HISTORY OF CONSTRUCTION 40 C.F.R PART 257.73(c)(1)(i)-(xii) PLANT SCHERER ASH POND (AP-1)

(i) Site Name and Ownership Information:

Site Name:	Robert W. Scherer Power Plant
Site Location: Site Address:	Juliette, Georgia 10986 Highway 87 Juliette, Georgia 31046
Owner/Operator: Owner Address:	Georgia Power Company 241 Ralph McGill Boulevard Atlanta, Georgia 30308
CCR Impoundment Name: NID ID:	Plant Scherer Power Ash Pond (AP-1) N/A

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257 and Part 261), §257.73(c)(1), requires the owner or operator of an existing CCR surface impoundment to compile a history of construction. To the extent feasible, the following information is provided:

(ii) Location of CCR Unit:

33°04'25"N, 83°48'44"W See Location Map in the Appendix

(iii) Purpose of CCR Unit:

The Robert W. Scherer Power Plant is a four unit, coal fired, power generation facility. AP-1 receives and stores coal combustion residuals and low volume waste streams produced during the electric generating process at Plant Scherer.

(iv) Watershed Description:

The Plant Scherer AP-1 is located within the Berry Creek Watershed (HUC 12 – 030701031307). The Berry Creek watershed encompasses 21,145 acres and is part of the larger Upper Ocmulgee Watershed (HUC 12 - 03070103). The pond itself has a 776 acre drainage basin.

(v) Description of physical and engineering properties of CCR unit foundation/abutments:

AP-1 is located in the Piedmont Physiographic Provence of Georgia. The Piedmont is underlain by igneous and metamorphic rocks. The residual soils in the Piedmont are a result of weathering of the underlying bedrock. The foundation and abutments are supported by residual soils consisting of stiff to very hard sandy silts and loose to very dense silty sands with varying clay and mica contents. The

residual soils' consistency generally increases with depth. Between the residual soils and the underlying bedrock a transitional layer of partially weathered rock is present. The bedrock at AP-1 consists of Biotite and Hornblende gneiss with amphibolite.

The dikes at AP-1 were constructed on residual soils. Engineering design parameters were obtained from soil samples collected and tested during pre-construction geotechnical investigations, pre-construction borrow studies, and subsequent explorations.

(vi) Summary of Site Preparation and Construction Activities:

The AP-1 Dam is approximately 8,000 feet Long. The Dam saddles with the original preconstruction topography of the northern, eastern, and southern sides of AP-1.

The AP-1 Dam is a zoned, soil embankment dam with a 30-ft wide crest, 3H:1V upstream and downstream slopes with a 30-ft wide, upstream and downstream bench. The dam was initially constructed by removal of any alluvial soils within the dam footprint and excavating a keyway along the dam centerline into the existing foundations soils equal in width to either 50 percent of the dam height or 20 feet (whichever was greater) as shown on drawing E1H1006. The dam embankment consisted of a mechanically compacted clay material core with 1H:1V slopes surrounded upstream and downstream by a soil shell constructed of more sandy materials. An internal drainage system consisting of a blanket drain and a chimney drain were incorporated into the downstream section of the dam. Grain size specifications for each soil material component of the Plant Scherer Ash Pond as well as the drain locations are shown on drawing E1H1002. Details of construction for drainage and diversion are shown on drawings E1H1029, E1H1033, and E1H1052.

The dikes at AP-1 were constructed of residual soils from within and adjacent to AP-1. Engineering design parameters were obtained from soil samples collected and tested during pre-construction geotechnical investigations, pre-construction borrow studies, and subsequent explorations.

The crest of the dam was constructed to elevation 505 ft and 505.6 ft, respectively, on the upstream and downstream edges. The 30-foot wide, upstream and downstream benches were constructed at elevation 457 ft. The maximum dam section is crossing a previous valley located along the eastern side of the Ash Pond near Station 46+00. The dam section at this point is approximately 100 feet in vertical height.

Clearing for AP-1 started in April of 1977 and was completed in November of 1977. Construction of the North Dike started in November of 1977 and was completed in September of 1980 and construction of the South and East Dikes started in April 0f 1978 and was completed in November of 1980. Initial filling of AP-1 started in November of 1980 and was completed in March of 1981.

(vii) Engineering Diagram:

The following drawings reflecting the construction of AP-1 can be found in the Appendix:

- Site Location Map
- M-154-6 Survey Monument Locations
- E1H1001 General Arrangement
- E1H1002 General Sections and Details

- E1H1006 Excavation Plan
- E1H1024 Controlled Discharge General Layout and Sections
- E1H1029 North Drainage Plan
- E1H1030 Spillway Excavation Plan and Details
- E1H1031 Spillway Arrangement and Grading Plan and Details
- E1H1033 South Drainage Plan
- E1H1036 Spillway Excavation Sections
- E1H1037 Controlled Discharge Arrangement and Grading Sections
- E1H1038 Spillway Arrangement and Grading Sections
- E1H1052 Stream Diversion Sections and Details
- E1H1058R1 Plan, Sections, and Details of Instrumentation
- E1H1058R2 Leak Collection System Main Dam Plan
- E1H1059R2 Plan, Sections, and Details of Instrumentation
- E1H1059R3 Leak Collection System Plan and Details
- E1H1069 As-Built Excavation
- E1H1070 As-Built Sections
- E1C3444 Spillway Details

(viii) Description of Instrumentation:

There are 22 piezometers and 8 deformation monuments located at AP-1. Piezometers are used to monitor water levels in and around the embankments, and deformation monuments are used to monitor horizontal and vertical movements. Plans indicating their location are attached.



(ix) Area-capacity curves:

(x) Spillway/Diversion design features and capacity calculations:

AP-1 spillway system consists of a primary discharge structure and an auxiliary spillway channel. The primary discharge structure is a 72-in diameter reinforced concrete riser pipe (morning glory) with a 72-in diameter outlet pipe. The morning glory has a top elevation of 494.5 ft. The outlet pipe drains into a concrete lined discharge channel with 6.5-ft bottom width and 2.5H:1V side slopes. The auxiliary spillway consists of a concrete trapezoidal weir with an 85-ft bottom width and 2.5H:1V side slopes that flow into a grass lined channel with an approximately 120-ft bottom width and 2.5H:1V side slopes. Both the primary and the auxiliary spillways discharge into the Settling (Recycle) Pond. Details of the outlet works are shown on drawings E1H1024, E1H1030, E1H1031, E1H1036, and E1H1037.

Based on the PMP flood routing, the peak outflow discharge is 1,812 cfs at a peak water surface elevation of 501.6 ft leaving a freeboard of 2.5 feet (measured to the top of embankment). Normal pool is 494.6 ft.

(xi) Provisions for surveillance, maintenance and repair:

Inspections of dams and dikes are critical components and are conducted on a regular basis—at least annually by professional dam safety engineers and at least weekly by trained plant personnel. In addition, inspections are performed after unusual events such as storms. The inspections provide assurance that structures are sound and that action is taken, as needed, based on the findings. Safety inspections include numerous checklist items. Specific items vary from site to site but may include observations of such things as pond levels, weather conditions, rainfall since the prior inspection, instrument readings, conditions of slopes and drains, erosion, animal damage, ant hills, alignment of retaining structures and more. Dam safety engineers assess instrument readings, inspect any maintenance or remediation performed since the previous inspection, check the status of work recommended at prior inspections, ensure that the posting of emergency notification information is up to date and evaluate any items noted during plant personnel inspections.

(xii) Known record of structural instability:

There are no known instances of structural instability at the CCR unit.

Appendix

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