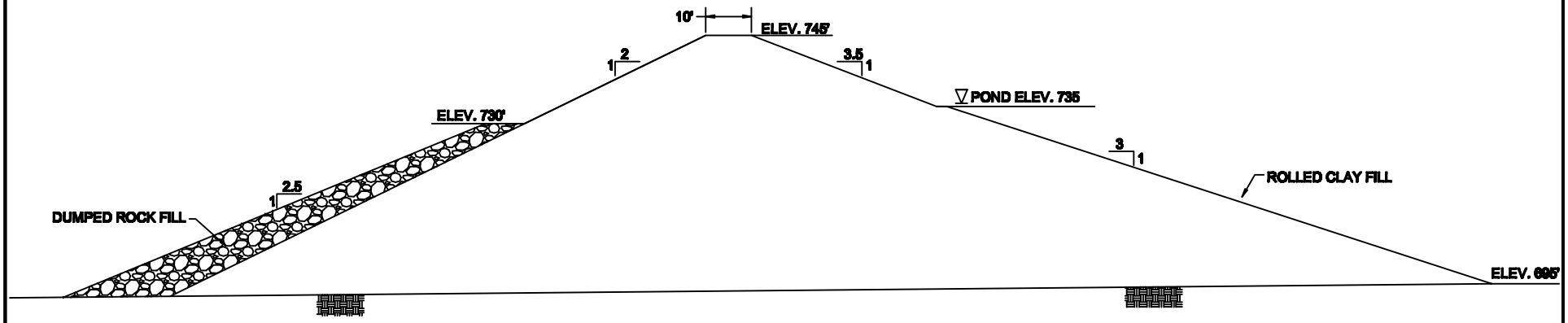
DWN BY: CAE
CHK'D BY: MS
DATUM:
PROJECTION:
SCALE: AS SHOWN

PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA
SITE MAP

DATE: 6/21/10
PROJECT NO: 3-2106-0174.0400
REV. NO.:
FIGURE No. 4

S:\Geosciences\Proposals\EPA Coal Impoundment Inspection\March 2010 RFP Pro\Georgia Power\Plant Yates\Figures\fig4-site.dwg — Layout1 — Jun. 23, 2010 10:40am — chris.eger



CLIENT LOGO	CLIENT: UNITED STATES ENVIRONMENTAL PROTECTION SERVICES	DWN BY: CAE CHK'D BY: MS	PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS	REV. NO.: A DATE: 6/21/10
AMEC Earth & Environmental 690 Commonwealth Center 11003 Bluegrass Parkway Louisville, Ky 40299 (502) 267-0700		DATUM: PROJECTION: SCALE: NTS	TITLE: GEORGIA POWER PLANT YATES, NEWNAN, GA ASH POND 1 TYPICAL CROSS-SECTION	PROJECT NO: 3-2106-0174.0400 FIGURE No. 5

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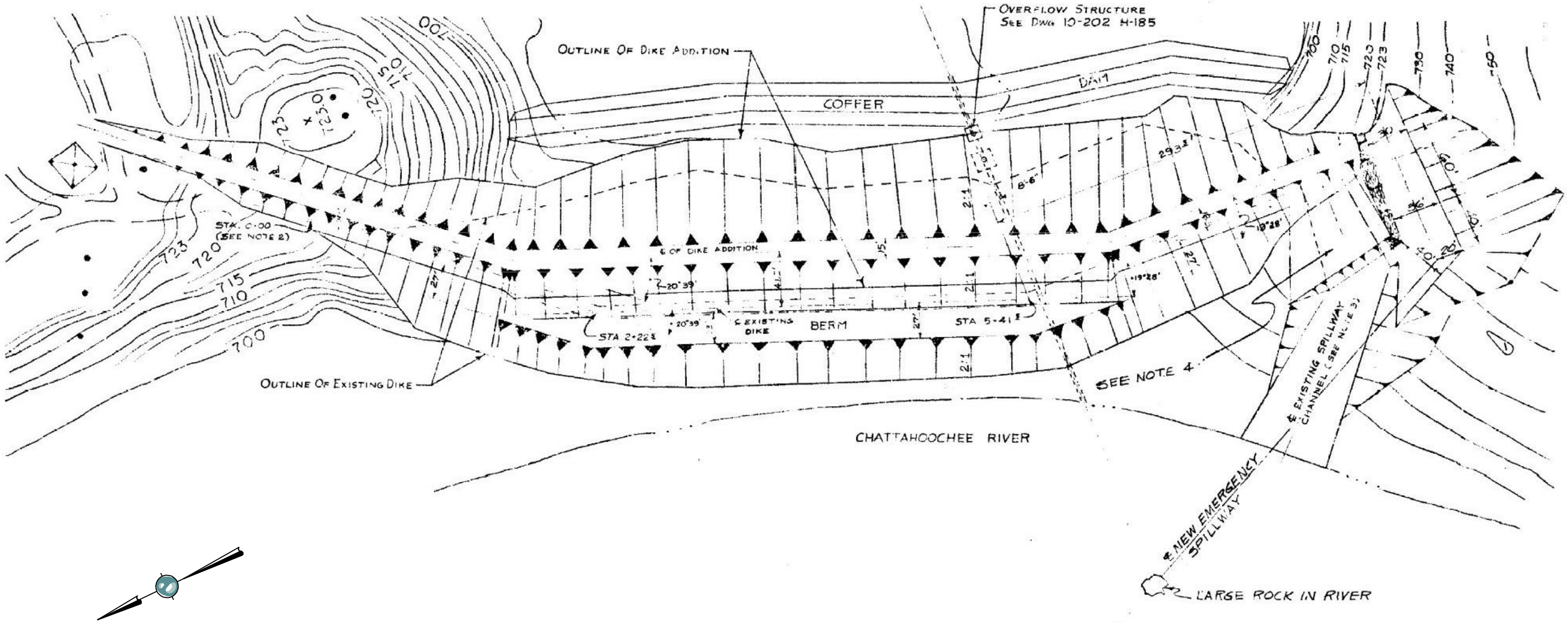

NOTE: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC EARTH & ENVIRONMENTAL REPORT

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CHK'D BY:	MS
DATUM:	
PROJECTION:	
SCALE:	AS SHOWN

PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA
ASH POND 2 DAM PLAN VIEW
(ORIGINAL AND ADDITION)

DATE:	6/21/10
PROJECT NO:	3-2106-0174.0400
REV. NO.:	
FIGURE No.	6

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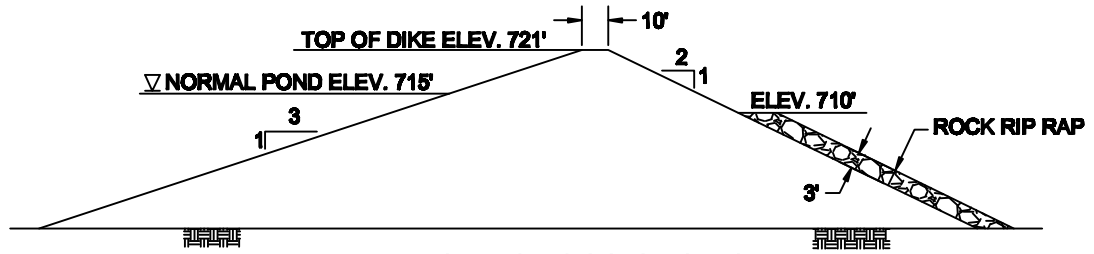
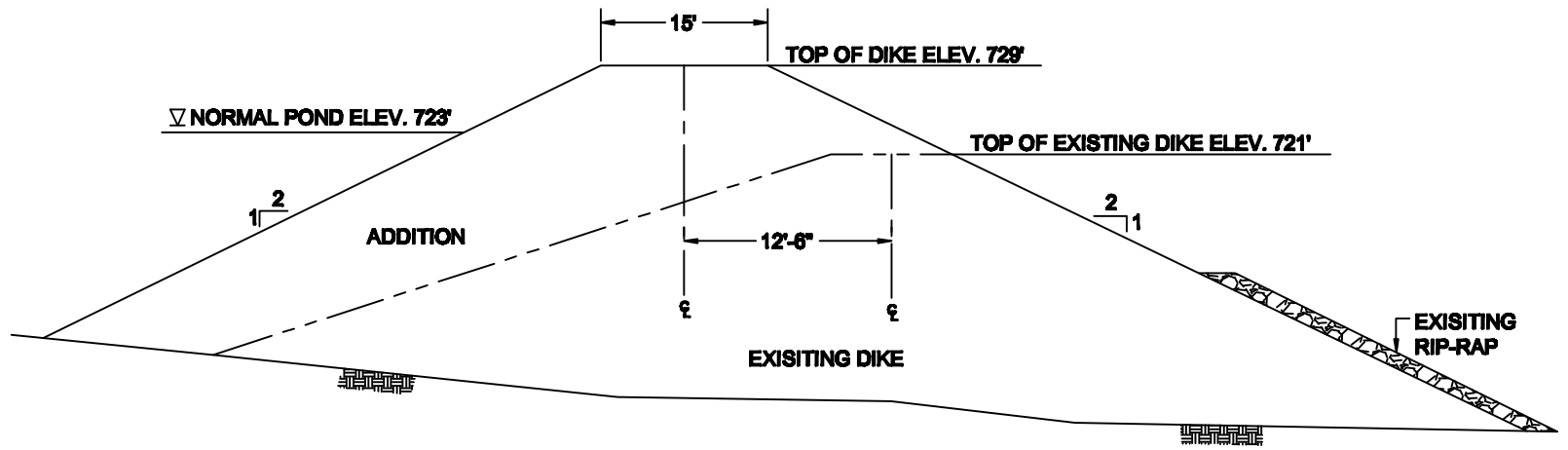
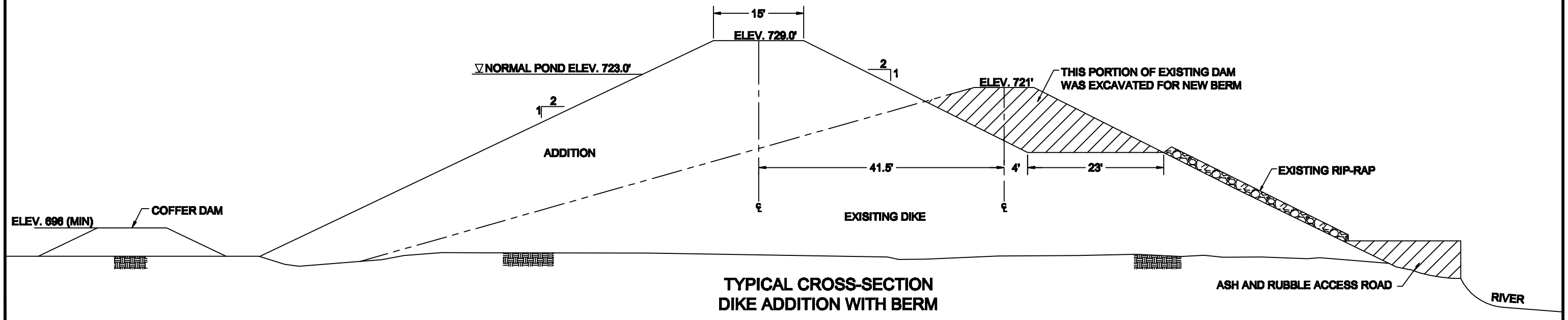


TYPICAL CROSS-SECTION
ORIGINAL DIKE



TYPICAL CROSS-SECTION
DIKE ADDITION WITHOUT BERM



TYPICAL CROSS-SECTION
DIKE ADDITION WITH BERM

NOTE: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC EARTH & ENVIRONMENTAL REPORT

CLIENT LOGO

CLIENT: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

AMEC Earth & Environmental
680 Commonwealth Center
11003 Bluegrass Parkway
Louisville, Ky 40299
(502) 267-0700

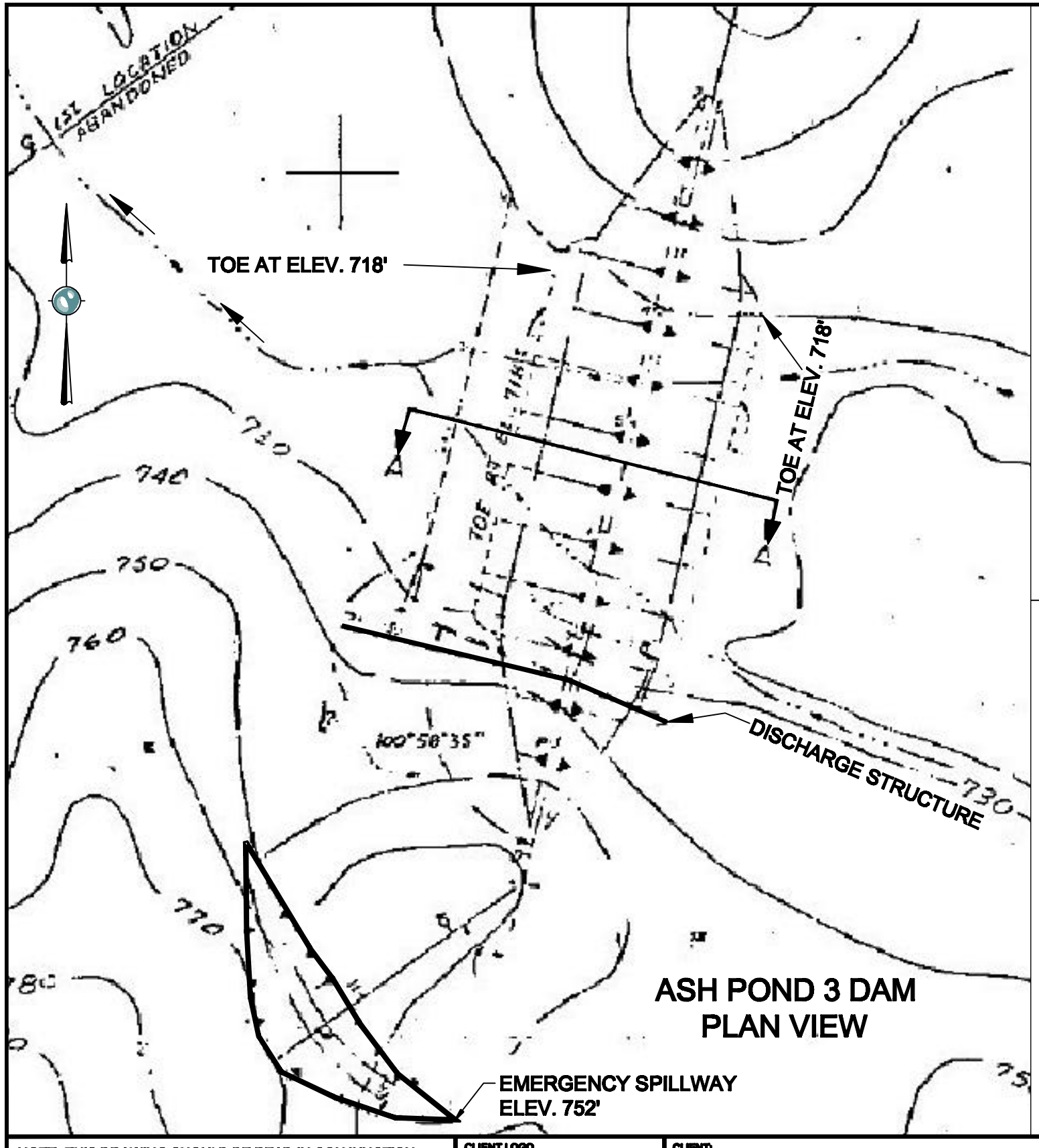
DWN BY:	CAE
CHK'D BY:	MS
DATUM:	
PROJECTION:	
SCALE:	NTS

PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

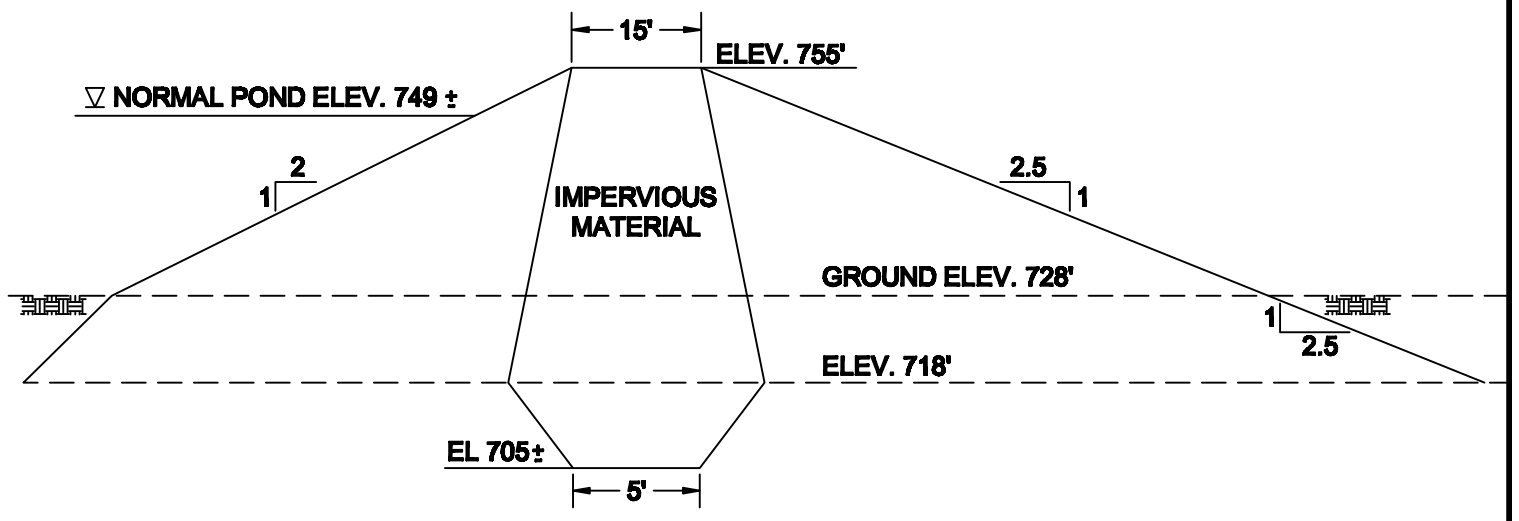
TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA
ASH POND 2 TYPICAL CROSS-SECTIONS

DATE:	6/21/10
PROJECT NO:	3-2108-0174.0400
REV. NO.:	
FIGURE No.	7

S:\Geosciences\Proposals\EPA Coal Impoundment Inspection\March 2010 RFP Pro\Georgia Power\Plant Yates\Figures\fig7-typcross.dwg – Layout1 – Jun. 22, 2010 2:35pm – chris.eger



ASH POND 3 DAM PLAN VIEW



TYPICAL CROSS-SECTION ASH POND 3

NOTE: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC EARTH & ENVIRONMENTAL REPORT

CLIENT LOGO

CLIENT: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

AMEC Earth & Environmental
600 Commonwealth Center
11003 Bluegrass Parkway
Louisville, Ky 40299
(502) 267-0700

