

**HISTORY OF CONSTRUCTION – REVISION 01**  
**40 C.F.R. PART 257.73(c)**  
**CCR UNIT ASH POND 1 (AP-1)**  
**PLANT MCDONOUGH, GEORGIA POWER COMPANY**

This History of Construction was prepared for Georgia Power Company Plant McDonough Ash Pond 1 (AP-1), located in Cobb County, Georgia. This History of Construction was prepared in accordance with the United States Environmental Protection Agency’s (EPA) “Disposal of Coal Combustion Residuals from Electric Utilities” Final Rule (40 C.F.R. Part 257 and Part 261) and meets the requirements of §257.73(c) for the owner or operator of a CCR surface impoundment to compile a history of construction.

## **HISTORY OF CONSTRUCTION**

### **CCR Unit**

McDonough AP-1 is located in the northwest part of the Plant McDonough property. The unit is bounded by a combination of land uses, including: commercial and an un-named tributary to the Chattahoochee River on the west, by industrial and residential areas on the north, by Ash Ponds AP-2, AP-3 and AP-4 to the east and northeast, and by plant infrastructure and the Chattahoochee River to the south. Plant McDonough ownership and contact information is provided below.

## **1.0 Facility Ownership Information**

### **Site Name and Location**

Plant McDonough – Atkinson  
5551 South Cobb Drive SE  
Smyrna, GA 30339

### **Owner Name and Address**

Georgia Power Company  
241 Ralph McGill Boulevard  
Atlanta, GA 30308

### **CCR Impoundment**

Ash Pond 1 (AP-1)

### **State Identification No.**

Not applicable at the time of submittal

## **2.0 Location of the CCR Unit**

### **Site Coordinates**

Ash Pond 1 (AP-1): 33°49’27” N, 84°28’50” W

The location of Plant McDonough AP-1 is shown on the United States Geological Survey (USGS) 7½-minute topographic quadrangle map presented in Figure 1.

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### 3.0 Purpose of the CCR Unit

Plant McDonough is a power generating facility that historically operated as a coal fired facility, and now operates as a natural gas combined cycle generating facility. Plant McDonough historically utilized four (4) ponds in the management of coal combustion residuals. AP-1 was constructed to receive and store CCRs from the generating process at Plant McDonough, and was used for sluicing operations for all ash types. AP-1 was in service until 1968 when Georgia Power ceased placing CCR in AP-1 upon reaching storage capacity. AP-1 no longer receives CCR or other waste streams. Installation of the final cover system for Plant McDonough AP-1 was substantially completed Q1 2017. AP-1 is undergoing additional closure construction in the near term in accordance with 40 C.F.R. §257.102(d), including the installation of a fully encompassing subsurface barrier wall and adjacent associated closure system upgrades.

### 4.0 Watershed Description

Plant McDonough and AP-1 are located within the Proctor Creek – Chattahoochee River Watershed (HUC 12). The watershed encompasses 15,229 acres and is part of the larger Middle Chattahoochee – Lake Harding Watershed (HUC 8) which has an area of 1,950,182 acres. The inflow to AP-1 consists of the rainfall that falls within the limits of the CCR unit, and runoff from adjoining land. The AP-1 drainage area totals nominally 31 acres.

### 5.0 Physical and Engineering Properties of AP-1 Foundation and Abutments

AP-1 is located in the northwest part of the Plant McDonough property. The unit is bounded on the west side by commercial use properties, on the north by industrial and residential areas, on the east by CCR units AP-2, AP-3 and AP-4, and on the south by plant infrastructure and the Chattahoochee River.

AP-1 is located in the Piedmont geologic region, characterized by igneous and metamorphic bedrock. In general, underlying rock at the facility consists of schist and gneiss with overlying Piedmont soils formed by the in-place weathering of the parent rock referred to as residuum soils. Weathering is generally most advanced near the surface and decreases with depth. This weathering results in a subsurface profile that consists of finer grained soils at the surface where weathering is more advanced (upper residuum), underlain by sandy silts and silty sands (lower residuum). Surficial soils tend to be featureless and of uniform color, typically reddish brown. With depth, soils often retain recognizable relic structure of the parent rock, producing banding or mottling in a wide range of colors, and are called “saprolite.” The depth to rock surface varies across the site, but rock is generally encountered 8 to 75 feet below ground surface.

