NOTE

Subject: EPA Comments on Georgia Power Co, McIntosh Power Station, Rincon, GA
Round 9 Draft Assessment Report

To: File

Date: September 13, 2011

1. On p. ii, section PURPOSE AND SCOPE, replace the first sentence of the second paragraph with the following sentence: "In early 2009, the EPA sent a first wave of letters to coal-fired electric utilities seeking information on the safety of surface impoundments and similar facilities that receive liquid-borne material that store or dispose of coal combustion residue."
2. On p. vii, document numbering order is inconsistent from Appendix A to B – Appendix A has Doc 01 to Doc 18, Appendix B begins with Doc 20.

3. On p. 1-2, insert "1.1.6" to the left of "Conclusions Regarding the Adequacy of Maintenance and Methods of Operation." Replace "1.1.6 Conclusions Regarding the Adequacy of the Surveillance and Monitoring Program" with "1.1.7 Conclusions Regarding the Adequacy of the Surveillance and Monitoring Program."

4. On p. 1-2, last paragraph, replace "Base" with "Based."

5. On p. 1-3, insert "1.1.8" to the left of "Classification Regarding Suitability for Continued Safe and Reliable Operation."

6. On p. 5-5, section 5.3.2 Upstream/Inside Slope, includes the following statement: "Figure 5.3.3-1 shows the inside slope of the east embankment." There seems to be a photo missing for this section and if so, it should be labeled 5.3.2-1.

7. On pp. 5-9 and 5-9, Figure 5.3.4-1 and Figure 5.4.1-1 are identical photographs, was this intentional?

8. On p. 5-13, Section 5.5.4 should be discussing Groin Areas for the NORTH embankment. This section of the report refers to the south embankment.

9. On p. 5-16, section 5.6.4 Low Level Outlet, the report states: "The Plant McIntosh CCR impoundment does not have an emergency spillway." Please correct statement to reflect the existence or not of the low level outlet.

10. On p. 7-3, insert "7.1.3" to the left of "Uplift and/or Phreatic Surface Assumptions" and renumber the next three subsections.

11. On p. 7-4, section 7.1.5, second paragraph, the following paragraph is the exact paragraph from the GA Power Plant Kraft report: “In accordance with the Georgia Rules for Dam Safety, and as shown on the USGS “Map for Peak Acceleration with a 2% Exceedance in 50 years” for the vicinity of **Plant Kraft**, the ground motion having a 2% probability of exceedance in 50 years is 0.16 g.” Also, on p. 9-1, the following section states: “9.1 SURVEILLANCE PROCEDURES, Weekly inspections Weekly inspections are conducted by plant personnel. Inspection observations are documented on the “**Plant Kraft** Weekly Ash Pond Dike Inspection Log” visual inspection checklist and report (see Appendix A Doc 12). Inspection reports are submitted to the plant manager for review and appropriate corrective actions.” **Both of these statements make the reader question the credibility of the material in the McIntosh report.**

12. Please label each document in Appendix A prior to inclusion.

13. Remove p. 47 of the document (page after Doc 02). The page contains the following statement contained in a text box and does not belong in the report: “Type a quote from the document or the summary of an interesting point. You can position the text box anywhere in the document. Use the Text Box Tools tab to change the formatting of the pull quote text box.]”

M E M O R A N D U M

TO: Jana Englander
FROM: Jerry Strauss
cc:
Date: November 28, 2011
SUBJECT: Georgia Power, Plant McIntosh, Response to Comments

EPA Comments: editorial comments were addressed. We have inserted Document identification pages between the documents in Appendix A.

Georgia Power Comments:

- Dewberry deleted sentences in the FINAL that (in the DRAFT) recommended changes by the utility due to seepage because the utility has taken such actions including adding a filter drain and sump pump.
- Clarified the issue concerning Doc 13: Dike Slot Drain Installation doc vs. the Toe Drain Installation
- Changed description of the Primary Outlet to an Emergency Discharge Outlet.
- Changed CCW Checklist document to include additional information and correct typos.