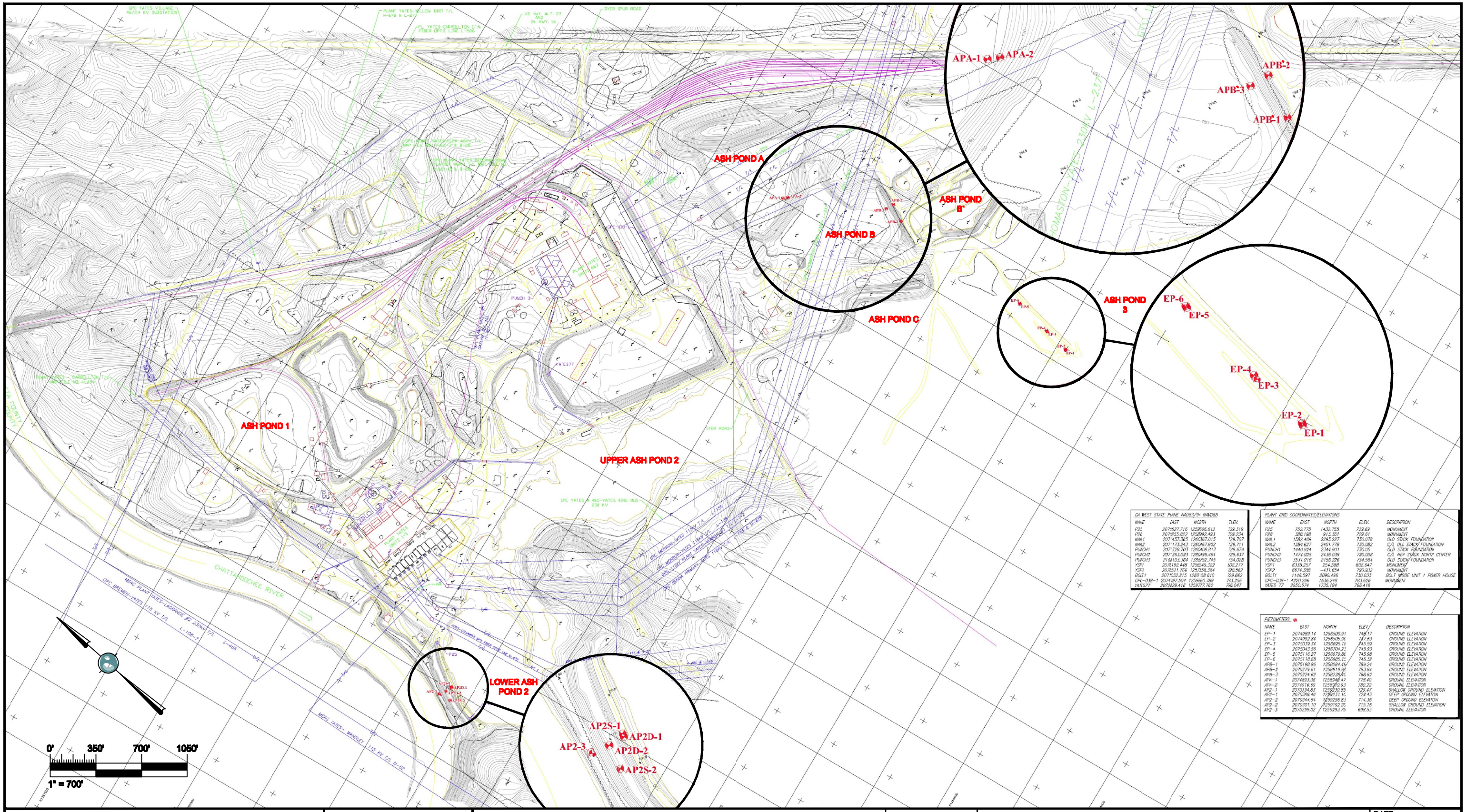
DWN BY:	CAE
CHK'D BY:	MS
DATUM:	
PROJECTION:	
SCALE:	NTS

PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER, PLANT YATES, NEWNAN, GA
ASH POND 3 DAM PLAN VIEW
AND TYPICAL CROSS-SECTION

DATE:	6/21/10
PROJECT NO:	3-2106-0174.0400
REV. NO.:	
FIGURE No.	8

S:\Geosciences\Proposals\EPA Coal Impoundment Inspection\March 2010 RFP Pro\Georgia Power\Plant Yates\Figures\fig8-damtypcross.dwg – Layout1 – Jun. 22, 2010 2:45pm – chris.eger



GA WEST STATE PLANE, NAD83/97H, NAVD88

NAME	EAST	NORTH	ELEV.
FP5	2078627.716	1259306.612	729.319
FP6	2078255.827	1258982.493	729.234
NAIL1	207.457.365	1260167.015	729.707
NAIL2	207.173.243	1260467.902	729.711
PUNCH1	207.128.703	1260426.813	729.679
PUNCH2	207.383.093	1260493.464	729.637
PUNCH3	2078103.306	1388752.745	754.028
YSP1	2076192.448	1258249.322	802.277
YSP2	2078521.766	1257558.594	810.562
BS1T1	2077132.815	1260.58.610	759.662
GPC--038--1	2074497.504	1259660.789	783.206
YATES77	2072629.416	1259777.762	766.047

PLANT GRID COORDINATES/ELEVATIONS

NAME	EAST	NORTH	ELEV.	DESCRIPTION
FP5	752.775	1432.755	729.69	MONUMENT
FP6	388.188	913.361	729.61	MONUMENT
NAIL1	1582.489	2293.227	730.078	OLD STACK FOUNDATION
NAIL2	1284.627	2401.778	730.082	C/L OLD STACK FOUNDATION
PUNCH1	1440.504	2344.801	730.05	OLD STACK FOUNDATION
PUNCH2	1474.025	2436.036	730.026	C/L NEW STACK NORTH CENTER
PUNCH3	3531.016	2156.226	754.584	OLD STACK FOUNDATION
YSP1	6335.257	254.588	802.647	MONUMENT
YSP2	6874.398	-411.654	790.932	MONUMENT
BS1T1	1148.597	2090.486	750.033	BS1 T MBSE UNIT 1 POWER HOUSE
GPC--038--1	4220.296	1636.248	783.626	MONUMENT
YATES 77	2950.574	1735.194	766.418	

PIEZOMETERS

NAME	EAST	NORTH	ELEV.	DESCRIPTION
EP--1	2074989.14	1256500.91	749.17	GROUND ELEVATION
EP--2	2074992.84	1256505.91	747.63	GROUND ELEVATION
EP--3	2075019.34	1256985.10	745.59	GROUND ELEVATION
EP--4	2075043.56	1256704.21	745.93	GROUND ELEVATION
EP--5	2075116.27	1256970.84	745.98	GROUND ELEVATION
EP--6	2075118.68	1256985.11	746.32	GROUND ELEVATION
APB--1	2075198.96	1252084.45	789.24	GROUND ELEVATION
APB--2	2075279.61	1258918.98	793.84	GROUND ELEVATION
APB--3	2075224.62	1258228.40	788.62	GROUND ELEVATION
APA--1	2074883.56	1258948.47	778.40	GROUND ELEVATION
APA--2	2074816.69	1258919.93	780.22	GROUND ELEVATION
AP2--1	2070334.83	1259239.85	729.47	SHALLOW GROUND ELEVATION
AP2--1	2070309.46	1259231.10	729.43	DEEP GROUND ELEVATION
AP2--2	2070344.54	1259256.83	714.36	DEEP GROUND ELEVATION
AP2--2	2070301.10	1259192.26	715.16	SHALLOW GROUND ELEVATION
AP2--3	2070289.02	1259293.75	698.53	GROUND ELEVATION

NOTE: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC EARTH & ENVIRONMENTAL REPORT

CLIENT LOGO

CLIENT: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

AMEC Earth & Environmental
690 Commonwealth Center
11003 Bluegrass Parkway
Louisville, Ky 40299
(502) 267-0700

DWN BY:	CAE
CHK'D BY:	MS
DATUM:	
PROJECTION:	
SCALE:	1"=700'

PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA
ASH PONDS A, 2, 3, AND B` PIEZOMETER LOCATIONS

DATE:	6/21/10
PROJECT NO:	3-2106-0174.0400
REV. NO.:	
FIGURE No.	9

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APPENDIX A
Waste Impoundment Inspection Forms

Coal Combustion Dam Inspection Checklist Form

US Environmental Protection Agency

Site Name: PLANT YATES Date: 10 MAY 2010

Unit Name: ASH POND #1 - COAL PILE RUNOFF Operator's Name: GEORGIA POWER

Unit I.D.: Hazard Potential Classification: High Significant (Low)

Inspector's Name: D. TATE & J. BLACK

Check the appropriate box below. Provide comments when appropriate. If not applicable or not available, record "N/A". Any unusual conditions or construction practices that should be noted in the comments section. For large diked embankments, separate checklists may be used for different embankment areas. If separate forms are used, identify approximate area that the form applies to in comments.

	Yes	No		Yes	No
1. Frequency of Company's Dam Inspections?	2/YEAR		18. Sloughing or bulging on slopes?	X	
2. Pool elevation (operator records)?	741		19. Major erosion or slope deterioration?		X
3. Decant inlet elevation (operator records)?	741		20. Decant Pipes:		
4. Open channel spillway elevation (operator records)?	NONE		Is water entering inlet, but not exiting outlet?		X
5. Lowest dam crest elevation (operator records)?	744		Is water exiting outlet, but not entering inlet?		X
6. If instrumentation is present, are readings recorded (operator records)?	X		Is water exiting outlet flowing clear?	N/A X	
7. Is the embankment currently under construction?		X	21. Seepage (specify location, if seepage carries fines, and approximate seepage rate below):		
8. Foundation preparation (remove vegetation,stumps, topsoil in area where embankment fill will be placed)?	X		From underdrain?		X
9. Trees growing on embankment? (If so, indicate largest diameter below)	X		At isolated points on embankment slopes?		X
10. Cracks or scarps on crest?		X	At natural hillside in the embankment area?		X
11. Is there significant settlement along the crest?		X	Over widespread areas?		X
12. Are decant trashracks clear and in place?		X	From downstream foundation area?		X
13. Depressions or sinkholes in tailings surface or whirlpool in the pool area?		X	"Boils" beneath stream or ponded water?		X
14. Clogged spillways, groin or diversion ditches?		X	Around the outside of the decant pipe?		X
15. Are spillway or ditch linings deteriorated?		X	22. Surface movements in valley bottom or on hillside?		X
16. Are outlets of decant or underdrains blocked?		NA	23. Water against downstream toe?		X
17. Cracks or scarps on slopes?		X	24. Were Photos taken during the dam inspection?	X	

Major adverse changes in these items could cause instability and should be reported for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) in the space below and on the back of this sheet.

Inspection Issue #	Comments
2	NO ~~POOL~~ WATER MAINTAINED IN POOL
6	PZ AT TOE
9	23" DIA PINE (NUMEROUS TREES ON EMBANKMENT & INTERIOR)
18	DUE TO MOWERS
20	COAL STOCKPILE RUNOFF
12	NO ~~TRASH~~ RACKS

U. S. Environmental Protection Agency

Coal Combustion Waste (CCW)
Impoundment Inspection

Impoundment NPDES Permit # GA0001473 INSPECTOR D. TATE, J. BLACK
Date 10 MAY 2010

Impoundment Name ASH POND #1 - COAL PILE RUNOFF
Impoundment Company GEORGIA POWER PLANT YATES
EPA Region 4
State Agency (Field Office) Addresss 2 MARTIN LUTHER KING JR. DR #1152 EAST TOWER, ATLANTA GA 30334-9000
Name of Impoundment ASH POND #1 - COAL PILE RUNOFF
(Report each impoundment on a separate form under the same Impoundment NPDES Permit number)

New X Update _____

	Yes	No
Is impoundment currently under construction?	_____	X
Is water or ccw currently being pumped into the impoundment?	_____	X

IMPOUNDMENT FUNCTION: SEDIMENT CONTROL FOR COAL STOCKPILE

Nearest Downstream Town : Name Franklin, GA
Distance from the impoundment 20 MILES
Impoundment Location:
Longitude 85.10 Degrees - Minutes - Seconds
Latitude 33.28 Degrees - Minutes - Seconds
State GA County Coweta

Does a state agency regulate this impoundment? YES _____ NO X

If So Which State Agency? _____

HAZARD POTENTIAL (In the event the impoundment should fail, the following would occur):

_____ **LESS THAN LOW HAZARD POTENTIAL:** Failure or misoperation of the dam results in no probable loss of human life or economic or environmental losses.

__X__ **LOW HAZARD POTENTIAL:** Dams assigned the low hazard potential classification are those where failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.

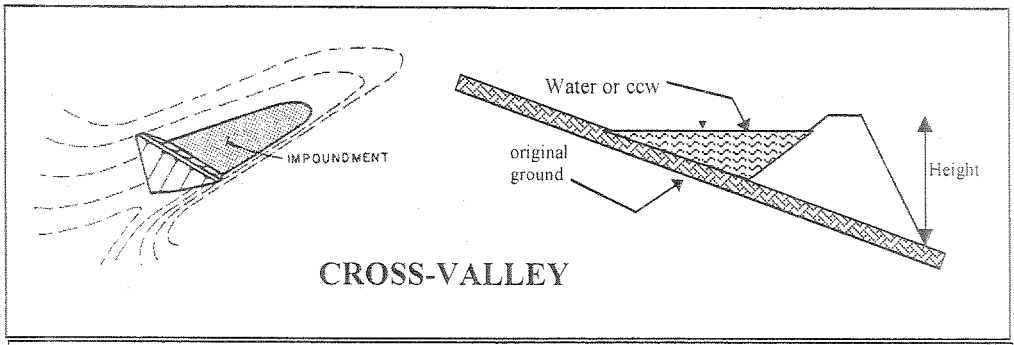
_____ **SIGNIFICANT HAZARD POTENTIAL:** Dams assigned the significant hazard potential classification are those dams where failure or misoperation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.

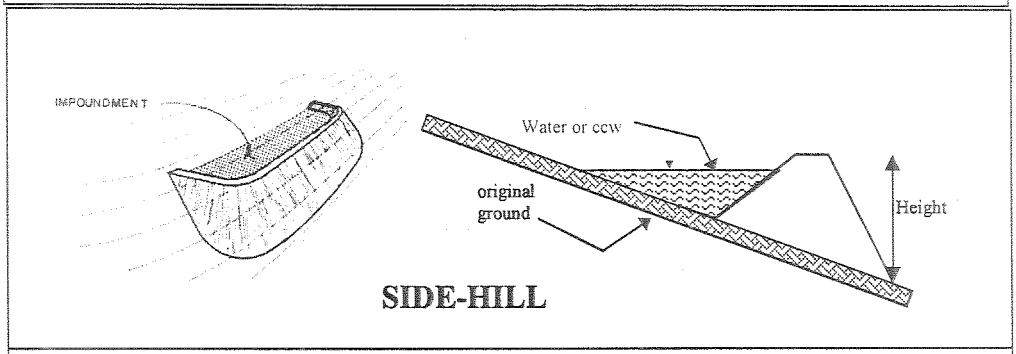
_____ **HIGH HAZARD POTENTIAL:** Dams assigned the high hazard potential classification are those where failure or misoperation will probably cause loss of human life.

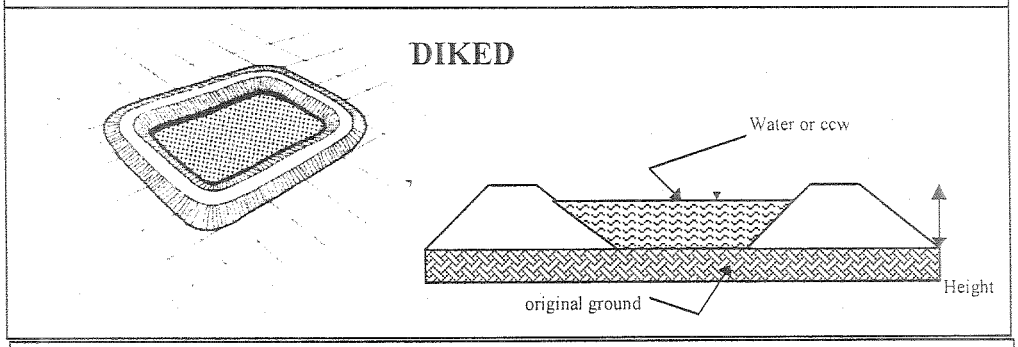
DESCRIBE REASONING FOR HAZARD RATING CHOSEN:

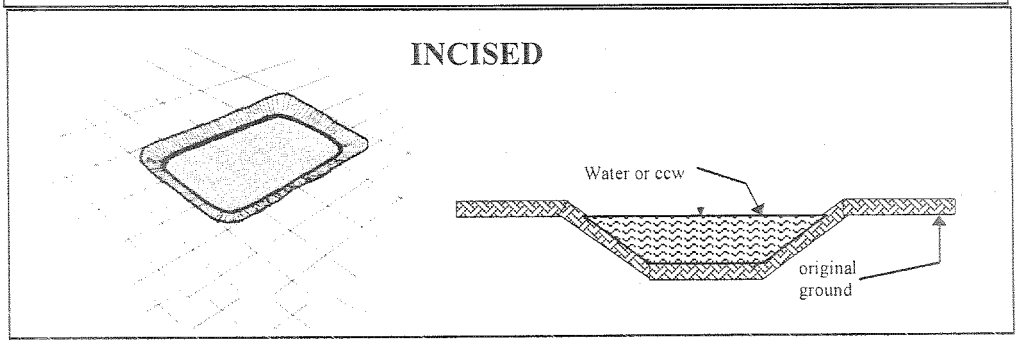
IMPOUNDMENT IS KEPT DEWATERED AND IS OPERATED AS SEDIMENT POND FOR COAL STORAGE PILES. FAILURE WOULD MOST LIKELY CAUSE DAMAGE ONLY WITHIN THE POWER PLANT AND IS UNLIKELY TO RESULT IN LOSS OF HUMAN LIFE.

CONFIGURATION:









__X__ Cross-Valley
_____ Side-Hill
_____ Diked
_____ Incised (form completion optional)
_____ Combination Incised/Diked

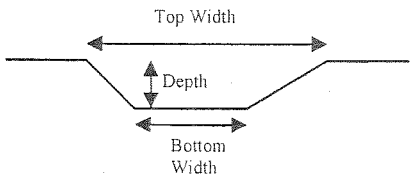
Embankment Height ~15 feet
Pool Area 17.1 acres
Current Freeboard ~43 feet JUB

Embankment Material EARTH FILL
Liner NONE
Liner Permeability —

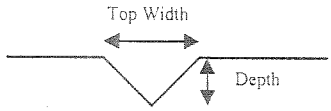
TYPE OF OUTLET (Mark all that apply)

_____ **Open Channel Spillway**
_____ Trapezoidal
_____ Triangular
_____ Rectangular
_____ Irregular

TRAPEZOIDAL

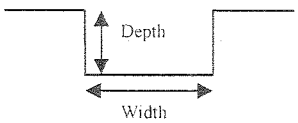


TRIANGULAR

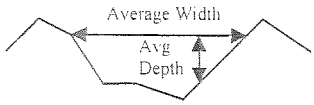


_____ depth
_____ bottom (or average) width
_____ top width
_____

RECTANGULAR

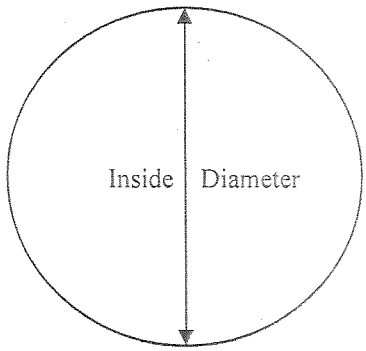


IRREGULAR



__X__ **Outlet**

__48"__ inside diameter



Material
_____ corrugated metal
_____ welded steel
__X__ concrete
_____ plastic (hdpe, pvc, etc.)
_____ other (specify) _____

_____

Is water flowing through the outlet? YES _____ NO __X__

_____ **No Outlet**

_____

_____ **Other Type of Outlet** (specify) _____

The Impoundment was Designed By Chief Civil Engineer
Georgia Power Co.