The embankments of AP-1 are formed by side hill perimeter dikes; the subsurface materials in the area of AP-1 consists of the following major layers:

- Sluiced and compacted CCR fill
- Dike fill
- Residuum soils
- Saprolite soils
- Partially weathered rock (PWR)

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- Schist and Gneiss Bedrock

The AP-1 embankments were originally constructed in the early 1960's.

AP-1 is a combination incised and compacted side hill fill impoundment. The embankment of AP-1, with a height of 34 feet, was formed in the early 1960's using perimeter dikes on the west, south, and southeast side of AP-1 using locally borrowed, residual compacted soils, consisting of clayey silts, sandy clays and silty clays. Compacted fill was placed above natural ground to a nominal top of dike Elevation 790 ft. Interior slopes for the compacted fill portion of the dike were constructed to no more than 1.75H:1V, while the exterior slopes were constructed to no more than 2H:1V. The embankment crest width is 10 ft.

## 6.0 Site Preparation and Construction Activities

AP-1 was constructed in the early 1960's with a total wet storage capacity of 880,000 cubic yards and an original pond area of 26 acres. AP-1 was in service from 1963 until 1968 when Georgia Power ceased placing CCR in AP-1 upon reaching storage capacity. AP-1 was covered with an intermediate closure system and the unit was utilized as a lay down area and for other plant infrastructure since removed. Closure activities for AP-1 were initiated in January 2016. AP-1 no longer receives CCR or other waste streams, and installation of the final cover system for Plant McDonough AP-1 was substantially completed Q1 2017. AP-1 is undergoing additional closure construction in the near term in accordance with 40 C.F.R. §257.102(d), including the installation of a fully encompassing subsurface barrier wall and adjacent associated closure system upgrades.

## 7.0 Engineering Diagram

Construction drawings for AP-1 can be found in Appendix A.

- 1960 Plan View of Initial Construction
- 1960 Details of Initial Construction

## 8.0 Description of Instrumentation

Prior to closure construction activities, there were twelve piezometers located within the boundary of AP-1 (AP1-1 through 8, AP1-10 through 13). Piezometers were used to monitor water levels in and around the embankments and have since been decommissioned. There are currently five (5) vibrating wire piezometers in the northwest part of AP-1 used to monitor water levels in the unit.

## 9.0 Area-Capacity Curves

At the time of this submittal, AP-1 no longer receives CCR or other waste streams, and installation of the final cover system for Plant McDonough AP-1 was substantially completed Q1 2017. AP-1 is undergoing additional closure construction in the near term in accordance with 40 C.F.R. §257.102(d), including the installation of a fully encompassing subsurface barrier wall and adjacent associated closure system upgrades.

## 10.0 Spillway and Diversion Design

The original design of the AP-1 outlet structure consisted of a drop inlet located at the southern end of the impoundment. The structure was a square concrete, vertical, drop inlet with a 36-inch diameter, corrugated metal pipe. From the outlet structure, water discharged south to the Chattahoochee River via an onsite un-named tributary. Historically, there were no open channel spillways at AP-1.

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At the time of this submittal, AP-1 includes two primary outfall areas to provide stormwater control, the Northwest Outfall and the South Outfall. At the Northwest outfall location there exists three spillways. Northwest Spillway 1 is one of two principal and functioning outfalls for the closure system. This spillway conveys flow from stormwater conveyance/storage area with final cover system and discharges over the AP-1 dam embankment into the overbank floodplain of the adjacent un-named tributary, and consisting of a flexible and grouted riprap spillway. Northwest Spillway 2 was designed to function during construction only and does not engage under the design storm in the current condition. Northwest Spillway 3 conveys stormwater from a small, ditch that collects runoff from the adjacent Georgia Power Environmental Lab, outside of the final cover area.