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GEORGIA POWER
A SOUTHERN COMPANY

June 3, 2011

Mr. Stephen Hoffmann
U.S. Environmental Protection Agency
2 Potomac Yard
2733 S. Crystal Drive, 5th Floor N-237
Arlington, Virginia 22202-2733

Re: Draft Coal Combustion Residue Impoundment Round 9 Dam Assessment Report
Plant McIntosh Ash Dike Georgia Power Company Rincon, Georgia, April 2011

Via email and U.S. Postal Service

Dear Mr. Hoffmann:

On May 5, 2011, the U.S. Environmental Protection Agency ("EPA") provided Georgia Power with a draft report regarding certain facilities for the management of coal combustion by- products at Georgia Power's Plant McIntosh ("Draft Report"). The Draft Report was prepared by Dewberry & Davis, LLC ("Dewberry") and dated April 2011. Georgia Power appreciates the opportunity to provide comments on the draft report before it is finalized. EPA's recommendations are shown in italics below, and Georgia Power's responses follow the recommendation. The Georgia Power comments on the Draft Report are shown in the attached spreadsheet and the attached document entitled "CCW Report Page 9 Comments on the draft report for "Plant McIntosh Ash Dike."

Acknowledgment of Management Unit Condition and Potential Hazard Rating

Georgia Power is committed to the management of coal combustion byproducts in a safe manner that is protective of human health and the environment. Georgia Power has had a robust ash pond dike inspection and maintenance program in place for many years. We are pleased that EPA's onsite inspection and document review have

given Plant McIntosh a "Satisfactory" rating (the highest rating) and have confirmed that Georgia Power's facilities are well constructed and managed effectively.

1.2.1 Recommendations Regarding the Surveillance and Monitoring Program

The current surveillance program of weekly inspections of the dike system has been very effective in identifying and reporting areas of potential seepage of the CCR impoundment embankments. It is recommended that the regular surveillance program continue to ensure that particular attention be paid to indication of potential seepage during future inspections, and that the Southern Company Hydro Services staff be made immediately aware of new seepage or a recurrence in the old areas.

Georgia Power is continuing with its weekly inspections of the dike system and should they discovery any indication of potential seepage they will notify Southern Company Hydro Services staff immediately.

All of EPA's recommendations have been completed. Please direct any future correspondence to me.

Sincerely,

Rochelle Routman for

Ron Shipman

Attachment

CCW Report page 9 Comments on the draft report for "Plant McIntosh Ash Dike"

Additional Inspection Questions

"Did the dam assessor meet with, or have documentation from, the design Engineer-of-Record concerning the foundation preparation?"

The January 19, 1981 report

> Report of Geotechnical Exploration and Stability Analysis
> Ash Pond Cell and Settling Basin Containment Dikes
> Savannah Electric and Power Company (SEPCO)
> Effingham Generating Station
> Effingham County, Georgia
> LETCO Job No. J-3595A

addressed to Reynolds, Smith & Hills, the designer of the ash containment dikes, contains passages related to foundation preparation:

> Page 72 "Excavation of Liquifiable Soils" recommends removal of loose sands from the foundation of the dikes,
>
> Page 78 "Site Preparation and Earthwork Construction" contains recommendations on stripping, surface preparation, excavation, groundwater control, and earthwork construction.

The Dewberry and Davis inspectors were also provided with construction photos that illustrate excavation and fill placement.

The borings done for the 2010 stability analysis, specifically M6, M7 and M8, show that the loose sands were removed from beneath C dike.