Has there ever been a failure at this site? YES _____ NO X

If So When? _____

If So Please Describe : _____

Has there ever been significant seepages at this site? YES _____ NO X

If So When? _____

IF So Please Describe: _____

Has there ever been any measures undertaken to monitor/lower Phreatic water table levels based on past seepages or breaches at this site? YES _____ NO X

If so, which method (e.g., piezometers, gw pumping,...)? _____

If so Please Describe : _____

Coal Combustion Dam Inspection Checklist Form

US Environmental Protection Agency

Site Name: PLANT YATES Date: 10 MAY 2010

Unit Name: ASH POND #2 Operator's Name: GEORGIA POWER

Unit I.D.: Hazard Potential Classification: High (Significant) Low

Inspector's Name: D. TATE & J. BLACK

Check the appropriate box below. Provide comments when appropriate. If not applicable or not available, record "N/A". Any unusual conditions or construction practices that should be noted in the comments section. For large diked embankments, separate checklists may be used for different embankment areas. If separate forms are used, identify approximate area that the form applies to in comments.

	Yes	No		Yes	No
1. Frequency of Company's Dam Inspections?	2/YEAR		18. Sloughing or bulging on slopes?	X	
2. Pool elevation (operator records)?	~724		19. Major erosion or slope deterioration?		X
3. Decant inlet elevation (operator records)?	724		20. Decant Pipes:		
4. Open channel spillway elevation (operator records)?	~~725~~		Is water entering inlet, but not exiting outlet?	N/A	
5. Lowest dam crest elevation (operator records)?	729		Is water exiting outlet, but not entering inlet?	N/A	
6. If instrumentation is present, are readings recorded (operator records)?	X		Is water exiting outlet flowing clear?	N/A	
7. Is the embankment currently under construction?		X	21. Seepage (specify location, if seepage carries fines, and approximate seepage rate below):		
8. Foundation preparation (remove vegetation,stumps, topsoil in area where embankment fill will be placed)?	X		From underdrain?		X
9. Trees growing on embankment? (If so, indicate largest diameter below)		X	At isolated points on embankment slopes?	X	
10. Cracks or scarps on crest?		X	At natural hillside in the embankment area?		X
11. Is there significant settlement along the crest?		X	Over widespread areas?		X
12. Are decant trashracks clear and in place?	X		From downstream foundation area?		X
13. Depressions or sinkholes in tailings surface or whirlpool in the pool area?		X	"Boils" beneath stream or ponded water?		X
14. Clogged spillways, groin or diversion ditches?		X	Around the outside of the decant pipe?		X
15. Are spillway or ditch linings deteriorated?		X	22. Surface movements in valley bottom or on hillside?		X
16. Are outlets of decant or underdrains blocked?		X	23. Water against downstream toe?	X	
17. Cracks or scarps on slopes?		X	24. Were Photos taken during the dam inspection?	X	

Major adverse changes in these items could cause instability and should be reported for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) in the space below and on the back of this sheet.

Inspection Issue #	Comments
18	RUTS & HUMMOCKS DUE TO MOWING
21	POSSIBLY DUE TO RECENT RAINS OR SLIGHT SEEPAGE
23	RIVER AT TOE
20	PRIMARILY CLOSED SYSTEM RECIRCULATING WATER, HAS VALVES TO DISCHARGE TO RIVER, RECIRCULATING AT TIME OF INSPECTION

U. S. Environmental Protection Agency

Coal Combustion Waste (CCW)
Impoundment Inspection

Impoundment NPDES Permit # GA0001473 INSPECTOR D. TATE, J. BLACK
Date 10 MAY 2010

Impoundment Name ASH POND #2
Impoundment Company GEORGIA POWER PLANT YATES
EPA Region
State Agency (Field Office) Addresss 2 ML King JR DR
1152 EAST TOWER ATLANTA GA 30334-9000
Name of Impoundment ASH POND #2
(Report each impoundment on a separate form under the same Impoundment NPDES Permit number)

New X Update

	Yes	No
Is impoundment currently under construction?		X
Is water or ccw currently being pumped into the impoundment?	X	

IMPOUNDMENT FUNCTION: CCW IMPOUNDMENT

Nearest Downstream Town : Name FRANKLIN, GA
Distance from the impoundment 20 miles
Impoundment
Location: Longitude 85.10 Degrees ~ Minutes ~ Seconds
Latitude 33.28 Degrees ~ Minutes ~ Seconds
State GA County Coweta

Does a state agency regulate this impoundment? YES NO X

If So Which State Agency?

HAZARD POTENTIAL (In the event the impoundment should fail, the following would occur):

_____ **LESS THAN LOW HAZARD POTENTIAL:** Failure or misoperation of the dam results in no probable loss of human life or economic or environmental losses.

_____ **LOW HAZARD POTENTIAL:** Dams assigned the low hazard potential classification are those where failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.

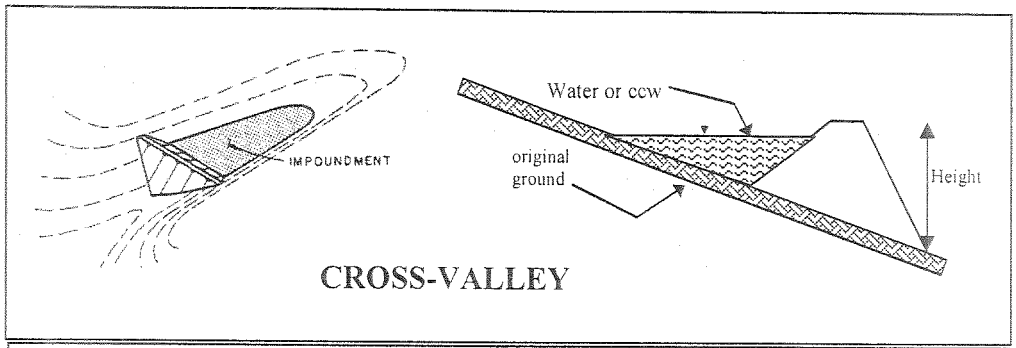
__X__ **SIGNIFICANT HAZARD POTENTIAL:** Dams assigned the significant hazard potential classification are those dams where failure or misoperation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.

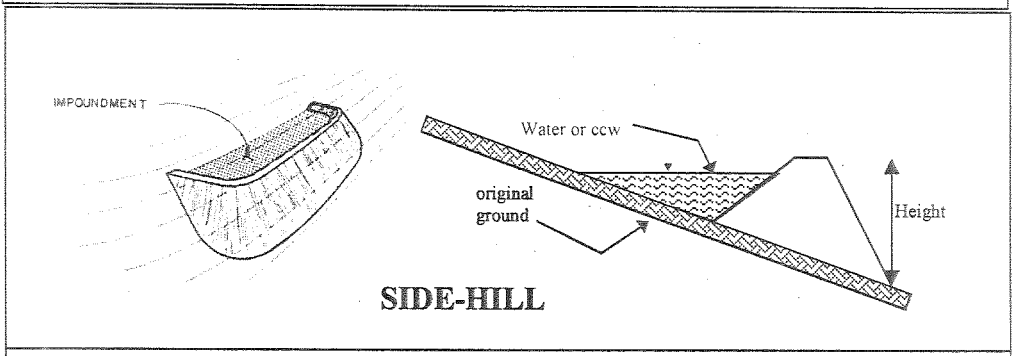
_____ **HIGH HAZARD POTENTIAL:** Dams assigned the high hazard potential classification are those where failure or misoperation will probably cause loss of human life.

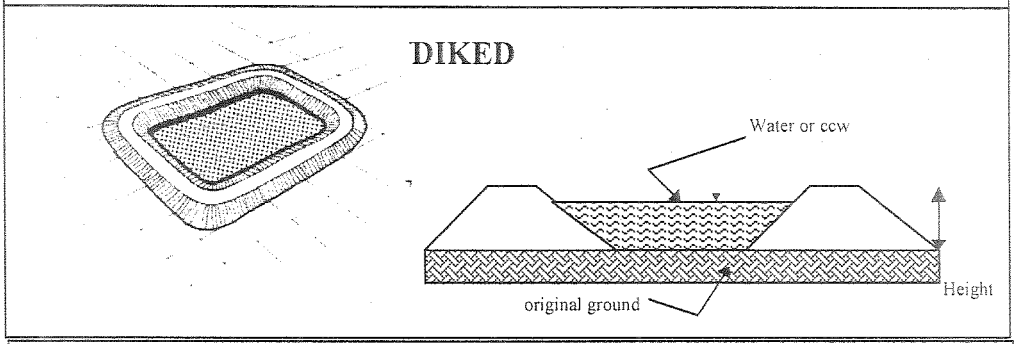
DESCRIBE REASONING FOR HAZARD RATING CHOSEN:

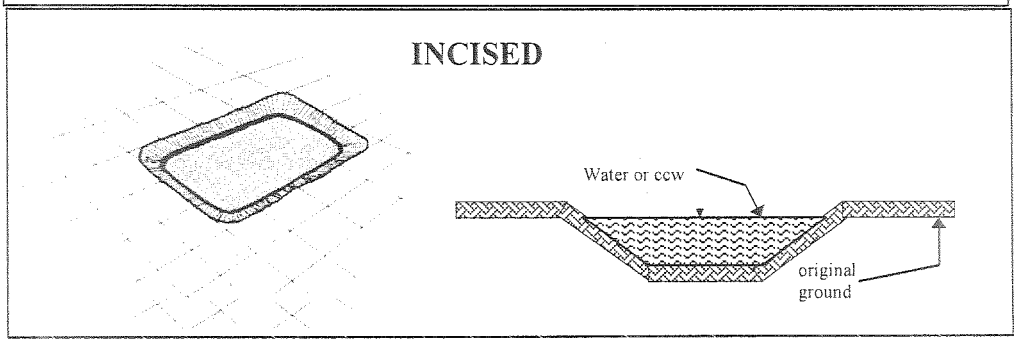
Breach of Dam Could Release Ash Contaminated Water into River. Unlikely to Result in Loss of Human Life

CONFIGURATION:









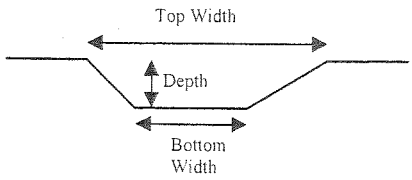
__X__ Cross-Valley
_____ Side-Hill
_____ Diked
_____ Incised (form completion optional)
_____ Combination Incised/Diked

Embankment Height 39 feet
Pool Area 50 acres
Current Freeboard 5 feet
Embankment Material EARTH FILL
Liner NONE
Liner Permeability N/A

TYPE OF OUTLET (Mark all that apply)

__X__ **Open Channel Spillway**
__X__ Trapezoidal
_____ Triangular
_____ Rectangular
_____ Irregular

TRAPEZOIDAL



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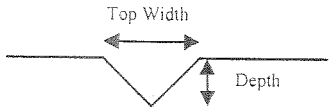
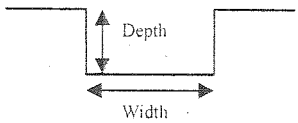
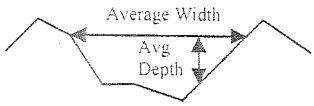


__4__ depth
__40__ bottom (or average) width
__56__ top width

RECTANGULAR

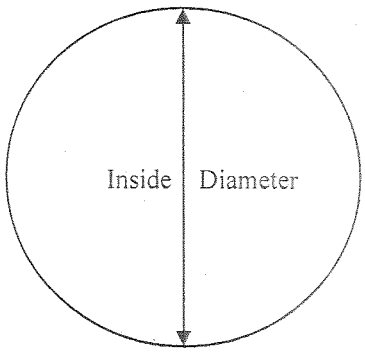


IRREGULAR



__X__ **Outlet**

__30"__ inside diameter



Material
_____ corrugated metal
_____ welded steel
_____ concrete
_____ plastic (hdpe, pvc, etc.)
__X__ other (specify) Fiberglass Lined Steel

Is water flowing through the outlet? YES __X__ NO _____

_____ **No Outlet**

_____ **Other Type of Outlet** (specify) _____

The Impoundment was Designed By Chief Engineer Georgia Power

Has there ever been a failure at this site? YES _____ NO X

If So When? _____

If So Please Describe : _____

Has there ever been significant seepages at this site? YES X NO _____

If So When? 1971

IF So Please Describe: SMALL LEAK IN 1971. UPSTREAM FACE OF DAM COVERED WITH CLAY LINER. LOCATION NEAR RIGHT ABUTMENT.

NO RECURRENCE SINCE THEN.

Has there ever been any measures undertaken to monitor/lower Phreatic water table levels based on past seepages or breaches at this site? YES _____ NO X

If so, which method (e.g., piezometers, gw pumping,...)? Pumping

If so Please Describe : Only For Tomporary lowing Due To 1971 LEAK.

Coal Combustion Dam Inspection Checklist Form

US Environmental Protection Agency

Site Name: GEORGIA POWER PLANT YATES Date: 10 MAY 2010

Unit Name: GYPSUM POND Operator's Name: Georgia Power

Unit I.D.: Hazard Potential Classification: High Significant (Low)

Inspector's Name: D. TAYE J. BLACK

Check the appropriate box below. Provide comments when appropriate. If not applicable or not available, record "N/A". Any unusual conditions or construction practices that should be noted in the comments section. For large diked embankments, separate checklists may be used for different embankment areas. If separate forms are used, identify approximate area that the form applies to in comments.

	Yes	No		Yes	No
1. Frequency of Company's Dam Inspections?	2/YEAR		18. Sloughing or bulging on slopes?		X
2. Pool elevation (operator records)?	765.5 JUNE		19. Major erosion or slope deterioration?		X
3. Decant inlet elevation (operator records)?	765.5 JUNE		20. Decant Pipes:		
4. Open channel spillway elevation (operator records)?	NONE		Is water entering inlet, but not exiting outlet?		X
5. Lowest dam crest elevation (operator records)?	770		Is water exiting outlet, but not entering inlet?		X
6. If instrumentation is present, are readings recorded (operator records)?	X		Is water exiting outlet flowing clear?	X	
7. Is the embankment currently under construction?		X	21. Seepage (specify location, if seepage carries fines, and approximate seepage rate below):		
8. Foundation preparation (remove vegetation,stumps, topsoil in area where embankment fill will be placed)?	X		From underdrain?		X
9. Trees growing on embankment? (If so, indicate largest diameter below)	X		At isolated points on embankment slopes?		X
10. Cracks or scarps on crest?		X	At natural hillside in the embankment area?		X
11. Is there significant settlement along the crest?		X	Over widespread areas?		X
12. Are decant trashracks clear and in place?	X		From downstream foundation area?		X
13. Depressions or sinkholes in tailings surface or whirlpool in the pool area?		X	"Boils" beneath stream or ponded water?		X
14. Clogged spillways, groin or diversion ditches?		X	Around the outside of the decant pipe?		X
15. Are spillway or ditch linings deteriorated?		X	22. Surface movements in valley bottom or on hillside?		X
16. Are outlets of decant or underdrains blocked?		X	23. Water against downstream toe?		X
17. Cracks or scarps on slopes?		X	24. Were Photos taken during the dam inspection?	X	

Major adverse changes in these items could cause instability and should be reported for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) in the space below and on the back of this sheet.

Inspection Issue #	Comments
6	ENVIRONMENTAL MONITORING WELLS
9	4" DIA

U. S. Environmental Protection Agency

Coal Combustion Waste (CCW)
Impoundment Inspection

Impoundment NPDES Permit # GA0001473 INSPECTOR D. TATE, J. BLACK
Date 10 - MAY 2010

Impoundment Name Gypsum Pond
Impoundment Company GEORGIA POWER PLANT YATES
EPA Region 4
State Agency (Field Office) Addresss 2 MLKing JR DR, 1152 EAST TOWER
ATLANTA, GA, 30334-9000
Name of Impoundment GYPSUM POND
(Report each impoundment on a separate form under the same Impoundment NPDES Permit number)

New X Update _____

	Yes	No
Is impoundment currently under construction?	_____	X
Is water or ccw currently being pumped into the impoundment?	X	_____

IMPOUNDMENT FUNCTION: STORM WATER RECIRCULATION

Nearest Downstream Town : Name FRANKLIN, GA.
Distance from the impoundment 20 MI
Impoundment Location:
Longitude 85.10 Degrees - Minutes - Seconds
Latitude 33.28 Degrees - Minutes - Seconds
State GA County COWETA

Does a state agency regulate this impoundment? YES X NO ~~X~~

If So Which State Agency? GEORGIA EPD ~~EA~~

HAZARD POTENTIAL (In the event the impoundment should fail, the following would occur):

_____ **LESS THAN LOW HAZARD POTENTIAL:** Failure or misoperation of the dam results in no probable loss of human life or economic or environmental losses.

__X__ **LOW HAZARD POTENTIAL:** Dams assigned the low hazard potential classification are those where failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.

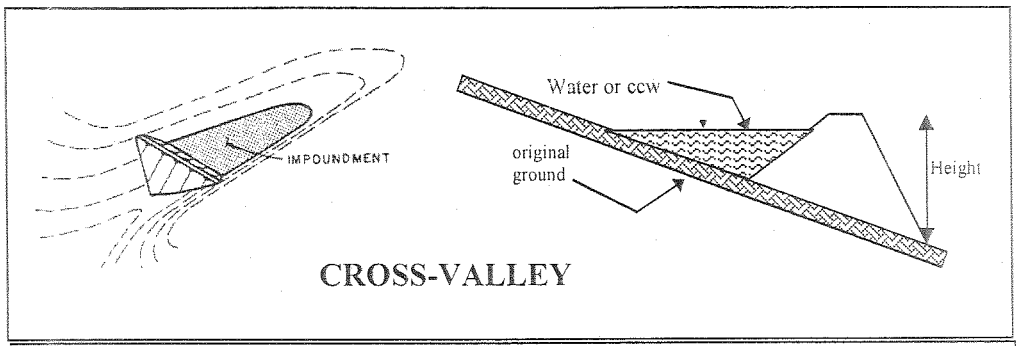
_____ **SIGNIFICANT HAZARD POTENTIAL:** Dams assigned the significant hazard potential classification are those dams where failure or misoperation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.