The South Outfall consists of the Southern Spillway, and is the second of the principal and functioning outfalls for the current configuration system and is also constructed as a combination flexible and grouted riprap trapezoidal chute. This spillway conveys flow from the perimeter ditch and discharges over the AP-1 dam embankment into the overbank floodplain of the adjacent un-named tributary.

The final closure surface water management design includes two (2) attenuation ponds at the North and South parts of the unit, and the corresponding discharge structures for attenuation of water following storm events and designed to fully drain through piped conveyance systems and outlet structures. This proposed final closure system condition will manage discharge from 42 acres of contributing watershed area.

## 11.0 Provisions for Surveillance, Maintenance, and Repair

Inspections of AP-1 dikes are conducted on a regular basis—at least annually by professional dam safety engineers and at least weekly by trained plant personnel. Dam safety engineers inspect any maintenance or repairs performed since the previous inspection, check the status of work recommended at prior inspections, ensure that emergency notification information is current, and evaluate any items noted during plant personnel inspections. Inspections are also performed after unusual circumstances, including (but not limited to): severe rain events, hurricane, tornado, or other storm events, and earthquake activity. The inspections provide evaluation that structures are sound and that action was taken, as needed, based on the findings.

These inspections include numerous items. Specific items may include, but are not limited to:

- Rainfall since the prior inspection
- Vegetation conditions
- Conditions of slopes and drains
- Erosion
- Animal damage and ant hills
- Wet spots or seepage

## 12.0 Post Closure Care Maintenance

Following closure in place of AP-1, maintenance activities and inspections will be completed by competent personnel and will be recorded and kept at the facility. The following cover system and unit components will be monitored and maintained:

- Security and site access
- Final cover (Closure Turf) integrity
- Vegetation maintenance
- Stormwater controls
- Groundwater Monitoring

## 13.0 Known Record of Structural Instability

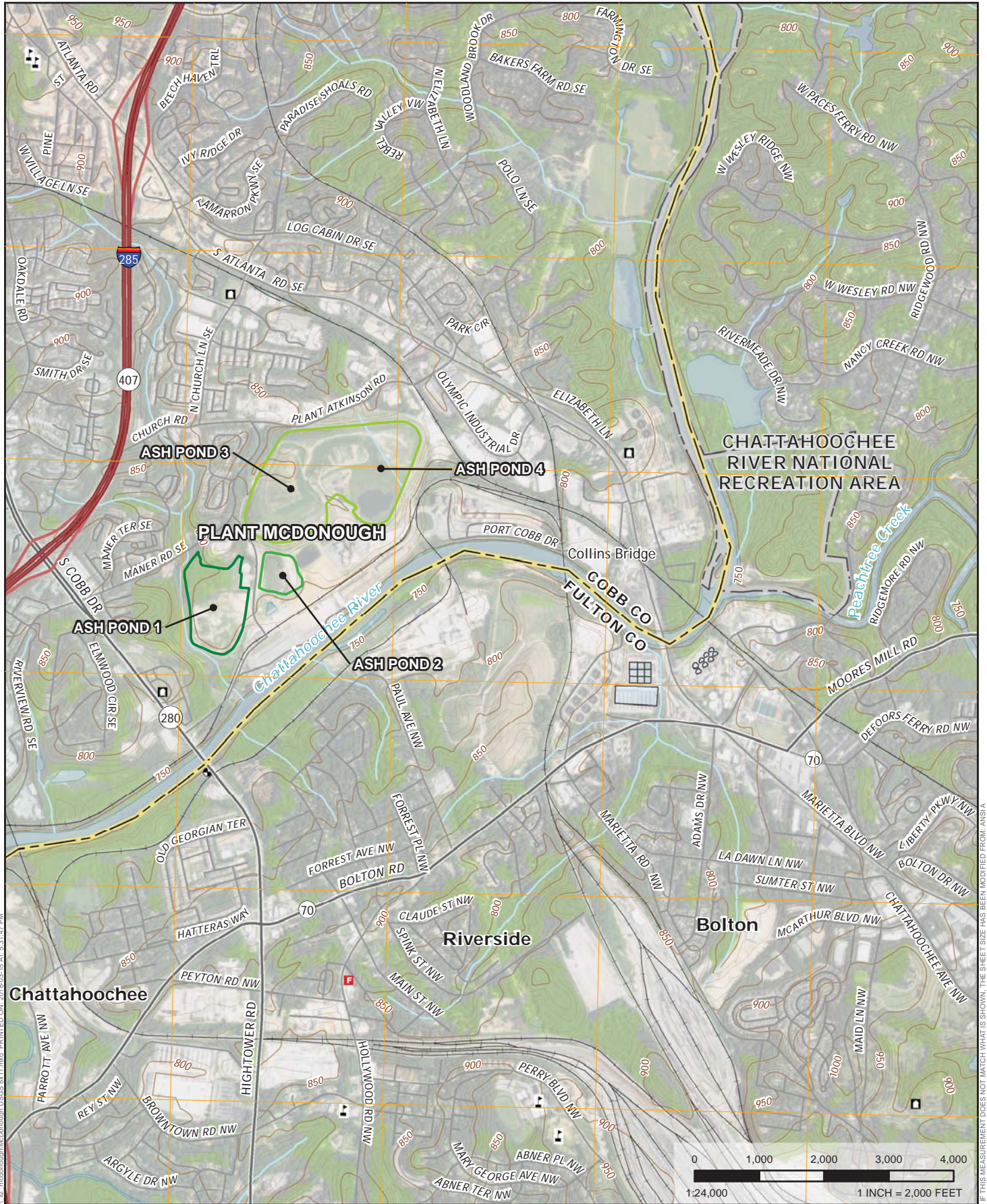
There are no known instances of structural instability at AP-1 at the time of this submittal. Upgrades to the southern half of the AP-1 embankments were completed in 2011 to increase the structural stability and calculated factors of safety for AP-1.