PLANT McIntosh				
PAGE	SECTION	CURRENT STATEMENT READS	*RECOMMENDED CHANGE*	ADDITIONAL NOTES
ii	Introduction	Last sentence - "...existing or potential management unity safety deficiencies."	*...existing or potential management unit safety deficiencies.*	
vi	Appendix A	Document 13 is referenced as being a March 2, 2011 document titled "Plant McIntosh Ash Pond C Slot Drain Installation.	*Document 13 is actually "Plant McIntosh, Ash Pond C, Toe Drain Installation" dated February 24, 2009.*	Please put the document numbers on the documents that are referenced in the report.
1-1	1.1.6	The 2009 annual inspection identified potential seepage along a section of the east embankment and recommended installation of a filter drain and sump system.	*The 2009 annual inspection identified potential seepage along a section of the east embankment and recommended installation of a filter drain.*	The filter drain was installed. A sump system was not recommended at the time of the 2009 annual inspection. However, the sump system was installed in August 2010 for other reasons.
1-1	1.1.6	In March 2011, plant staff reported a potential seepage area along the west embankment. An inspection of the site resulted in the design and installation of an addition to the west bank drainage system installed in2009. The new work was completed in February 2011. Observations made by Dewberry indicated the new drainage system was functioning properly.	*In February 2011, plant staff reported a potential seepage area along the west embankment. An inspection of the site resulted in the design and installation of an addition to the west bank drainage system installed in 2009. The new work was completed in February 2011. Observations made by Dewberry indicated the new drainage system was functioning properly.*	
1-1	1.3.1	Joel L. Galt, P.E., Southern Company	*Joel L. Galt, P.E., Southern Company Services*	
1-1	1.3.1	Gary H. McWhorter, P.E., Southern Company	*Gary H. McWhorter, P.E., Southern Company Services*	
1-1, 1-4	1.1, 1.3.1	Georgia Power Company	*The correct name of the company is Georgia Power.*	Please use the name Georgia Power consistently throughout the report.
2-4	2.4.1	The slopes are covered with vegetation, a few locations with gravel placed in erosion rills, and rip rap in the groin areas.	*The slopes are covered with vegetation, a few locations with gravel placed in erosion rills, and rip rap in the groin areas.*	The slopes are covered with vegetation, a few locations contain mixed stone that was used to repair erosion rills in the slopes.
2-4	2.5	Second sentence: "..a brief driving tour of the area, expect for electrical power transmission lines....."	*"a brief driving tour of the area, except for electrical power transmission lines....."*	
3-1	3	Provide a 20-foot wide clear space along the eastern embankment for inspection and maintenance vehicles.	*Provide a 20-foot wide clear space along the eastern embankment toe for inspection and maintenance vehicles.*	embankment toe rather than embankment
3-1	3	Last bullet under Summary "Plant McIntosh Ash Pond 'C' Dike Slot Drain Installation, March 2, 2010	*Add: See Appendix A Doc 13.* *However, referenced document is titled "Plant McIntosh, Ash Pond C, Toe Drain Installation" dated February 24, 2009.*	Please make sure that references for documents are correct throughout the report.
3-2	3.1	First sentence: "The east and west side perimeter embankments and an interior embankment regulated and classified by the Georgia Department of Natural Resources (GADNR)."	*The east and west side perimeter embankments and an interior embankment are regulated and classified by the Georgia Department of Natural Resources (GADNR)."*	
4-1	4.1.3	(See Appendix A Document 11 and 13).		Document 11 is an Annual Inspection Report. Is this reference to Document 13 correct now since the reference is to a toe drain? Please check if these references are correct.
5-2	5.2.3	(See Appendix A Document 12)	*(See Appendix A Document 11).*	The sentence references the 2010 Annual Inspection Report. Document 12 are the weekly reports. This should be Document 11.
5-6	5.3.3	Last sentence (see Appendix A Document 12)	*(See Appendix A Document 11).*	The sentence references the 2010 Annual Inspection Report. Doc 12 are the weekly reports. This should be Doc 11.
5-6	5.3.3	A March 2, 2011 report (See Appendix A Doc 12) indicated that plant personnel reported signs of additional seepage along the toe of the east embankment. A reverse blanket filter drain, collection piping and sumps were constructed and connected to the 2009/2010 drainage system. Figures 5.3.3-2 and 5.3.3-3 show the area of the new blanket drain and sump, respectively.	*A March 2, 2011 report (See Appendix A Doc 12) indicated that plant personnel reported signs of additional seepage along the toe of the east embankment. A series of sand drains were installed and tied in to the existing collection piping and sump that were part of the 2009/2010 drainage system. Figures 5.3.3-2 and 5.3.3-3 show the area of the new sand drains and the north 2010 sump, respectively.*	