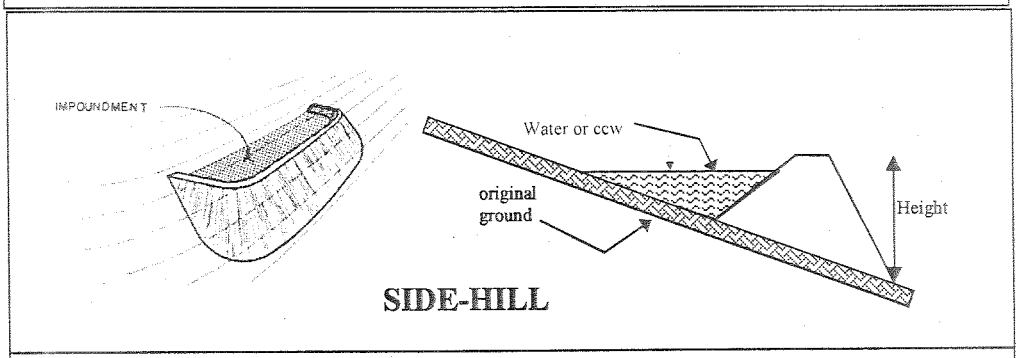
_____ **HIGH HAZARD POTENTIAL:** Dams assigned the high hazard potential classification are those where failure or misoperation will probably cause loss of human life.

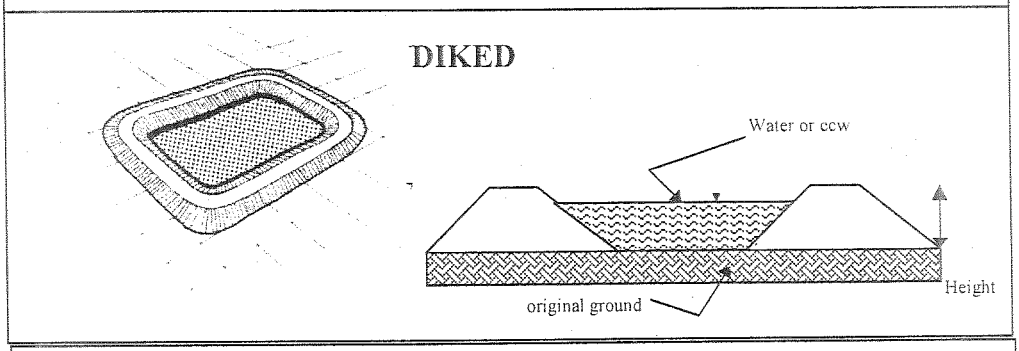
DESCRIBE REASONING FOR HAZARD RATING CHOSEN:

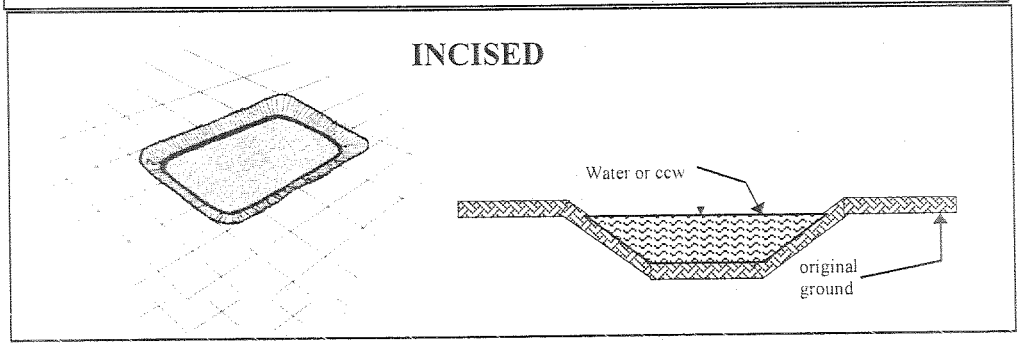
Failure would likely be contained on plant property, ~~or~~ it unlikely to contaminate River. Unlikely to result in loss of human life.

CONFIGURATION:









____ Cross-Valley
_X_ Side-Hill
____ Diked
____ Incised (form completion optional)
_X_ Combination Incised/Diked

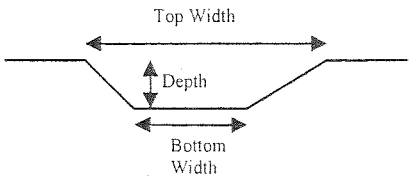
Embankment Height 14 feet
Pool Area 16 acres
Current Freeboard 4' 3.5" feet
JHB

Embankment Material EARTH FILL
Liner YES HDPE
Liner Permeability IMPERMEABLE

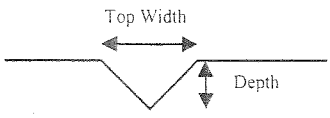
TYPE OF OUTLET (Mark all that apply)

_____ **Open Channel Spillway**
_____ Trapezoidal
_____ Triangular
_____ Rectangular
_____ Irregular

TRAPEZOIDAL

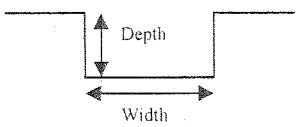


TRIANGULAR

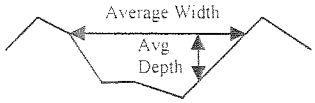


_____ depth
_____ bottom (or average) width
_____ top width
_____

RECTANGULAR

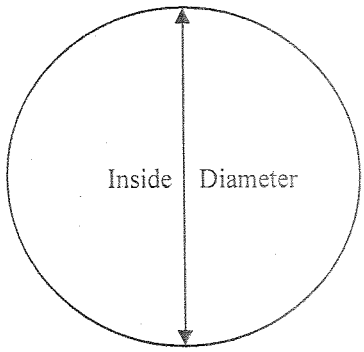


IRREGULAR



X **Outlet** Pumped

~~10"~~ ~8" inside diameter



Material
_____ corrugated metal
_____ welded steel
_____ concrete
_____ plastic (hdpe, pvc, etc.)
_____ other (specify) _____

_____

Is water flowing through the outlet? YES ~~X~~ NO X

_____ **No Outlet**

_____

X **Other Type of Outlet** (specify) Pumped Recirculation Redundant Pumps

The Impoundment was Designed By ~~Arcadis~~ Arcadis & ASSOCIATES for Georgia Power

Has there ever been a failure at this site? YES _____ NO X

If So When? _____

If So Please Describe : _____

Has there ever been significant seepages at this site? YES _____ NO X

If So When? _____

IF So Please Describe: _____

Has there ever been any measures undertaken to monitor/lower Phreatic water table levels based on past seepages or breaches at this site? YES _____ NO X

If so, which method (e.g., piezometers, gw pumping,...)? _____

If so Please Describe : _____

Coal Combustion Dam Inspection Checklist Form

US Environmental Protection Agency

Site Name: PLANT YATES Date: 10 MAY 2010

Unit Name: Pond A Operator's Name: GEORGIA POWER

Unit I.D.: Hazard Potential Classification: High Significant (Low)

Inspector's Name: D. TATE & J. BLACK

Check the appropriate box below. Provide comments when appropriate. If not applicable or not available, record "N/A". Any unusual conditions or construction practices that should be noted in the comments section. For large diked embankments, separate checklists may be used for different embankment areas. If separate forms are used, identify approximate area that the form applies to in comments.

	Yes	No		Yes	No
1. Frequency of Company's Dam Inspections?	~~2/YEAR~~	X	18. Sloughing or bulging on slopes?		X
2. Pool elevation (operator records)?	NONE		19. Major erosion or slope deterioration?		X
3. Decant inlet elevation (operator records)?	NONE		20. Decant Pipes:		
4. Open channel spillway elevation (operator records)?	776.0		Is water entering inlet, but not exiting outlet?	NONE	
5. Lowest dam crest elevation (operator records)?	780		Is water exiting outlet, but not entering inlet?	NONE	
6. If instrumentation is present, are readings recorded (operator records)?	X		Is water exiting outlet flowing clear?	NONE	
7. Is the embankment currently under construction?		X	21. Seepage (specify location, if seepage carries fines, and approximate seepage rate below):		
8. Foundation preparation (remove vegetation,stumps, topsoil in area where embankment fill will be placed)?	X		From underdrain?	NONE	
9. Trees growing on embankment? (If so, indicate largest diameter below)		X	At isolated points on embankment slopes?		X
10. Cracks or scarps on crest?		X	At natural hillside in the embankment area?		X
11. Is there significant settlement along the crest?		X	Over widespread areas?		X
12. Are decant trashracks clear and in place?	NONE		From downstream foundation area?		X
13. Depressions or sinkholes in tailings surface or whirlpool in the pool area?	NONE		"Boils" beneath stream or ponded water?		X
14. Clogged spillways, groin or diversion ditches?		X	Around the outside of the decant pipe?	NONE	
15. Are spillway or ditch linings deteriorated?	X		22. Surface movements in valley bottom or on hillside?		X
16. Are outlets of decant or underdrains blocked?	NONE		23. Water against downstream toe?		X
17. Cracks or scarps on slopes?		X	24. Were Photos taken during the dam inspection?	X	

Major adverse changes in these items could cause instability and should be reported for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) in the space below and on the back of this sheet.

Inspection Issue #	Comments
HPC	less than low hazard
1,2,3,12,13,16,20	Pond inactive ~~closed~~ (NOT INSPECTED.), covered - no pool + no decant.
15	Erosion on drainage/emergency spillway ditch at left abutment.

EPA FORM -XXXX

U. S. Environmental Protection Agency

Coal Combustion Waste (CCW)
Impoundment Inspection

Impoundment NPDES Permit # GA0001473 INSPECTOR D. TATE, J. BLACK

Date 10 MAY 2010

Impoundment Name Pond A

Impoundment Company GEORGIA POWER PLANT YATES

EPA Region 4

State Agency (Field Office) Addresss 2 MLKing Jr DR, 1152 EAST TOWER
ATLANTA GA 30334-9000

Name of Impoundment Pond A
(Report each impoundment on a separate form under the same Impoundment NPDES Permit number)

New X Update _____

	Yes	No
Is impoundment currently under construction?	_____	X
Is water or ccw currently being pumped into the impoundment?	_____	X

IMPOUNDMENT FUNCTION: ~~Closed~~ Inactive CCW Pond

Nearest Downstream Town : Name Franklin, GA

Distance from the impoundment 20 MI

Impoundment Location:
Longitude 85.10 Degrees - Minutes - Seconds
Latitude 33.38 Degrees - Minutes - Seconds
State GA County Coweta

Does a state agency regulate this impoundment? YES _____ NO X

If So Which State Agency?_____

HAZARD POTENTIAL (In the event the impoundment should fail, the following would occur):

__X__ **LESS THAN LOW HAZARD POTENTIAL:** Failure or misoperation of the dam results in no probable loss of human life or economic or environmental losses.

_____ **LOW HAZARD POTENTIAL:** Dams assigned the low hazard potential classification are those where failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.

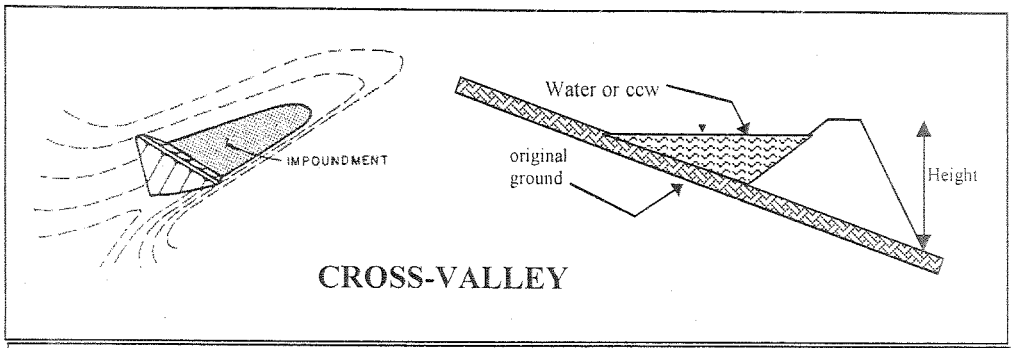
_____ **SIGNIFICANT HAZARD POTENTIAL:** Dams assigned the significant hazard potential classification are those dams where failure or misoperation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.

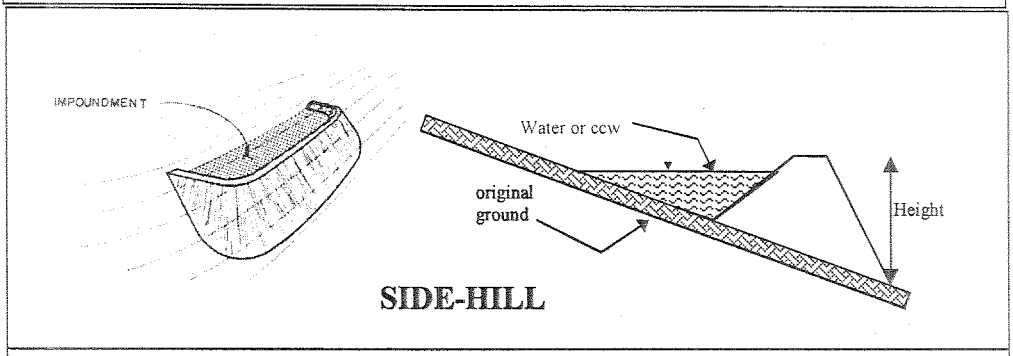
_____ **HIGH HAZARD POTENTIAL:** Dams assigned the high hazard potential classification are those where failure or misoperation will probably cause loss of human life.

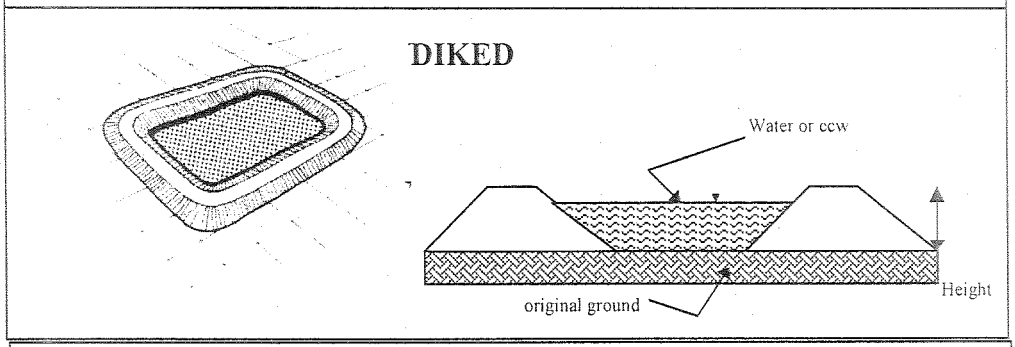
DESCRIBE REASONING FOR HAZARD RATING CHOSEN:

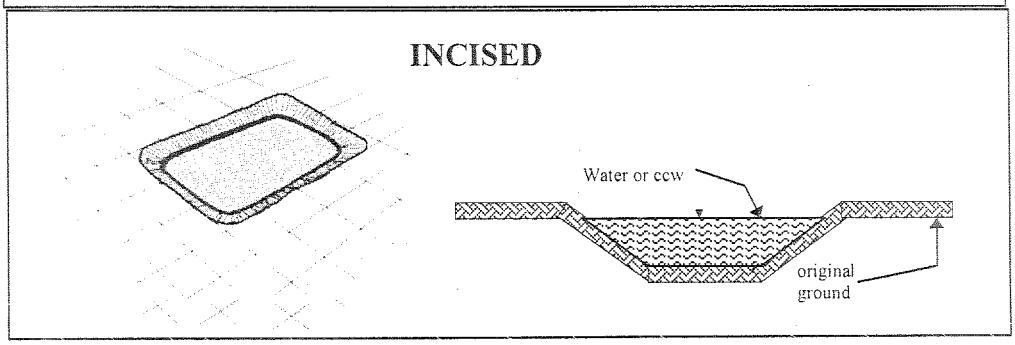
Dam for "A" appears to be breached and impoundment is covered. Failure would most likely be fully contained within Companies property and cause only minor inconvience.

CONFIGURATION:









__X__ Cross-Valley
_____ Side-Hill
_____ Diked
_____ Incised (form completion optional)
_____ Combination Incised/Diked

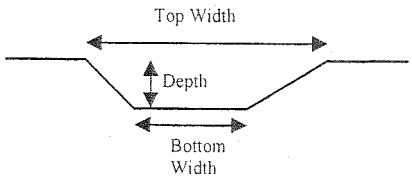
Embankment Height ~ 30 feet
Pool Area 19.2 acres
Current Freeboard NONE feet
Breeched (Covered, Inactive)

Embankment Material EARTH FILL
Liner NONE
Liner Permeability —

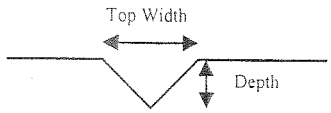
TYPE OF OUTLET (Mark all that apply)

X **Open Channel Spillway**
X Trapezoidal
____ Triangular
____ Rectangular
____ Irregular

TRAPEZOIDAL

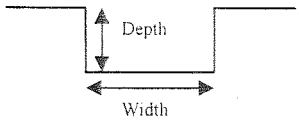


TRIANGULAR

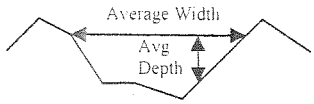


~ 4 depth
~ 30 bottom (or average) width
~ 46 top width

RECTANGULAR

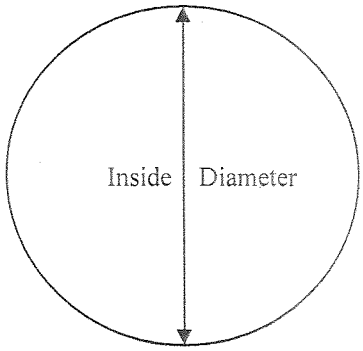


IRREGULAR



____ **Outlet**

____ inside diameter



Material
____ corrugated metal
____ welded steel
____ concrete
____ plastic (hdpe, pvc, etc.)
____ other (specify) _____

Is water flowing through the outlet? YES ____ NO X

____ **No Outlet**

____ **Other Type of Outlet** (specify) _____

The Impoundment was Designed By Lawrence W. Dabney & Assoc for AMAX Resource Recovery Systems

Has there ever been a failure at this site? YES _____ NO UNKNOWN

If So When? _____

If So Please Describe : _____

Has there ever been significant seepages at this site? YES _____ NO UNKNOWN

If So When? _____

IF So Please Describe: _____

Has there ever been any measures undertaken to monitor/lower Phreatic water table levels based on past seepages or breaches at this site? YES _____ NO UNKNOWN

If so, which method (e.g., piezometers, gw pumping,...)? _____

If so Please Describe : _____

Coal Combustion Dam Inspection Checklist Form

US Environmental Protection Agency

Site Name: GEORGIA POWER PLANT YATES Date: 10 MAY 2010

Unit Name: Pond B Operator's Name: Georgia Power

Unit I.D.: Hazard Potential Classification: High Significant (Low)

Inspector's Name: D. TATE J. BLACK

Check the appropriate box below. Provide comments when appropriate. If not applicable or not available, record "N/A". Any unusual conditions or construction practices that should be noted in the comments section. For large diked embankments, separate checklists may be used for different embankment areas. If separate forms are used, identify approximate area that the form applies to in comments.