## 14.0 References

AMEC (2010). "Report of Dam Safety Assessment of Coal Combustion Surface Impoundments Plant McDonough, Smyrna, GA." December 2010

Golder Associates (2018), "Geotechnical Material Property Package." February 2018





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CLIENT  
 GEORGIA POWER COMPANY

PROJECT  
 HISTORY OF CONSTRUCTION FOR PLANT MCDONOUGH



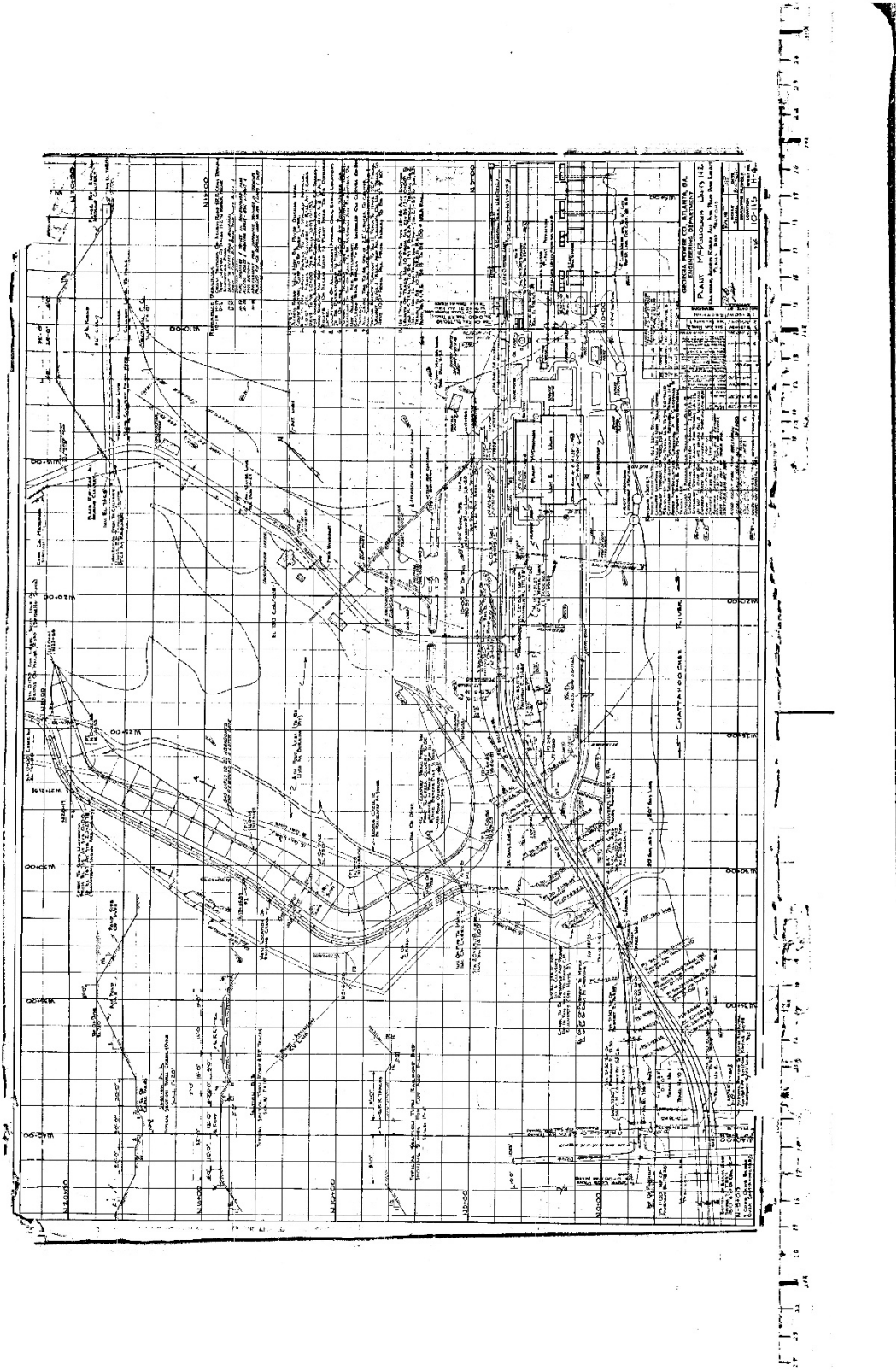
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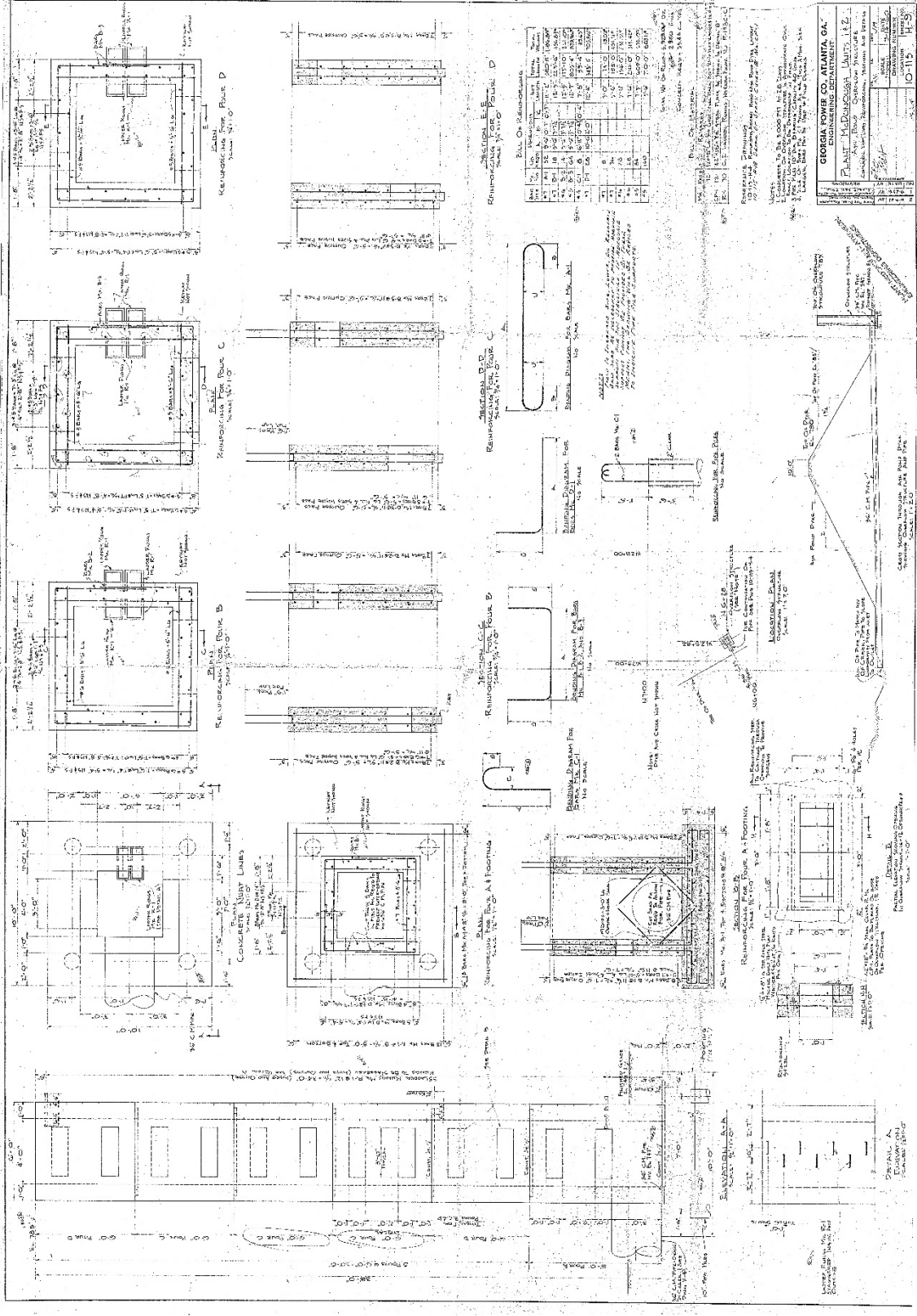
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**USGS TOPOGRAPHIC MAP**  
**NORTHWEST ATLANTA QUADRANGLE**  
 PROJECT No.  
 1777449