5-7	5.3.3	Figure 5.3.3-3 East Embankment Drainage System Sump	*Figure 5.3.3-3 East Embankment North Drainage System Sump*	North sump rather than just sump
5-13	5.6.1	Reference is made to Appendix A Document 9		Please verify that this is the correct reference document. The referenced document should possibly be document 8.
5-13	5.6.1	The water elevation on Cell D is controlled by timber stop logs installed to the the desired pool elevation.	*The water elevation on Cell D is controlled by a pumping system.*	
5-13	5.6.1	The primary overflow structure is a rectangular, reinforced concrete riser structure located in the southwest corner of Cell D, the polishing pond.	*The emergency overflow structure is a rectangular, reinforced concrete riser structure located in the southwest corner of Cell D, the polishing pond.*	
5-15	5.6.1	Plant McIntosh recycles water from the polishing pond for reuse in the plant. The pumping station for recycling is located on the west side of the polishing pond, Cell D. Photograph 5.6.1-3 shows the recycling pump station.	*Plant McIntosh has the capability to recycle water from the polishing pond to reuse in the plant. The pumping station for recycling/discharging is located on the west side of the polishing pond, Cell D. Photograph 5.6.1-3 shows the recycling pump station.*	
5-15	5.6.2	The primary spillway outlet conduit is 30-inch diameter concrete pipe with an invert elevation of 39.5 feet.	*The emergency discharge spillway outlet conduit is a 30-inch diameter concrete pipe with an invert elevation of 39.5 feet.*	
5-16	5.6.3	The Plant McIntosh CCR impoundment does not have an emergency spillway.	*The Plant McIntosh CCR impoundment has an emergency discharge structure, in which discharge is controlled by a series of valves and stop logs.*	This isn't the primary overflow structure, it is the emergency overflow structure. Also, photographs that reference the primary overflow structure should instead reference the emergency overflow structure.
5-16	5.6.4	The Plant McIntosh CCR impoundment does not have an emergency spillway.	*The Plant McIntosh CCR impoundment has an emergency discharge structure, in which dicharge is controlled by a series of valves and stop logs.*	
7-4	7.1.5	Last paragraph refers to Plant Kraft	*Plant McIntosh*	Please remove reference to Plant Kraft in the Plant McIntosh report.
7-4	7.1.5	0.16g	*0.18g*	0.18g is the correct coefficient.
7-6	8.1	Coal combustion residue, primarily bottom ash and boiler slag, are sluiced through a piping system from the boiler ash hopper to the ash ponds. The cell of the pond receiving the ash rotates depending on the level of dried ash in the cell. The cells are interconnected, permitting control of the water levels in the cells and assist in the dispersion of the sluiced ash.	*Coal combustion residue, primarily bottom ash and boiler slag, are sluiced through a piping system from the boiler ash hopper to the ash ponds. The cell of the pond receiving the ash rotates depending on the level of dried ash in the cell. The cells are interconnected, permitting control of the water levels in the cells.*	The interconnectedness of the cells does not aid in the dispersion of the ash.
8-1	8.2	(Appendix A - Document 19)	*(Appendix A - Document 18)*	
9-1	9.1	Under weekly Inspections, first paragraph refers to Plant Kraft	*Plant McIntosh*	
9-1	9.1	Last sentence references reports submitted to Plant Manager for review	*Reports are submitted to SCS Hydro Services Engineer for review and copies maintained in plant files*	
CCW Form Page 1		Coal Combustion Dam Inspection Checklist Form	*Please include the Unit Name (Ash Cells A,B, C and D) included on the form*	
CCW Form page 1	Issue 1	Safety Procedure for Dames and Dikes	*Safety Procedure for Dams and Dikes*	
CCW Form page 1	Issue 21	Seepage into under drain system reported to range from 0.2 gallons/minute (gpm) to 0.5 gpm in two sumps.	*Seepage into the under drain system reported to range from 0.2 gallons/minute (gpm) to 0.5 gpm in three sumps.*	
CCW Form Page 2		The current date shown on the form 6/30/1999	*The date of pre-existing NPDES permit was 6/30/1999. The date on the reissued NPDES permit for Plant McIntosh is 5/31/2004. Plant McIntosh is still operating under the 5/31/2004 permit.*	
CCW Form page 2		Dam Safety Program	*Safe Dams Program*	
CCW Form Page 8		New toe drain installed along eastern dike (Dike "C") in response to observed seepage. Piezometers installed to monitor groundwater levels.	*New toe drain installed along eastern dike (Dike "C") and west dike (Dike "A") in response to observed seepage. Piezometers installed to monitor groundwater levels.*	
CCW Form Page 9		"Did the dam assessor....?" (Currently the response is "No")	*The response should be "Yes". The Law Engineering documents which were provided at the time of the inspection, do address foundation preparation.*	This note contradicts Issue number 8 on Page 1. Georgia Power is providing a document with these comments which further explains foundation preparation documentation.