	Yes	No		Yes	No
1. Frequency of Company's Dam Inspections?	NONE		18. Sloughing or bulging on slopes?		NA
2. Pool elevation (operator records)?	NONE		19. Major erosion or slope deterioration?		NA
3. Decant inlet elevation (operator records)?	NONE		20. Decant Pipes:		
4. Open channel spillway elevation (operator records)?	NONE		Is water entering inlet, but not exiting outlet?		NA
5. Lowest dam crest elevation (operator records)?	N/A		Is water exiting outlet, but not entering inlet?		NA
6. If instrumentation is present, are readings recorded (operator records)?		X	Is water exiting outlet flowing clear?		NA
7. Is the embankment currently under construction?		X	21. Seepage (specify location, if seepage carries fines, and approximate seepage rate below):		
8. Foundation preparation (remove vegetation,stumps, topsoil in area where embankment fill will be placed)?		UNK	From underdrain?		NA
9. Trees growing on embankment? (If so, indicate largest diameter below)	X		At isolated points on embankment slopes?		NA
10. Cracks or scarps on crest?		X	At natural hillside in the embankment area?		NA
11. Is there significant settlement along the crest?		X	Over widespread areas?		NA
12. Are decant trashracks clear and in place?		N/A	From downstream foundation area?		NA
13. Depressions or sinkholes in tailings surface or whirlpool in the pool area?		NA	"Boils" beneath stream or ponded water?		NA
14. Clogged spillways, groin or diversion ditches?		NA	Around the outside of the decant pipe?		NA
15. Are spillway or ditch linings deteriorated?		NA	22. Surface movements in valley bottom or on hillside?		NA
16. Are outlets of decant or underdrains blocked?		NA	23. Water against downstream toe?		NA
17. Cracks or scarps on slopes?		NA	24. Were Photos taken during the dam inspection?	X	

Major adverse changes in these items could cause instability and should be reported for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) in the space below and on the back of this sheet.

Inspection Issue #	Comments
1-5	Ponds INACTIVE & Fully ENCLOSED & Covered
9	12" +
12-23	Pond, Dam, & STRUCTURE Covered & inactive & closed

U. S. Environmental Protection Agency

Coal Combustion Waste (CCW)
Impoundment Inspection

Impoundment NPDES Permit # GA0001473 INSPECTOR D. TATE, J. BLACK
Date 10 MAY 2010

Impoundment Name Pond B
Impoundment Company GEORGIA POWER PLANT YATES
EPA Region 4
State Agency (Field Office) Addresss 2 MLK JR RD, 1152 EAST TOWER
ATLANTA GA 30334-9020
Name of Impoundment Pond B
(Report each impoundment on a separate form under the same Impoundment NPDES Permit number)

New X Update _____

	Yes	No
Is impoundment currently under construction?	_____	X
Is water or ccw currently being pumped into the impoundment?	_____	X

IMPOUNDMENT FUNCTION: ~~Closed~~ Inactive CCW Pond

Nearest Downstream Town : Name FRANKLIN, GA
Distance from the impoundment 20 MI
Impoundment Location:
Longitude 85.10 Degrees — Minutes — Seconds
Latitude 33.28 Degrees — Minutes — Seconds
State GA County Coweta

Does a state agency regulate this impoundment? YES _____ NO X

If So Which State Agency? _____

HAZARD POTENTIAL (In the event the impoundment should fail, the following would occur):

__X__ **LESS THAN LOW HAZARD POTENTIAL:** Failure or misoperation of the dam results in no probable loss of human life or economic or environmental losses.

_____ **LOW HAZARD POTENTIAL:** Dams assigned the low hazard potential classification are those where failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.

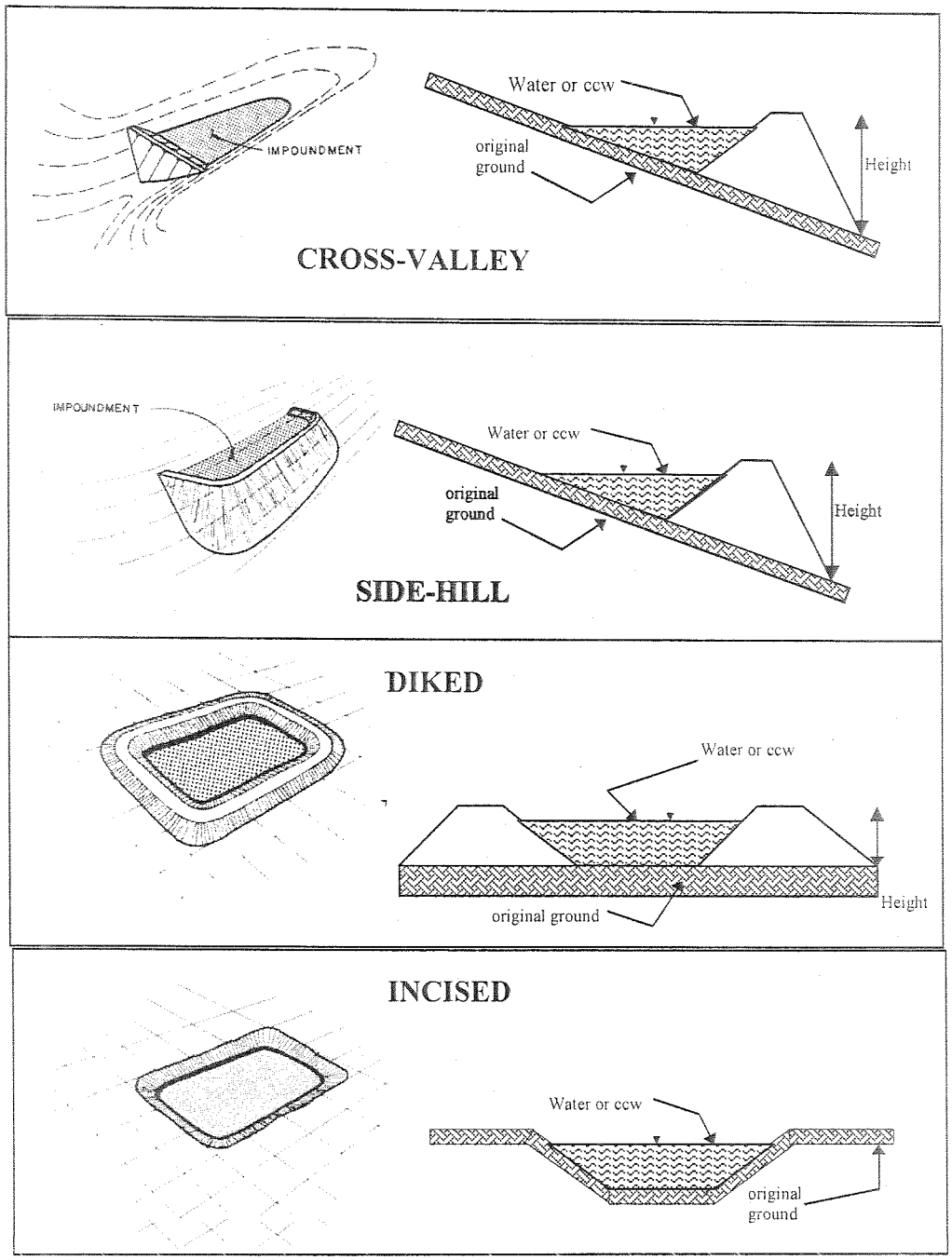
_____ **SIGNIFICANT HAZARD POTENTIAL:** Dams assigned the significant hazard potential classification are those dams where failure or misoperation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.

_____ **HIGH HAZARD POTENTIAL:** Dams assigned the high hazard potential classification are those where failure or misoperation will probably cause loss of human life.

DESCRIBE REASONING FOR HAZARD RATING CHOSEN:

Pond is inactive. ~~And closed~~. There is no visible Berm / Dam Remaining. OCW And Dams is fully contained by surrounding fill & site Development

CONFIGURATION:



__X__ Cross-Valley
_____ Side-Hill
_____ Diked
_____ Incised (form completion optional)
_____ Combination Incised/Diked

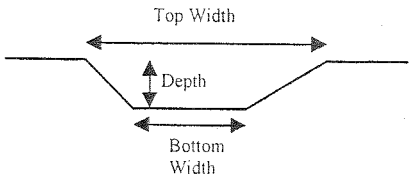
Embankment Height UNKNOWN feet
Pool Area 6.3 acres
Current Freeboard NONE feet
Closed - Covered Inactive

Embankment Material EARTH FILL
Liner NONE
Liner Permeability —

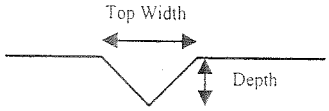
TYPE OF OUTLET (Mark all that apply)

_____ **Open Channel Spillway**
_____ Trapezoidal
_____ Triangular
_____ Rectangular
_____ Irregular

TRAPEZOIDAL

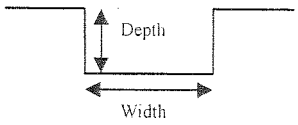


TRIANGULAR

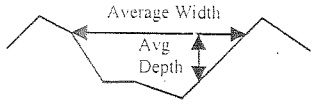


_____ depth
_____ bottom (or average) width
_____ top width
_____

RECTANGULAR

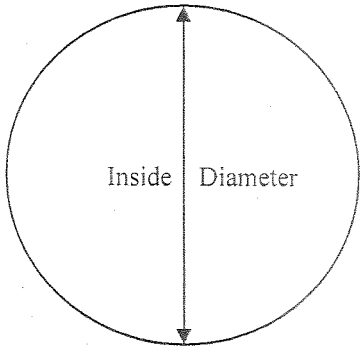


IRREGULAR



_____ **Outlet**

_____ inside diameter



Material
_____ corrugated metal
_____ welded steel
_____ concrete
_____ plastic (hdpe, pvc, etc.)
_____ other (specify) _____

_____

Is water flowing through the outlet? YES _____ NO _____

X **No Outlet**

Pond B is ~~closed~~ inactive & covered

_____ **Other Type of Outlet** (specify) _____

The Impoundment was Designed By Lawrence Dabney & Assoc. for AMAX Resource Recovery Systems

Has there ever been a failure at this site? YES _____ NO UNKNOWN

If So When? _____

If So Please Describe : _____

Has there ever been significant seepages at this site? YES _____ NO UNKNOWN

If So When? _____

IF So Please Describe: _____

Has there ever been any measures undertaken to monitor/lower Phreatic water table levels based on past seepages or breaches at this site?

YES _____ NO UNKNOWN

If so, which method (e.g., piezometers, gw pumping,...)? _____

If so Please Describe : _____

Coal Combustion Dam Inspection Checklist Form

US Environmental Protection Agency

Site Name: PLANT YATES Date: 10 MAY 2010

Unit Name: POND C Operator's Name: GEORGIA POWER

Unit I.D.: Hazard Potential Classification: High Significant (Low)

Inspector's Name: D TATE & J. BLACK

Check the appropriate box below. Provide comments when appropriate. If not applicable or not available, record "N/A". Any unusual conditions or construction practices that should be noted in the comments section. For large diked embankments, separate checklists may be used for different embankment areas. If separate forms are used, identify approximate area that the form applies to in comments.

	Yes	No		Yes	No
1. Frequency of Company's Dam Inspections?		X	18. Sloughing or bulging on slopes?	NONE	
2. Pool elevation (operator records)?	NONE		19. Major erosion or slope deterioration?	NONE	
3. Decant inlet elevation (operator records)?	NONE		20. Decant Pipes:		
4. Open channel spillway elevation (operator records)?	NONE		Is water entering inlet, but not exiting outlet?	NONE	
5. Lowest dam crest elevation (operator records)?	NONE		Is water exiting outlet, but not entering inlet?	NONE	
6. If instrumentation is present, are readings recorded (operator records)?		X	Is water exiting outlet flowing clear?	NONE	
7. Is the embankment currently under construction?		X	21. Seepage (specify location, if seepage carries fines, and approximate seepage rate below):		
8. Foundation preparation (remove vegetation,stumps, topsoil in area where embankment fill will be placed)?	X		From underdrain?	NONE	
9. Trees growing on embankment? (If so, indicate largest diameter below)		X	At isolated points on embankment slopes?	NONE	
10. Cracks or scarps on crest?	NONE		At natural hillside in the embankment area?	NONE	
11. Is there significant settlement along the crest?	NONE		Over widespread areas?	NONE	
12. Are decant trashracks clear and in place?	NONE		From downstream foundation area?	NONE	
13. Depressions or sinkholes in tailings surface or whirlpool in the pool area?	NONE		"Boils" beneath stream or ponded water?	NONE	
14. Clogged spillways, groin or diversion ditches?	NONE		Around the outside of the decant pipe?	NONE	
15. Are spillway or ditch linings deteriorated?	NONE		22. Surface movements in valley bottom or on hillside?	NONE	
16. Are outlets of decant or underdrains blocked?	NONE		23. Water against downstream toe?		X
17. Cracks or scarps on slopes?	NONE		24. Were Photos taken during the dam inspection?	X	

Major adverse changes in these items could cause instability and should be reported for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) in the space below and on the back of this sheet.

Inspection Issue # Comments

HPC less than low

2,3,4,5,10 thru 22 Pond ~~Closed~~ Inactive (Full), incorporated into solid waste permit with Ash landfill - no decant, no pool, no spillway, regraded surface away from landfill to roadside ditch

U. S. Environmental Protection Agency

Coal Combustion Waste (CCW)
Impoundment Inspection

Impoundment NPDES Permit # GA0001473 INSPECTOR D. TATE, J. BLACK
Date 10 MAY 2010

Impoundment Name Pond C
Impoundment Company GEORGIA POWER PLANT YATES
EPA Region 4
State Agency (Field Office) Addresss 2 MLKING Jr Dr 1152 EAST Tower
ATLANTA GA 30334-9000

Name of Impoundment
(Report each impoundment on a separate form under the same Impoundment NPDES Permit number)

New X Update

	Yes	No
Is impoundment currently under construction?		X
Is water or ccw currently being pumped into the impoundment?		X

IMPOUNDMENT FUNCTION: Inactive ~~Closed~~ COVERED W/ SOLID WASTE

Nearest Downstream Town : Name Franklin, GA
Distance from the impoundment 20 mi
Impoundment Location: Longitude 85.10 Degrees ____ Minutes ____ Seconds
Latitude 33.28 Degrees ____ Minutes ____ Seconds
State GA County Coweta

Does a state agency regulate this impoundment? YES X NO ~~X~~

If So Which State Agency? Georgia Environmental Protection Division (Incorporated into Solid Waste Permit with Ash landfill)

HAZARD POTENTIAL (In the event the impoundment should fail, the following would occur):

__X__ **LESS THAN LOW HAZARD POTENTIAL:** Failure or misoperation of the dam results in no probable loss of human life or economic or environmental losses.

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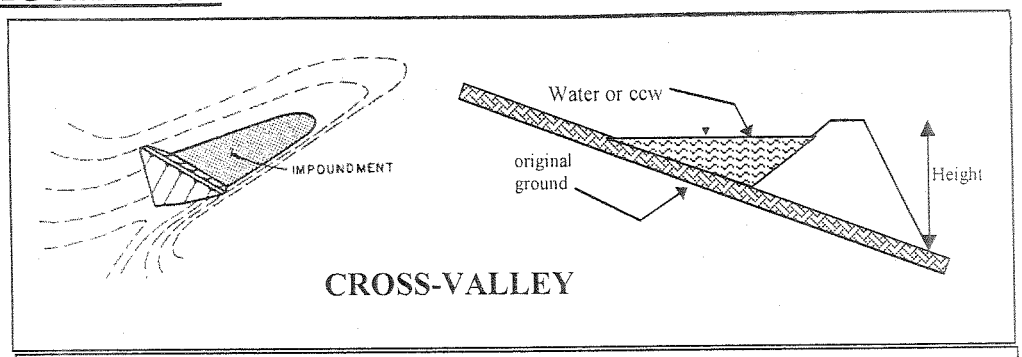
_____ **HIGH HAZARD POTENTIAL:** Dams assigned the high hazard potential classification are those where failure or misoperation will probably cause loss of human life.

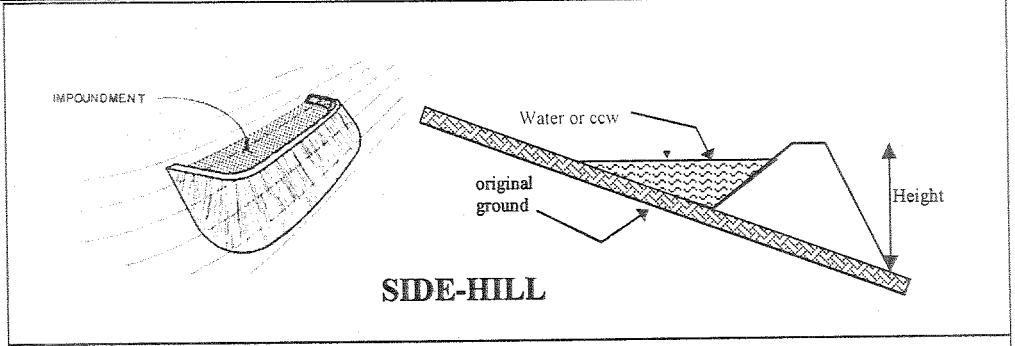
DESCRIBE REASONING FOR HAZARD RATING CHOSEN:

Pond C is fully contained by surrounding ground. There is virtually no possibility of Dam Failure.