Rev. 0  
 FIGURE 1



# DRAWINGS





**GEORGIA POWER CO. ATLANTA, GA.**  
 ENGINEERING DEPARTMENT  
**PLANT: McCOMBSON, UNIT 1 & 2**  
 DRAWING NO. 10-115  
 DATE: 10-15-59

**REVISIONS**

No.	Description
1	As Issued

**SCALE**  
 1" = 10'-0"

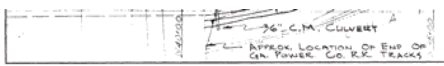
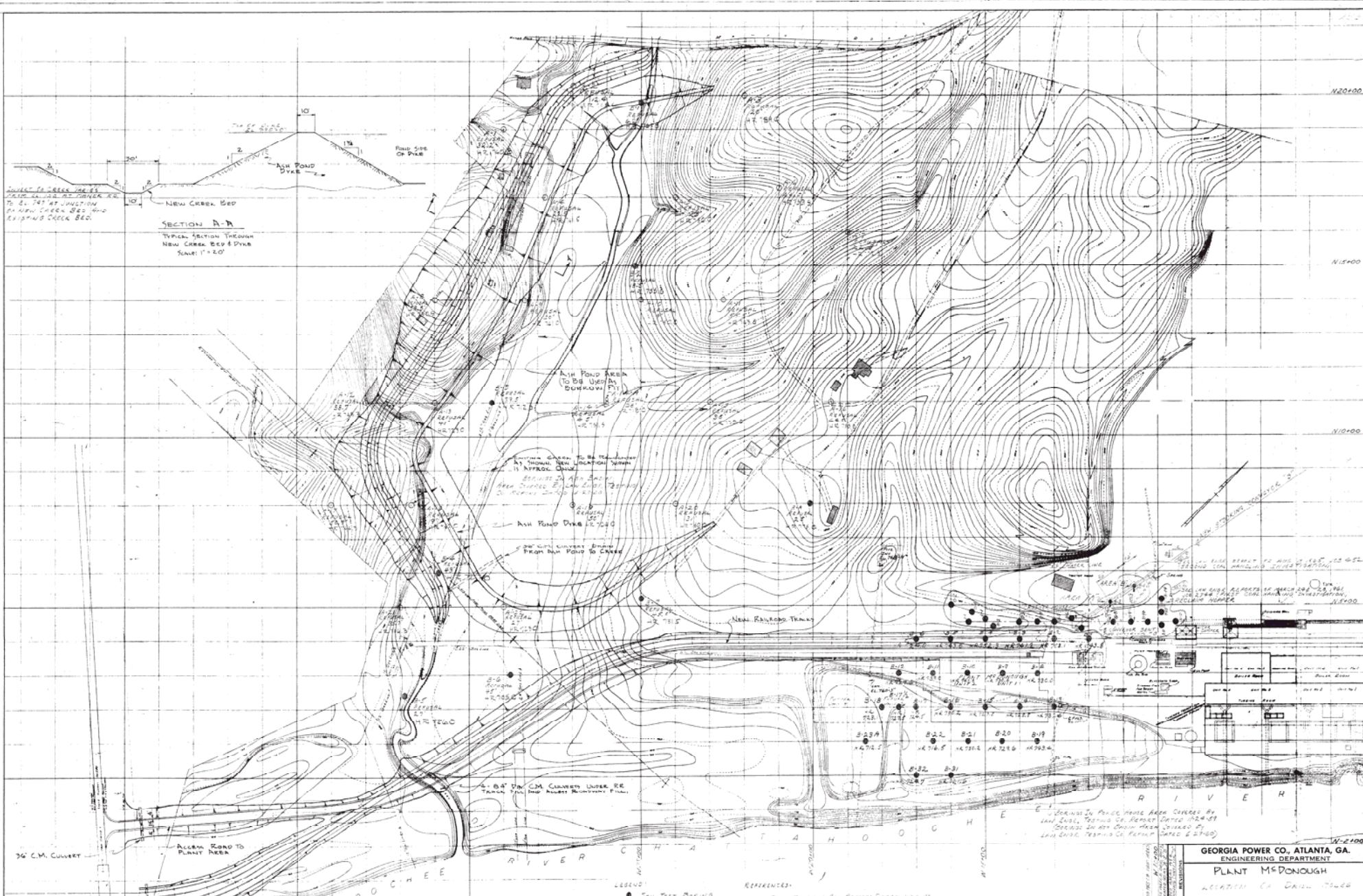
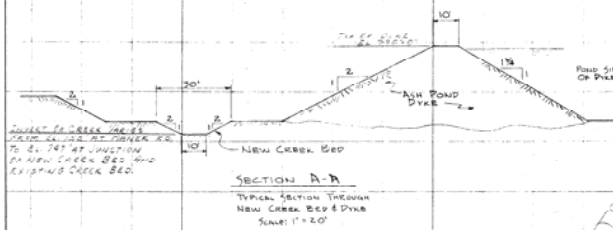
**NOTES**

1. All concrete to be cast in place.
2. All reinforcement to be lap welded.
3. All steel to be A36.
4. All steel to be painted.
5. All steel to be galvanized.
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LEGEND:  
 ■ Soil Test Borings

HR. HARD ROCK

REFERENCES:  
 GEOTECHNICAL REPORTS DATED MARCH 24 & 28, 1961 (See 2746)  
 SOILS AND ROCK TESTING CO. REPORT DATED AUGUST 12, 1961 (See 4042)

NO. 1000  
 NO. 1001  
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 NO. 1009  
 NO. 1010

GEORGIA POWER CO., ATLANTA, GA.  
 ENGINEERING DEPARTMENT  
 PLANT McDONOUGH  
 LOCATION CO. DALL. 75-68

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