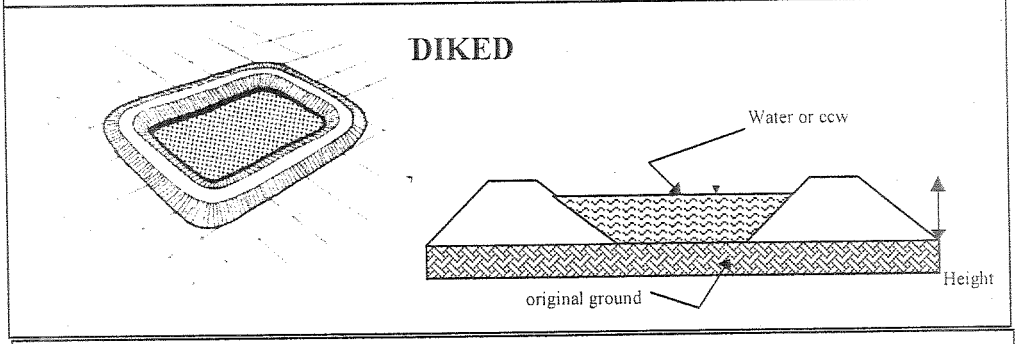
CONFIGURATION:

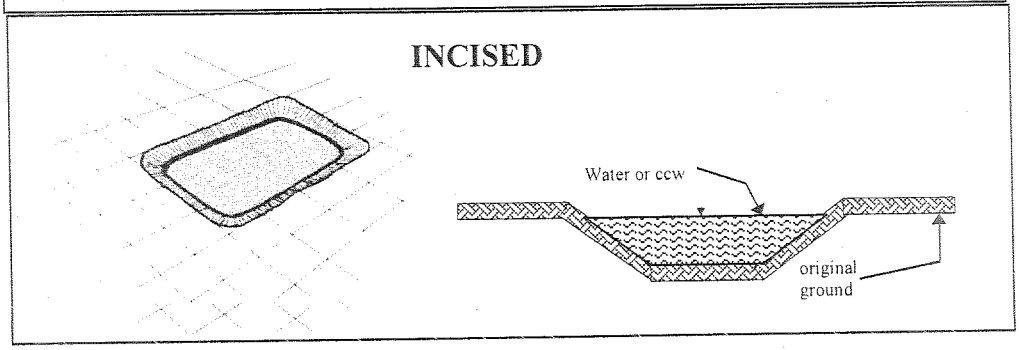


CROSS-VALLEY



SIDE-HILL





X Cross-Valley
_____ Side-Hill
_____ Diked
_____ Incised (form completion optional)
_____ Combination Incised/Diked

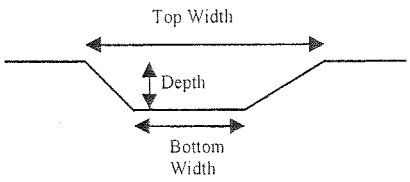
Embankment Height UNKNOWN feet
Pool Area N/A (Prev. 12.4 AC) acres
Current Freeboard N/A feet
breached/regraded, incorporated into landfill

Embankment Material EARTH FILL
Liner NONE
Liner Permeability —

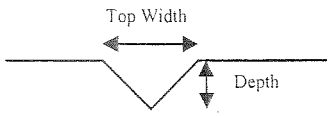
TYPE OF OUTLET (Mark all that apply)

_____ **Open Channel Spillway**
_____ Trapezoidal
_____ Triangular
_____ Rectangular
_____ Irregular

TRAPEZOIDAL

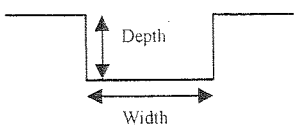


TRIANGULAR

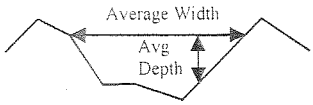


_____ depth
_____ bottom (or average) width
_____ top width
_____

RECTANGULAR

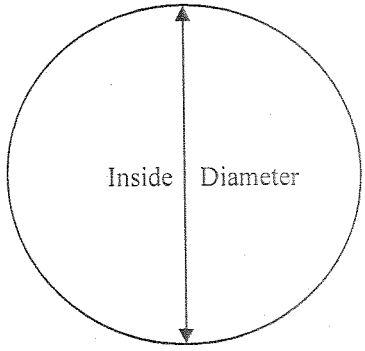


IRREGULAR



_____ **Outlet**

_____ inside diameter



Material
_____ corrugated metal
_____ welded steel
_____ concrete
_____ plastic (hdpe, pvc, etc.)
_____ other (specify) _____

_____

Is water flowing through the outlet? YES _____ NO _____

__X__ **No Outlet**

IMPOUNDMENT COVERED WITH SOLID WASTE LAND FILL

_____ **Other Type of Outlet** (specify) _____

The Impoundment was Designed By LAWRENCE DABNEY & ASSOC FOR AMAX Resource Recovery Systems

Has there ever been a failure at this site? YES _____ NO UNKNOWN

If So When? _____

If So Please Describe : _____

Has there ever been significant seepages at this site? YES _____ NO UNKNOWN

If So When? _____

IF So Please Describe: _____

Has there ever been any measures undertaken to monitor/lower Phreatic water table levels based on past seepages or breaches at this site? YES _____ NO UNKNOWN

If so, which method (e.g., piezometers, gw pumping,...)? _____

If so Please Describe : _____

Coal Combustion Dam Inspection Checklist Form

US Environmental Protection Agency

Site Name: Georgia Power Plant Yates Date: 10 MAY 2010

Unit Name: Pond B' Operator's Name: Georgia Power

Unit I.D.: Hazard Potential Classification: High Significant (Low)

Inspector's Name: D. Tate, J. Black

Check the appropriate box below. Provide comments when appropriate. If not applicable or not available, record "N/A". Any unusual conditions or construction practices that should be noted in the comments section. For large diked embankments, separate checklists may be used for different embankment areas. If separate forms are used, identify approximate area that the form applies to in comments.

	Yes	No		Yes	No
1. Frequency of Company's Dam Inspections?	2/YR		18. Sloughing or bulging on slopes?		X
2. Pool elevation (operator records)?	NONE		19. Major erosion or slope deterioration?		X
3. Decant inlet elevation (operator records)?	NONE		20. Decant Pipes:		
4. Open channel spillway elevation (operator records)?	776		Is water entering inlet, but not exiting outlet?		X
5. Lowest dam crest elevation (operator records)?	789		Is water exiting outlet, but not entering inlet?		X
6. If instrumentation is present, are readings recorded (operator records)?	X		Is water exiting outlet flowing clear?		X
7. Is the embankment currently under construction?		X	21. Seepage (specify location, if seepage carries fines, and approximate seepage rate below):		
8. Foundation preparation (remove vegetation,stumps, topsoil in area where embankment fill will be placed)?	X		From underdrain?		X
9. Trees growing on embankment? (If so, indicate largest diameter below)		X	At isolated points on embankment slopes?		X
10. Cracks or scarps on crest?		X	At natural hillside in the embankment area?		X
11. Is there significant settlement along the crest?		X	Over widespread areas?		X
12. Are decant trashracks clear and in place?		NA	From downstream foundation area?		X
13. Depressions or sinkholes in tailings surface or whirlpool in the pool area?		X	"Boils" beneath stream or ponded water?		X
14. Clogged spillways, groin or diversion ditches?		X	Around the outside of the decant pipe?		X
15. Are spillway or ditch linings deteriorated?		X	22. Surface movements in valley bottom or on hillside?		X
16. Are outlets of decant or underdrains blocked?		X	23. Water against downstream toe?		X
17. Cracks or scarps on slopes?	X		24. Were Photos taken during the dam inspection?	X	

Major adverse changes in these items could cause instability and should be reported for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) in the space below and on the back of this sheet.

Inspection Issue #	Comments
2,3	Pond used for Dewatering, No Pool maintained
12	No Decant Pipe Water removed By Dredge
17,19	Slight Erosion (Repaired while on site)

U. S. Environmental Protection Agency

Coal Combustion Waste (CCW)
Impoundment Inspection

Impoundment NPDES Permit # GA0001473 INSPECTOR D. TATE, J. BLACK
Date 10 MAY 2010

Impoundment Name Pond B'
Impoundment Company GEORGIA POWER PLANT YATES
EPA Region 4
State Agency (Field Office) Addresss 2 MLKing Jr. RD 1152 EMT TOWER
ATLANTA, GA 30334-9000

Name of Impoundment Pond B'
(Report each impoundment on a separate form under the same Impoundment NPDES Permit number)

New X Update _____

	Yes	No
Is impoundment currently under construction?	_____	X
Is water or ccw currently being pumped into the impoundment?	X	_____

IMPOUNDMENT FUNCTION: CCW DEWATERING

Nearest Downstream Town : Name FRANKLIN, GA
Distance from the impoundment 20 mi
Impoundment Location:
Longitude 85.10 Degrees - Minutes - Seconds
Latitude 33.28 Degrees - Minutes - Seconds
State GA County Coweta

Does a state agency regulate this impoundment? YES _____ NO X

If So Which State Agency? _____

HAZARD POTENTIAL (In the event the impoundment should fail, the following would occur):

_____ **LESS THAN LOW HAZARD POTENTIAL:** Failure or misoperation of the dam results in no probable loss of human life or economic or environmental losses.

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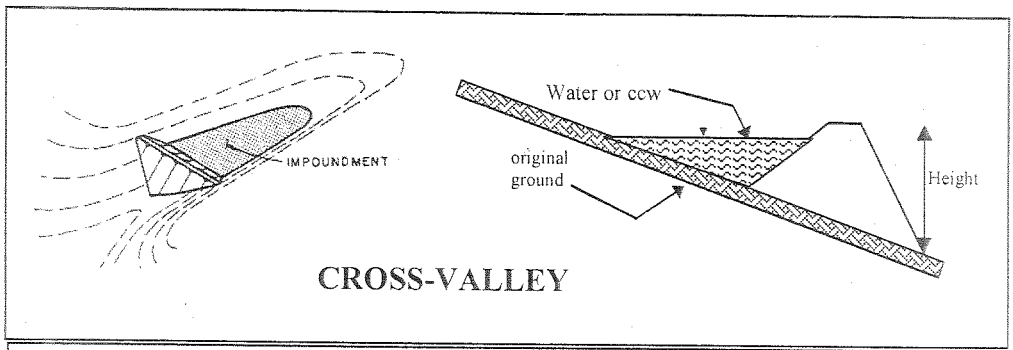
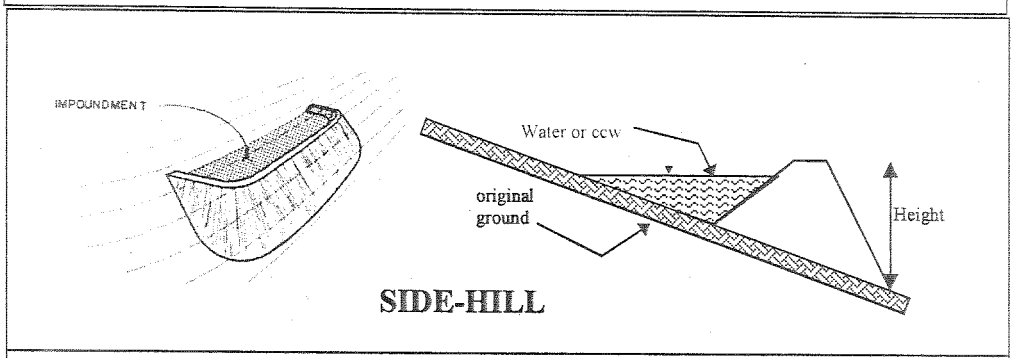
_____ **HIGH HAZARD POTENTIAL:** Dams assigned the high hazard potential classification are those where failure or misoperation will probably cause loss of human life.

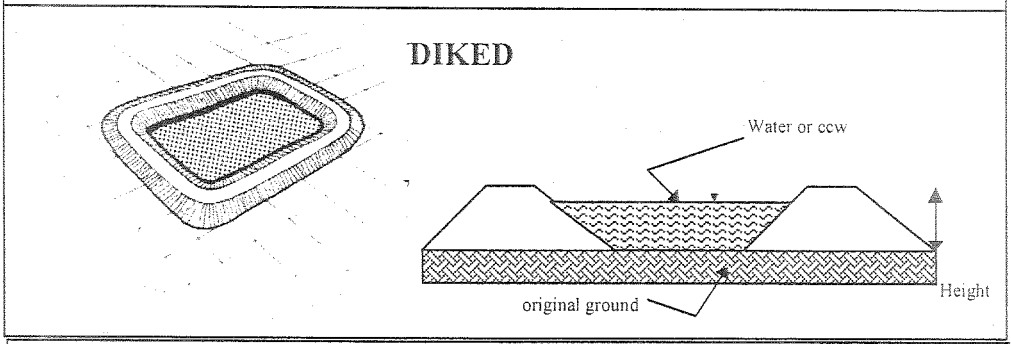
DESCRIBE REASONING FOR HAZARD RATING CHOSEN:

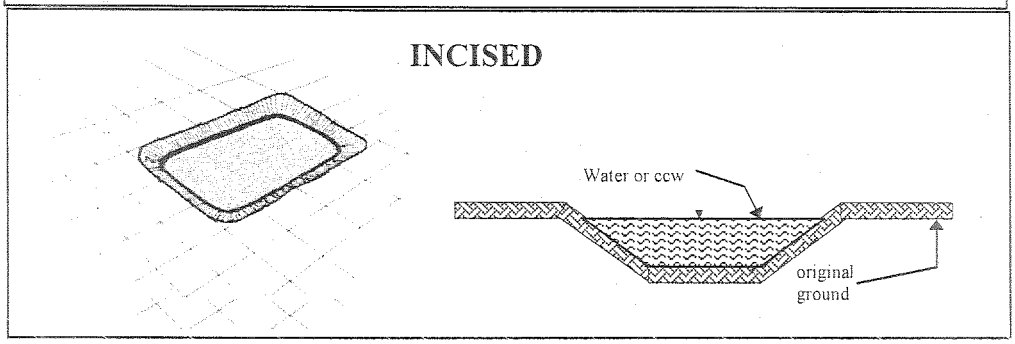
Failure would be contained in plant property unlikely to result in loss of human life.

CONFIGURATION:









__X__ Cross-Valley
_____ Side-Hill
_____ Diked
_____ Incised (form completion optional)
_____ Combination Incised/Diked

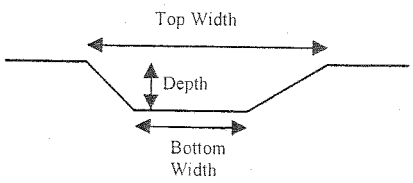
Embankment Height 31 feet
Pool Area 29.8 acres
Current Freeboard 10 feet VARIES

Embankment Material EARTH & ASH FILL
Liner NONE
Liner Permeability —

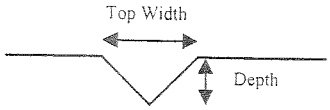
TYPE OF OUTLET (Mark all that apply)

__X__ **Open Channel Spillway**
__X__ Trapezoidal
_____ Triangular
_____ Rectangular
_____ Irregular

TRAPEZOIDAL

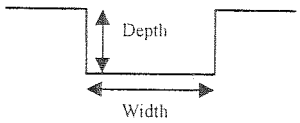


TRIANGULAR

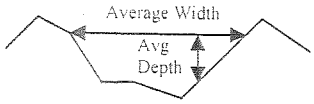


__13__ depth
__~20__ bottom (or average) width
__~100__ top width
_____

RECTANGULAR

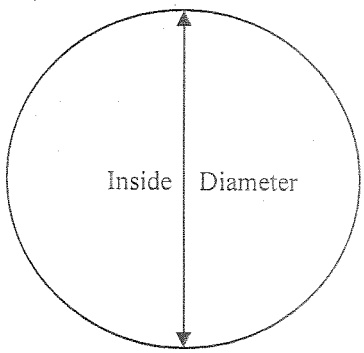


IRREGULAR



_____ **Outlet**

_____ inside diameter



Material
_____ corrugated metal
_____ welded steel
_____ concrete
_____ plastic (hdpe, pvc, etc.)
_____ other (specify) _____

_____

Is water flowing through the outlet? YES _____ NO __X__

_____ **No Outlet**

_____

_____ **Other Type of Outlet** (specify) _____

The Impoundment was Designed By Lawrence Dahnes & Assoc for AMAX Resource Recovery Systems

Has there ever been a failure at this site? YES _____ NO X

If So When? _____

If So Please Describe : _____

Has there ever been significant seepages at this site? YES _____ NO X

If So When? _____

IF So Please Describe: _____

Has there ever been any measures undertaken to monitor/lower Phreatic water table levels based on past seepages or breaches at this site? YES _____ NO ___X___

If so, which method (e.g., piezometers, gw pumping,...)? _____

If so Please Describe : _____

Coal Combustion Dam Inspection Checklist Form

US Environmental Protection Agency

Site Name: PLANT YATES Date: 10-MAY-2010

Unit Name: Pond 3 Operator's Name: GEORGIA POWER

Unit I.D.: Hazard Potential Classification: High Significant (Low)

Inspector's Name: D. TATE & J. BLACK

Check the appropriate box below. Provide comments when appropriate. If not applicable or not available, record "N/A". Any unusual conditions or construction practices that should be noted in the comments section. For large diked embankments, separate checklists may be used for different embankment areas. If separate forms are used, identify approximate area that the form applies to in comments.

	Yes	No		Yes	No
1. Frequency of Company's Dam Inspections?	2/YEAR		18. Sloughing or bulging on slopes?		X
2. Pool elevation (operator records)?	751.5		19. Major erosion or slope deterioration?		X
3. Decant inlet elevation (operator records)?	751.5		20. Decant Pipes:		
4. Open channel spillway elevation (operator records)?	752		Is water entering inlet, but not exiting outlet?		X
5. Lowest dam crest elevation (operator records)?	755		Is water exiting outlet, but not entering inlet?		X
6. If instrumentation is present, are readings recorded (operator records)?	X		Is water exiting outlet flowing clear?	X	
7. Is the embankment currently under construction?		X	21. Seepage (specify location, if seepage carries fines, and approximate seepage rate below):		
8. Foundation preparation (remove vegetation,stumps, topsoil in area where embankment fill will be placed)?	X		From underdrain?		X
9. Trees growing on embankment? (If so, indicate largest diameter below)	X		At isolated points on embankment slopes?		X
10. Cracks or scarps on crest?		X	At natural hillside in the embankment area?		X
11. Is there significant settlement along the crest?		X	Over widespread areas?		X
12. Are decant trashracks clear and in place?	X		From downstream foundation area?		X
13. Depressions or sinkholes in tailings surface or whirlpool in the pool area?		X	"Boils" beneath stream or ponded water?		X
14. Clogged spillways, groin or diversion ditches?		X	Around the outside of the decant pipe?		X
15. Are spillway or ditch linings deteriorated?		X	22. Surface movements in valley bottom or on hillside?		X
16. Are outlets of decant or underdrains blocked?		X	23. Water against downstream toe?		X
17. Cracks or scarps on slopes?		X	24. Were Photos taken during the dam inspection?	X	

Major adverse changes in these items could cause instability and should be reported for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) in the space below and on the back of this sheet.

Inspection Issue #	Comments
9B	Scattered minor woody vegetation on U/S slope ≤ 1" dia.

U. S. Environmental Protection Agency

Coal Combustion Waste (CCW)
Impoundment Inspection

Impoundment NPDES Permit # GA0001473 INSPECTOR D. TATE, J. BLACK
Date 10 MAY 2010

Impoundment Name Pond 3
Impoundment Company GEORGIA POWER PLANT YATES
EPA Region 4
State Agency (Field Office) Addresss 2 M L KING JR Dr
1152 EAST TOWER, ATLANTA, GA 30334-9000
Name of Impoundment POND 3
(Report each impoundment on a separate form under the same Impoundment NPDES Permit number)

New X Update _____

	Yes	No
Is impoundment currently under construction?	_____	X
Is water or ccw currently being pumped into the impoundment?	_____	X

IMPOUNDMENT FUNCTION: STORM WATER

Nearest Downstream Town : Name Franklin, GA
Distance from the impoundment 20 MILES
Impoundment Location:
Longitude 85.10 Degrees _____ Minutes _____ Seconds
Latitude 33.28 Degrees _____ Minutes _____ Seconds
State GA County Coweta

Does a state agency regulate this impoundment? YES _____ NO X

If So Which State Agency? _____

HAZARD POTENTIAL (In the event the impoundment should fail, the following would occur):

_____ **LESS THAN LOW HAZARD POTENTIAL:** Failure or misoperation of the dam results in no probable loss of human life or economic or environmental losses.

__X__ **LOW HAZARD POTENTIAL:** Dams assigned the low hazard potential classification are those where failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.

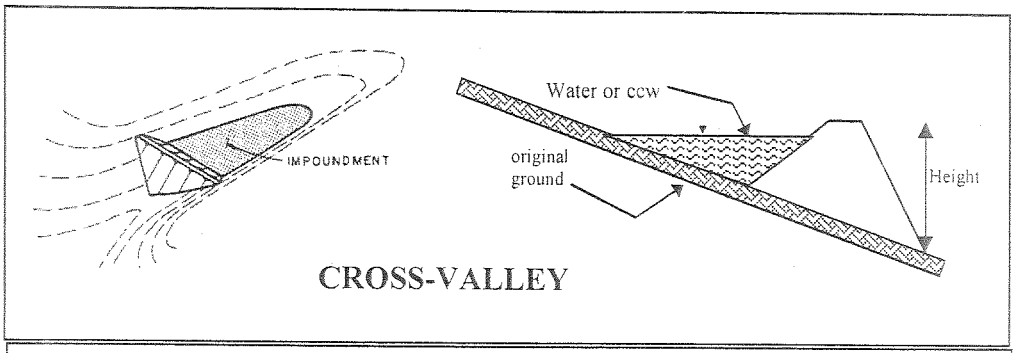
_____ **SIGNIFICANT HAZARD POTENTIAL:** Dams assigned the significant hazard potential classification are those dams where failure or misoperation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.

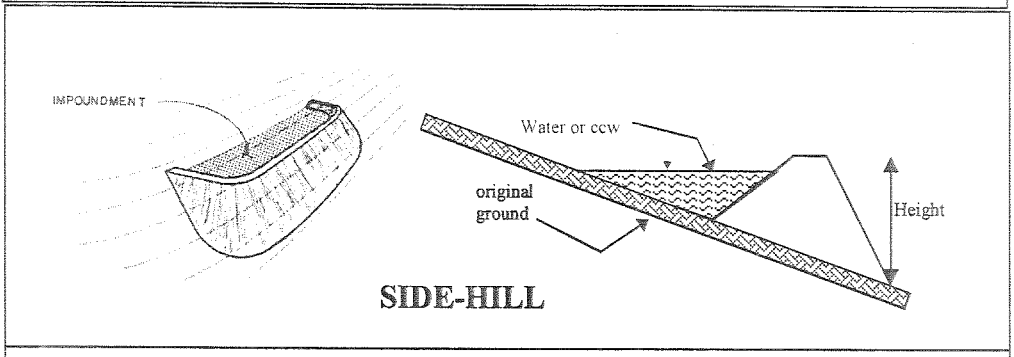
_____ **HIGH HAZARD POTENTIAL:** Dams assigned the high hazard potential classification are those where failure or misoperation will probably cause loss of human life.

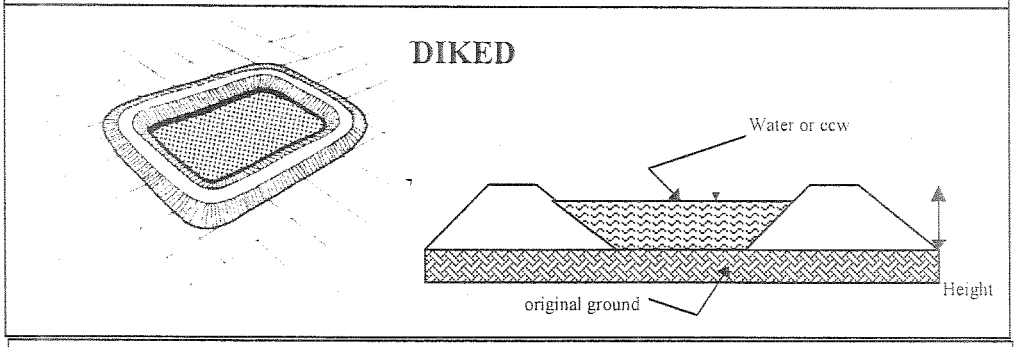
DESCRIBE REASONING FOR HAZARD RATING CHOSEN:

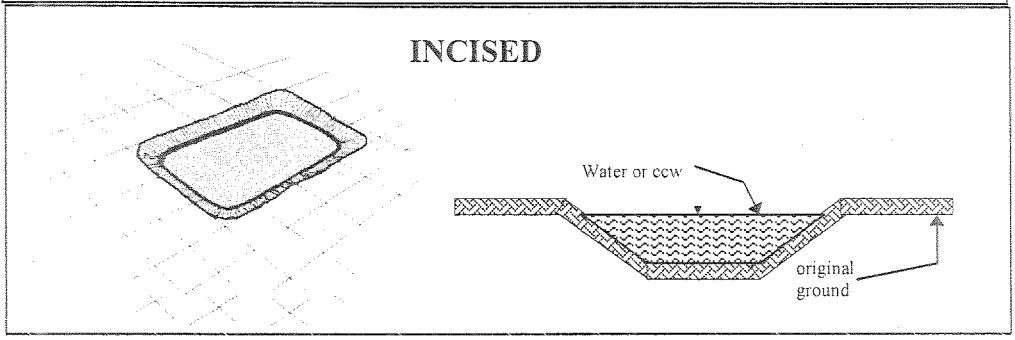
Failure would likely contained in plant property with low cost to clean up and ~~th~~ unlikely to result in loss of Human Life

CONFIGURATION:





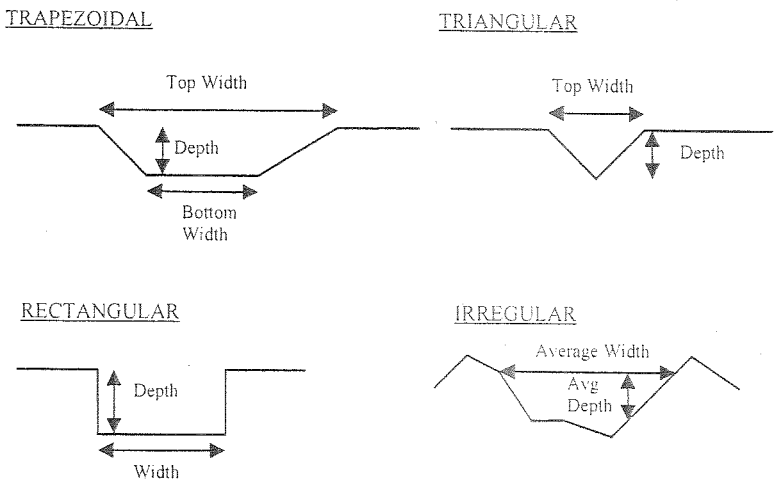




__X__ Cross-Valley
_____ Side-Hill
_____ Diked
_____ Incised (form completion optional)
_____ Combination Incised/Diked

Embankment Height 37 feet
Pool Area 69 acres
Current Freeboard 3.5 feet
Embankment Material EARTH FILL
Liner NONE
Liner Permeability —

TYPE OF OUTLET (Mark all that apply)

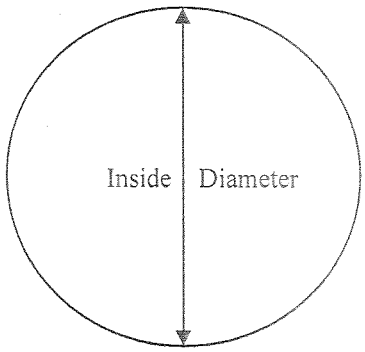


X **Open Channel Spillway**
____ Trapezoidal
X Triangular
____ Rectangular
____ Irregular

12' ~~50~~ depth
____ bottom (or average) width
50' top width

X **Outlet**

42" inside diameter



Material
X corrugated metal
____ welded steel
____ concrete
____ plastic (hdpe, pvc, etc.)
____ other (specify) _____

Is water flowing through the outlet? YES X NO _____

____ **No Outlet**

____ **Other Type of Outlet** (specify) _____

The Impoundment was Designed By GEORGIA Power Chief ENGineer

Has there ever been a failure at this site? YES _____ NO X

If So When? _____

If So Please Describe : _____

Has there ever been significant seepages at this site? YES _____ NO X

If So When? _____

IF So Please Describe: _____

Has there ever been any measures undertaken to monitor/lower Phreatic water table levels based on past seepages or breaches at this site? YES _____ NO X

If so, which method (e.g., piezometers, gw pumping,...)? _____

If so Please Describe : _____

APPENDIX B
Site Photo Log Map and Site Photos

amec

AMEC Earth & Environmental
690 Commonwealth Business Center
11003 Bluegrass Parkway
Louisville, KY 40299

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

DRAWN BY: ATJ	
CHK'D BY: MS	
DATUM: NAD83	
PROJECTION: Albers	
SCALE: AS SHOWN	
DATE: 5/21/2010	

ASSESSMENT OF DAM SAFETY OF
COAL COMBUSTION SURFACE IMPOUNDMENTS

GEORGIA POWER
PLANT YATES NEWNAN, GA
ASH POND 1, ASH POND 2, and GYPSUM POND
PHOTO LOCATION MAP

N

0 100 Meters

0 300 600 Feet

Notes: Critical infrastructure data provided by ESRI

FIGURE
B-1

amec
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11003 Bluegrass Parkway
Louisville, KY 40299

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

DRAWN BY: ATJ	
CHK'D BY: MS	
DATUM: NAD83	
PROJECTION: Albers	
SCALE: AS SHOWN	
DATE: 5/21/2010	

ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

GEORGIA POWER
PLANT YATES NEWNAN, GA
ASH POND A, B, C, B', and ASH POND 3
PHOTO LOCATION MAP

N

0 100 Meters

0 300 600 Feet

Notes: Base data provided by ESRI

FIGURE
B-2

1-1

RUTTING ON DOWNSTREAM SLOPE

1-2

LOOKING OUT INTO ASH POND #1, 48-INCH DIAMETER CMP OUTLET

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(502) 267-0700

CLIENT LOGO

CLIENT: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA.
ASH POND 1 SITE PHOTOS

DWN BY: CAE	DATUM:	DATE: 6/21/10	
CHK'D BY: MS	REV. NO.:	PROJECT NO: 3-2106-0174.0400	
PROJECTION:	SCALE:	PAGE NO. B-3	

1-3

PONDED WATER AND DITCH INLET FROM COAL PILE

1-4

NEW PZ AT SEEPAGE REPAIR AREA ON ROAD AT TOE OF DOWNSTREAM SLOPE

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DWN BY:	DATUM:	DATE:
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MS		3-2106-0174.0400
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1-5

TREES IN UPSTREAM SLOPE, GENERALLY SMALL (<2) TO 18 IN. DIA., ONE OF LARGEST =23 IN. DIA., ENTIRELY WOODED ON UPSTREAM SLOPE AND MOST OF INTERIOR

1-6

UPPER DOWNSTREAM SLOPE, DEBRIS PILES AND BARE AREAS

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PLANT YATES, NEWNAN, GA.
ASH POND 1 SITE PHOTOS

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1-7

DOWNSTREAM SLOPE WEST OF ROAD AND ABOVE COOLING TOWERS, EROSION/STEEP SLOPE

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	PROJECTION:	SCALE:	PAGE NO. B-6

2-1

SPILLWAY ENTRANCE

2-2

SPILLWAY CHANNEL LINED WITH CONCRETE FILLED FABRI-FORM®

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TITLE: GEORGIA POWER PLANT YATES, NEWNAN, GA. ASH POND 2 SITE PHOTOS	CHK'D BY: MS	REV. NO.:	PROJECT NO: 3-2106-0174.0400
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2-3

SPILLWAY OUTFALL

2-4

SPILLWAY EXIT, ROCK IN BOTTOM

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PLANT YATES, NEWNAN, GA.
ASH POND 2 SITE PHOTOS

DWN BY:	DATUM:	DATE:
CAE		6/21/10
CHK'D BY:	REV. NO.:	PROJECT NO:
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2-5

UPPER DOWNSTREAM SLOPE, RUTTED AREAS FROM MOWING

2-6

MIDDLE DOWNSTREAM SLOPE, PZ LOCATIONS TOP AP2-2D & AP2-2S

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PLANT YATES, NEWNAN, GA.
ASH POND 2 SITE PHOTOS

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2-7

LOW SPOT ON BOTTOM OF UPPER DOWNSTREAM SLOPE AT LEFT ABUTMENT

2-8

SILTED IN SURFACE DRAIN OUTLET AT RIVER IN LEFT ABUTMENT AREA

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	PROJECTION:	SCALE:	PAGE NO. B-10

2-9

WET AREA AT TOE NEAR RIGHT ABUTMENT OF MIDDLE DOWNSTREAM SLOPE

2-10

PHOTO FROM LEFT ABUTMENT SOUTH ACROSS POND #2, DECANT PIPE & SPILLWAY IN BACKGROUND

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2-11

OUTLET POND #2 HOLDING TANK (PLANT DISCHARGE THROUGH #2)

2-12

OUTLET POND #2 PIPE AND VALVES IN PIT

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GP-1

TOP OF UPPER BASIN

GP-2

BOTTOM OF UPPER BASIN - MIDDLE AND LOWER BASIN (NOT VISIBLE) TO RIGHT

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PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS	DWN BY: CAE	DATUM:	DATE: 6/21/10
TITLE: GEORGIA POWER PLANT YATES, NEWNAN, GA. GYPSUM POND SITE PHOTOS	CHK'D BY: MS	REV. NO.:	PROJECT NO: 3-2106-0174.0400
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GP-3

WELL LOCATED TO THE EAST AND BELOW LOWER BASIN

GP-4

GP PUMP STATION AND PIPING LOCATED TO THE EAST OF LOWER BASIN

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GP-5
SLOPE TO EAST OF LOWER BASIN

GP-6
HDPE LINED LOWER BASIN

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CLIENT LOGO

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PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA.
GYPSUM POND SITE PHOTOS

DWN BY: CAE	DATUM:	DATE: 6/21/10
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GP-7

TREES AT EDGE OF LOWER BASIN

GP-8

GAGE FROM WEST SIDE (ROAD) OF LOWER BASIN INDICATES APPROX. ELEV. 766.5

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CLIENT LOGO

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TITLE: GEORGIA POWER PLANT YATES, NEWNAN, GA. GYPSUM POND SITE PHOTOS	CHK'D BY: MS	REV. NO.:	PROJECT NO: 3-2106-0174.0400
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A-1

FROM LEFT ABUTMENT LOOKING EAST, PZ'S APA-1 AND APA-2

A-2

LOOKING NORTHWEST, INTERIOR OF POND AND PZ APA-1

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CLIENT LOGO

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PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA.
ASH POND A SITE PHOTOS

DWN BY:	DATUM:	DATE:
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CHK'D BY:	REV. NO.:	PROJECT NO:
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A-3

SEVERE EROSION AT DRAIN OUTLET AT RIGHT ABUTMENT

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TITLE: GEORGIA POWER PLANT YATES, NEWNAN, GA. ASH POND A SITE PHOTOS	CHK'D BY: MS	REV. NO.:	PROJECT NO: 3-2106-0174.0400	
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B-1

LOOKING FROM TOE AT B' TO WEST ACROSS POND B

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CLIENT LOGO

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PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA.
ASH POND B SITE PHOTOS

DWN BY:	DATUM:	DATE:
CAE		6/21/10
CHK'D BY:	REV. NO.:	PROJECT NO:
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C-1

LOOKING EAST ACROSS POND C, ASH UP TO FULL HEIGHT, NOT CAPPED, INCLUDED UNDER SOLID WASTE PERMIT

C-2

LOOKING SOUTHEAST ACROSS POND C, R6 LANDFILL IN BACKGROUND

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CLIENT LOGO

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TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA.
ASH POND C SITE PHOTOS

DWN BY:	DATUM:	DATE:
CAE		6/21/10
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B`-1
MIDDLE CELL

B`-2
MIDDLE CELL

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CLIENT LOGO

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PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA.
ASH POND B` SITE PHOTOS

DWN BY:	DATUM:	DATE:
CAE		6/21/10
CHK'D BY:	REV. NO.:	PROJECT NO:
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B`-3

EROSION AT TOE OF NORTH SIDE OF DOWNSTREAM SLOPE NEXT TO POND B

B`-4

EXPOSED 1-FOOT ASH LAYER BENEATH THIN SURFACE NEAR TOP OF LOWER EMBANKMENT ON NORTH DAM

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CLIENT LOGO

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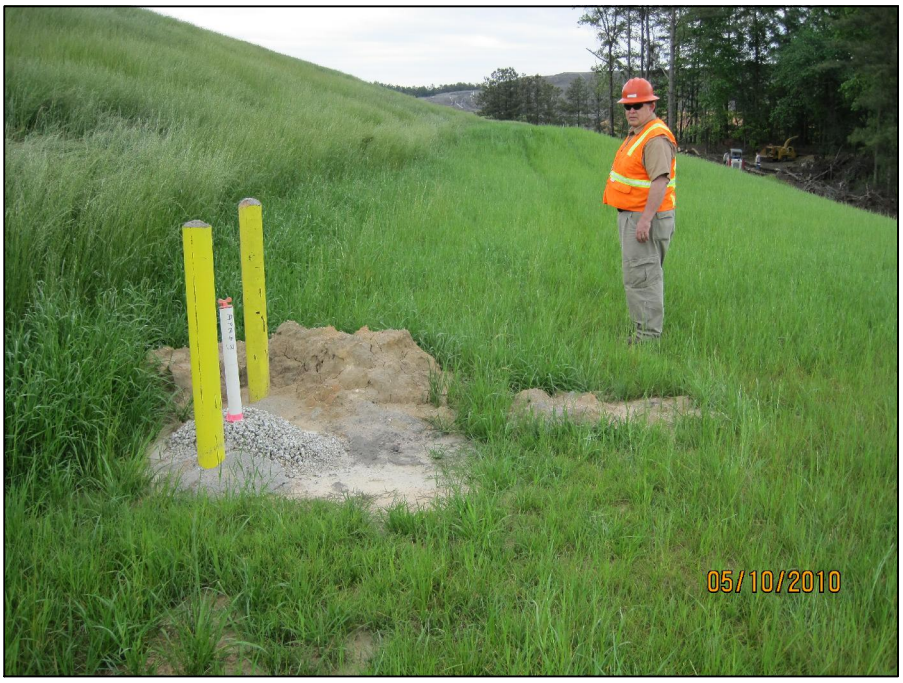
PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA.
ASH POND B` SITE PHOTOS

DWN BY: CAE	DATUM:	DATE: 6/21/10	
CHK'D BY: MS	REV. NO.:	PROJECT NO: 3-2106-0174.0400	
PROJECTION:	SCALE:	PAGE NO. B-22	



B`-5

MIDDLE BENCH OF NORTH DAM AND PZ APBMW3

B`-6

SOUTH CELL

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PLANT YATES, NEWNAN, GA.
ASH POND B` SITE PHOTOS

DWN BY:	DATUM:	DATE:
CAE		6/21/10
CHK'D BY:	REV. NO.:	PROJECT NO:
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		B-23

B`-7
SOUTH CELL

AMEC Earth & Environmental
690 Commonwealth Center
11003 Bluegrass Parkway
Louisville, Ky 40299
(502) 267-0700

CLIENT LOGO

CLIENT: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA.
ASH POND B` SITE PHOTOS

DWN BY:	DATUM:	DATE:
CAE		6/21/10
CHK'D BY:	REV. NO.:	PROJECT NO:
MS		3-2106-0174.0400
PROJECTION:	SCALE:	PAGE NO.
		B-24

3-1

DECANT CMP PIPE OUTLET WITH TRASH RACK

3-2

PZ AND EXIT CHANNEL FOR EMERGENCY SPILLWAY

AMEC Earth & Environmental
690 Commonwealth Center
11003 Bluegrass Parkway
Louisville, Ky 40299
(502) 267-0700

PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS	DWN BY: CAE	DATUM:	DATE: 6/21/10
TITLE: GEORGIA POWER PLANT YATES, NEWNAN, GA. ASH POND 3 SITE PHOTOS	CHK'D BY: MS	REV. NO.:	PROJECT NO: 3-2106-0174.0400
	PROJECTION:	SCALE:	PAGE NO. B-25

CLIENT LOGO

CLIENT: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

3-3

EMERGENCY SPILLWAY

3-4

OUTLET OF DECANT PIPE TO DITCH

AMEC Earth & Environmental
690 Commonwealth Center
11003 Bluegrass Parkway
Louisville, Ky 40299
(502) 267-0700

CLIENT LOGO

CLIENT: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA.
ASH POND 3 SITE PHOTOS

DWN BY:	DATUM:	DATE:
CAE		6/21/10
CHK'D BY:	REV. NO.:	PROJECT NO:
MS		3-2106-0174.0400
PROJECTION:	SCALE:	PAGE NO.
		B-26

3-5

OUTLET DITCH FROM POND #3 (DRAINS TO POND #2)

3-6

LOOKING WEST ACROSS DOWNSTREAM SLOPE (PZ'S EP-3 AND EP-4)

AMEC Earth & Environmental
690 Commonwealth Center
11003 Bluegrass Parkway
Louisville, Ky 40299
(502) 267-0700

CLIENT LOGO

CLIENT: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS

TITLE: GEORGIA POWER
PLANT YATES, NEWNAN, GA.
ASH POND 3 SITE PHOTOS

DWN BY:	DATUM:	DATE:
CAE		6/21/10
CHK'D BY:	REV. NO.:	PROJECT NO:
MS		3-2106-0174.0400
PROJECTION:	SCALE:	PAGE NO.
		B-27

3-7

MINOR WOODY VEGETATION (APPROX. 1-INCH DIAMETER) ON UPSTREAM SLOPE

AMEC Earth & Environmental
690 Commonwealth Center
11003 Bluegrass Parkway
Louisville, Ky 40299
(502) 267-0700

PROJECT: ASSESSMENT OF DAM SAFETY OF COAL COMBUSTION SURFACE IMPOUNDMENTS	DWN BY: CAE	DATUM:	DATE: 6/21/10
TITLE: GEORGIA POWER PLANT YATES, NEWNAN, GA. ASH POND 3 SITE PHOTOS	CHK'D BY: MS	REV. NO.:	PROJECT NO: 3-2106-0174.0400
	PROJECTION:	SCALE:	PAGE NO. B-28

CLIENT LOGO

CLIENT: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

APPENDIX C
Inventory of Provided Materials

Plant Yates
708 Dyer Road
Newnan, Georgia 30263

Tel. 770-252-0452

GEORGIA POWER
A SOUTHERN COMPANY

Confidential Business Information – Do Not Disclose

May 11, 2010

VIA E-MAIL

Stephen Hoffman
Office of Resource conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

Re: Documents Provided to EPA and Claims of Confidentiality

Dear Mr. Hoffman:

This letter confirms the documents provided by Georgia Power to the Environmental Protection Agency (EPA) during EPA's inspection of Plant Yates Ash Ponds on May 10th and 11th, 2010. The following table lists the documents provided to EPA during the inspection. Georgia Power has provided some of the documents under a claim of confidentiality for purposes of Part 2, Subpart B of EPA's regulations. The documents claimed as confidential have been marked as such, and are noted as "Yes" under the column for CBI, which stands for Confidential Business Information. Georgia Power also claims this letter as confidential due to the information it conveys with respect to Georgia Power's facilities and management practices.

Bates	Date	Document Description	CBI
YAT-API 001	N/A	Aerial Photo Intake Structures	Yes
YAT-API 002	N/A	Aerial Photo of Ash Pond	Yes
YAT-API 003	N/A	Aerial Photo of Ash Pond	Yes
YAT-API 004	N/A	Plant Yates NPDES Flow Diagram	No
YAT-API 005	N/A	Aerial Photo of Ash Pond B	Yes
YAT-API 006	N/A	Aerial Photo of #3 Ash Pond	Yes
YAT-API 007	N/A	Aerial Photo of #1 Ash Pond	Yes
YAT-API 008	N/A	Aerial Photo	Yes
YAT-API 009	1968	Yates AP 2 Dike Stability Analysis Excerpt	Yes

Bates	Date	Document Description	CBI
YAT-API 010	N/A	Plant Yates Drawing No. H-28	Yes
YAT-API 011	N/A	This number not assigned	N/A
YAT-API 012	1/10/1969	Law Engineering letter re: Ash Pond 2 Dike	Yes
YAT-API 013	3/18/1969	Law Engineering letter re: Proctor Test Proposed Borrow Area Plant Yates	Yes
YAT-API 014	N/A	This number not assigned	N/A
YAT-API 015	N/A	This number not assigned	N/A
YAT-API 016	N/A	This number not assigned	N/A
YAT-API 017	4/16/1969	Plant Yates –Drawing No. H-183	Yes
YAT-API 018	4/18/1969	Plant Yates Drawing No. H-185	Yes
YAT-API 019	3/30/1976	Law Engineering Testing Company letter re: Ash Pond C	Yes
YAT-API 020	N/A	Plant Yates Drawing No. H-812	Yes
YAT-API 021	N/A	Plant Yates Drawing No. H-825	Yes
YAT-API 022	N/A	Plant Yates Ash Pond 2 Drawing No. H-829	Yes
YAT-API 023	8/6/1970	Plant Yates Ash Pond 2 Drawing No. H-9074	Yes
YAT-API 024	N/A	This number not assigned	N/A
YAT-API 025	N/A	Plant Yates Emergency Ash Pond 3-Drawing No. H-9065	Yes
YAT-API 026	8/10/1976	Plant Yates Ash Pond 3 Drawing H-9066	Yes
YAT-API 027	N/A	Plant Yates Ash Pond 3 Drawing No. H-9067	Yes
YAT-API 028	N/A	Plant Yates Ash Pond Drawing No. H-9068	Yes
YAT-API 029	11/1997	Plant Yates Ash Pond No. 3 Drawing No. L-586-1	Yes
YAT-API 030	3/7/1978	Plant Yates AMAX-Pond B' Drawing No. 811-1	Yes
YAT-API 031	1/23/1976	Plant Yates AMAX 1976 Pond C, Pond B Drawing No. AMAX 1976	Yes
YAT-API 032	5/27/1976	Atlanta Testing & Engineering Ash Pond 3 Test Boring Logs	Yes
YAT-API 033	11/24/1987	Plant Yates Drawing No. E-00006	Yes
YAT-API 034	4/15/1977	Plant Yates AMAX B' Drawing No. Figure 1	Yes
YAT-API 035	1/15/2000	Plant Yates Ash Pond Drawing No. M-186-3	Yes
YAT-API 036	6/5/1995	Plant Yates Ash Pond Drawing No. E12814	Yes
YAT-API 037	4/22/2005	Plant Yates Dam Safety Surveillance 1st Semi-Annual 2005 Report	Yes
YAT-API 038	7/22/2005	Plant Yates Dam Safety Surveillance Semi-Annual 2005 Report	Yes
YAT-API 039	4/28/2006	Plant Yates Dam Safety Surveillance Semi-Annual 2006 Report	Yes

Bates	Date	Document Description	CBI
YAT-API 040	10/23/2007	Plant Yates Dam Safety Surveillance Inspection Report	Yes
YAT-API 041	12/17/2008	Plant Yates Dam Safety Surveillance Inspection Report	Yes
YAT-API 042	10/1/2009	Plant Yates Dam Safety Surveillance 1st Semi-Annual Report	Yes
YAT-API 043	1/15/2010	Plant Yates Dam Safety Surveillance 2nd Semi-Annual Report	Yes
YAT-API-044	3/2010	Ash Pond 3 Boring Locations	Yes
YAT-API-045	9/1/2006	Plant Yates NPDES Permit GA0001473	No
YAT-API 046	6/7/1976	Atlanta Testing & Engineering letter re: Plant Yates Ash Pond 3 Dike	Yes
YAT-API 047	6/24/1976	Georgia Power Procedures for Construction of Yates Ash Pond 3	Yes
YAT-API 048	7/7/1976	Geoconsultants, Inc., letter re: Ash Pond 3	Yes
YAT-API 049	1977	Plant Yates AP3 1977 Stability Analysis	Yes
YAT-API 050	4//1977	AMAX Resource Recovery Systems Report for Yates Ash Pond B'	Yes
YAT-API 051	4/19/1977	Atlanta Testing & Engineering re: B' Dike and Pond at Plant Yates	Yes
YAT-API 052	5/24/1977	Georgia Power Geotechnical Report	Yes
YAT-API 053	8/25/1977	Atlanta Testing & Engineering letter B' Dike and Pond at Plant Yates	Yes
YAT-API 054	10/15/1997	SCS Yates Ash Pond 3 Dike Field Test Boring Records	Yes
YAT-API 055	1/9/1998	Atlanta Testing & Engineering re: Yates Ash Pond 3	Yes
YAT-API 056	11/11/1998	Plant Yates Ash Pond 3 Temporary Piezometers	Yes
YAT-API 057	7/3/2001	SCS Analysis of Ash Pond 3 for Proposed Ash Stacking	Yes
YAT-API 058	3/4/2010	SCS Log of Test Boring Wells	Yes
YAT-API 059	3/4/2010	SCS Log of Test Boring	Yes
YAT-API 060	N/A	Georgia Power Inquiry Detail Specifications Ash Pond 2	Yes
YAT-API 061	N/A	SCS Yates AP3 Dike Lab Test Summary & Analysis	Yes
YAT-API 062	N/A	Georgia Power Ash Pond Dike Boring Summary	Yes
YAT-API 063	2/2/2010	Georgia Power Responses to EPA's Section 104(e) Request Questions 5-8	Yes

I trust this list is consistent with your understanding of the documents we have provided to you today and is clear with respect to Georgia Power's claims of confidentiality. Please advise me immediately if you should become aware of any discrepancy with respect to the documents Georgia Power has provided, or if there is any question as to which documents are claimed as confidential.

Sincerely,

Michael L. Burroughs
Plant Manager
Plant Yates

cc: Douglas E. Tate, P.E.
James Black, P.E.
Charles H. Huling

GEORGIA POWER
A SOUTHERN COMPANY

Confidential Business Information – Do Not Disclose

May 20, 2010

VIA E-MAIL

Stephen Hoffman
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

Re: Documents Provided to EPA and Claims of Confidentiality

Dear Mr. Hoffman:

Dear Mr. Hoffman:

This letter confirms that an additional documents were provided by Georgia Power to the consultants of the Environmental Protection Agency (EPA) in response to EPA's inspection of Plant Yates held on May 10th and 11th which have been designated as Confidential Business Information. We have affixed a unique identifying number to the document. The table below identifies the documents provided to EPA in this supplemental production. Georgia Power has designated those documents provided to EPA as confidential with a Confidential Business Information stamp. The confidential documents have been identified below and marked as such.

Doc. Control No.	CBI
YAT-API 064	Yes
YAT-API 065	No
YAT-API 066	No
YAT-API 067	Yes
YAT-API 068	No

I trust this letter is consistent with your understanding of the documents Georgia Power has provided, including which documents are subject to a claim of confidentiality. Please advise me immediately if you should have any question about which documents have been provided and which are confidential.

Sincerely

Tanya Blalock

Tanya Blalock
Environmental Affairs Manager

cc: Douglas E. Tate, P .E.
James Black, P.E.
Charles H. Huling

GEORGIA POWER
A SOUTHERN COMPANY

Confidential Business Information – Do Not Disclose

June 7, 2010

VIA E-MAIL

Stephen Hoffman
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

Re: Documents Provided to EPA and Claims of Confidentiality

Dear Mr. Hoffman:

Dear Mr. Hoffman:

This letter confirms that additional documents were provided by Georgia Power to the consultants of the Environmental Protection Agency (EPA) in response to EPA's inspection of Plants McDonough, Mitchell and Yates which have been designated as Confidential Business Information. We have affixed a unique identifying number to the document. The table below identifies the documents provided to EPA in this supplemental production. Georgia Power has designated those documents provided to EPA as confidential with a Confidential Business Information stamp. The confidential documents have been identified below and marked as such.

Doc. Control No.	CBI
MCD-API 077	No
MCD-API 078	No
MCD-API 079	No
MIT-API 051	Yes
YAT-API 069	Yes

I trust this letter is consistent with your understanding of the documents Georgia Power has provided, including which documents are subject to a claim of confidentiality. Please advise me immediately if you should have any question about which documents have been provided and which are confidential.

Sincerely

Tanya Blalock

Tanya Blalock
Environmental Affairs Manager

cc: Douglas E. Tate, P .E.
James Black, P.E.
Mary Swiderski
Charles H. Huling

GEORGIA POWER
A SOUTHERN COMPANY

Confidential Business Information – Do Not Disclose

June 9, 2010

VIA E-MAIL

Stephen Hoffman
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

Re: Documents Provided to EPA and Claims of Confidentiality

Dear Mr. Hoffman:

Dear Mr. Hoffman:

This letter confirms that additional documents were provided by Georgia Power to the consultants of the Environmental Protection Agency (EPA) in response to EPA's inspection of Plant Yates which have been designated as Confidential Business Information. We have affixed a unique identifying number to the document. The table below identifies the documents provided to EPA in this supplemental production. Georgia Power has designated those documents provided to EPA as confidential with a Confidential Business Information stamp. The confidential documents have been identified below and marked as such.

Doc. Control No.	CBI
YAT-API 070	Yes
YAT-API 071	Yes
YAT-API 072	Yes
YAT-API 073	Yes
YAT-API 074	Yes
YAT-API 075	Yes
YAT-API 076	Yes

I trust this letter is consistent with your understanding of the documents Georgia Power has provided, including which documents are subject to a claim of confidentiality. Please advise me immediately if you should have any question about which documents have been provided and which are confidential.

Sincerely

Tanya Blalock

Tanya Blalock
Environmental Affairs Manager

cc: Douglas E. Tate, P .E.
James Black, P.E.
Charles H. Huling

Additional Yates Documents

(Includes Corrections to Document List and Number Assignments Supplied by Troutman Sanders)

Listed[1] Assigned Document Identification Number	Stamped Identification Number Extension	Document Description
YAT-API 001	0001	Aerial Photo Intake Structure
YAT-API 002	0002	Aerial Photo of Ash Pond (2)
YAT-API 003	0003	Aerial Photo of Ash Pond (2)
YAT-API 004	004	Plant Yates NPDES Flow Diagram – **Digital copy not provided**
Not listed	0004	Aerial Photo of Ash Pond C and R6 Landfill – **included in digital file**
YAT-API 005	0005	Aerial Photo of Ash Pond B – **Description is mistaken, photo is of Pond B'**
YAT-API 006	0006	Aerial Photo of #3 Ash Pond
YAT-API 007	0007	Aerial Photo of #1 Ash Pond
YAT-API 008	0008	Aerial Photo **of Gypsum Pond**
YAT-API 009	009	Yates AP 2 Dike Stability Analysis Excerpt – **1968, No digital copy provided**
Not listed	0009	Aerial Photo of Pyrite Pond – **included in digital file**
YAT-API 011		May 2010 Repair to Ash Pond B' Photo – **API number originally not assigned**
YAT – API 012	012	Law Engineering Letter re: Ash Pond 2 Dike - **Provided only hard copy**
Not listed	0012	1951 Ash Pond 1 Drawing H-66 General Plan of Development Ash Pond 1 / Coal Pile Facility – **included in digital file**
YAT – API 013	013	Law Engineering Letter re: Proctor Test Proposed Borrow Area Plant Yates – **Provided only hard copy**
Not listed	0013	Ash Pond 1 Drawing H 842 (or H 82, copy unclear) Units 1-5 Coal Pile Runoff Drainage Ditch – **provided digitally**
YAT-API 014		May 2010 Repair to Ash Pond B' Photo – **API number originally not assigned**
YAT-API 015		May 2010 Repair to Ash Pond B' Photo – **API number originally not assigned**
YAT-API 016		May Repair to Ash Pond B' Photo – **API number originally not assigned**
YAT-API 019	019	Law Engineering Testing Company Letter re: Ash Pond C - **Provided only hard copy**
Not listed	0019	Ash Pond 2 Drawing H 566 (may not be accurate, file hard to read) Plan View - **included in digital file**
YAT-API 035	035	Plant Yates Ash Pond Drawing No. M-186-3 - **Provided only hard copy**
Not listed	0035	2000 Plant Yates Topographic Map – **included in digital file**
YAT-API 044		Ash Pond 3 Boring Locations – **Drawing actually illustrates 2010 Boring and Piezometer Locations for**

		Ash Ponds 2, A, and B' – Ash Pond 3 depiction is for historically installed piezometers
YAT – API 064	064	April 2009 - Ash Pond 2 Rip Rap Apron Spillway Approach Design Calculations
YAT – API 065	065	Ash Pond 2 Rip Rap Apron Spillway Approach Design Site Photo (before rip-rap placed)
YAT – API 066	066	Ash Pond 2 Rip Rap Apron Spillway Approach Design Site Photo (after rip-rap placed)
YAT – API 067	067	February 2010 - Ash Pond 1 (minor seepage) and 2 (diversion dike repairs) Site Visit Repair Document
YAT – API 068	068	VOID – Plant McDonough Document mistakenly provided
YAT – API 069		June 2010 Plant Yates Ash Ponds Stability Analyses Report
YAT – API 070	070	October 1991, Design and Operation Plan for the Coweta County Georgia Power, Plant Yates, Private Industry Waste Disposal Site, Sheet 9 of 24
YAT – API 071	071	October 1991, Design and Operation Plan for the Coweta County Georgia Power, Plant Yates, Private Industry Waste Disposal Site, Sheet 10 of 24
YAT – API 072	072	October 1991, Design and Operation Plan for the Coweta County Georgia Power, Plant Yates, Private Industry Waste Disposal Site, Sheet 11 of 24
YAT – API 073	073	January 2005 Design and Operation Plan for Plant Yates Private Industry Waste Disposal Site (for the Gypsum Facility and Ponds)
YAT – API 074	074	October 1991, Design and Operation Plan for the Coweta County Georgia Power, Plant Yates, Private Industry Waste Disposal Site, Sheet 4 of 24
YAT – API 075	075	December 2003, Design and Operation Plan, Minor Modification, for the Coweta County Georgia Power, Plant Yates, Private Industry Waste Disposal Site, Sheet 7 of 24
YAT – API 076	076	December 2003, Design and Operation Plan, Minor Modification, for the Coweta County Georgia Power, Plant Yates, Private Industry Waste Disposal Site, Sheet 8 of 24

1 Many API numbers listed with a single zero, have an additional zero stamped on the document. For instance, listed document YAT-API 029, is stamped on document as YAT-API 0029.