

US EPA ARCHIVE DOCUMENT

Comments:

EPA:

Cover Page – “Prepared for” should read:

U.S. Environmental Protection Agency
Office of Solid Waste and Emergency Response
Office of Resource Conservation and Recovery
1200 Pennsylvania Ave, NW
MC: 5304P
Washington, DC 20460

Page 1 – change “Request” to “Response”

State: None

Company: See letter dated September 21, 2010

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September 21, 2010

CERTIFIED MAIL AND ELECTRONIC MAIL

Mr. Stephen Hoffman
Office of Resource Conservation and Recovery (5304P)
U. S. Environmental Protection Agency
2733 South Crystal Drive Fifth Floor
Arlington, VA 22202

Re: Comments on Draft "Report of Geotechnical Investigation Dam Safety Assessment of Coal Combustion Surface Impoundments, Georgia Power Plant Scherer"

Dear Mr. Hoffman:

On July 6, 2010, the U. S. Environmental Protection Agency ("EPA") provided to Georgia Power a draft report regarding certain facilities for the management of coal combustion byproducts at Georgia Power Plant Scherer ("Draft Report"). The Draft Report was prepared by AMEC Earth & Environmental, Inc. ("AMEC") and was dated June 2010. Georgia Power appreciates the opportunity to provide comments on the Draft Report before it is finalized. This letter and attachments provide Georgia Power's comments on that Draft Report.

Management Unit Condition and Potential Hazard Rating

We are pleased that AMEC's on-site inspection of the management unit was satisfactory and that AMEC recognized that Georgia Power's inspection practices for the management unit at Plant Scherer were adequate. Georgia Power, however, does not agree with the "poor" rating for the ash pond. Georgia Power recognizes that the "poor" rating is not a result of the physical, on-site inspections of the dam but appears to be the result of information requested in the Draft Report. The information requested appears to fall into two basic categories: (1) slope stability analyses and (2) hydrology/hydraulic studies. With this submittal we have provided the information requested for these two categories. This information supports a rating of "Satisfactory" for the ash pond.

In addition, the Draft Report included the results for the "Settling Pond" or "Recycle Pond" at Plant Scherer. As discussed below, this pond does not meet the definition of a coal combustion management unit as defined by EPA in its CERCLA §104(e) Information Request to Georgia Power and should not be a part of this inspection or the final report. Georgia Power is confident that the Recycle Pond meets applicable integrity criteria to warrant a rating of "Satisfactory" and has submitted the appropriate studies as requested

by AMEC. This pond, however, is not a management unit for storage or disposal of coal combustion byproducts and should be removed from the final report.

While Georgia Power has provided the additional information requested, it is important to understand that Georgia Power did provide slope stability information for the management unit before the Draft Report was issued. As discussed in the attached comments, there are no regulatory criteria specifying the design storm or minimum freeboard for the Plant Scherer ash pond, so these studies were not provided before the Draft Report was issued.

It is important to note that guidance such as Mine Safety and Health Administration (MSHA) for mine tailing ponds is not applicable to the Plant Scherer ash pond. The preface, on page iii, of the MSHA Engineering and Design Manual, Coal Refuse Disposal Facilities (May 2009), states as follows (emphasis added):

The guidance presented in this Manual represents information, methods and procedures that are recommended for consideration by designers, coal operators, and regulators. The guidance presented in this Manual is not regulation and cannot be enforced as such. It is not intended to preclude the application of other credible methods and procedures or the use of other and new information that will result in a safe and reliable coal refuse disposal facility. It is the responsibility of the designer to investigate the requirements of the project, recognize the unique and critical aspects of the site conditions, and prepare designs that reflect actual site conditions, features, loadings and constraints.

MSHA, therefore, is only guidance. In addition, based on our review of the other final dam CCB inspection reports posted on EPA's website, it appears that MSHA guidance was not used to determine the final rating of a CCB dam.

Hydrology/Hydraulic Studies

In AMEC's Draft Report, Georgia Power was requested to "determine what rainfall event the Ash and Settling Ponds are capable of safely containing or passing. A more complete evaluation would determine the effect of the PMP rainfall event on the Ash Pond and the Plant Scherer site. The analyses should include evaluation of Lake Juliette's ability to safely contain or pass the design storm event." (Draft Report, page 15). Since the ash pond is not classified as Category I under the Georgia EPD Safe Dams Program, there are no current regulatory requirements for these ponds. In the absence of a regulatory requirement, we view the requested study as a recommendation to Georgia Power, which has now been satisfied. Given that the requested hydrology/hydraulic studies assure that the dams can safely store or control the referenced storm flow and that Georgia Power has provided the information requested by AMEC, we are confident that the rating for the ash pond will be "Satisfactory" in the final report. Additionally, we request that the ash pond rating in the Draft Report be changed to "Satisfactory". Although we believe that these studies show that the Recycle Pond also warrants a "Satisfactory" rating, we reiterate our request that the Recycle Pond be removed from the final report since it is not a diked management unit receiving liquid-borne material for storage or disposal of CCBs.

Stability Analyses

Georgia Power provided available historical slope stability information that could support a "Satisfactory" rating for the ash pond. However, due to the late notification by EPA that Plant Scherer would be included in the inspection schedule, an updated stability analysis could not be provided for

AMEC's review prior to the submittal of the Draft Report. AMEC noted this in the Draft Report (pages 12 and 13) and stated that the comments and recommendations contained in the Draft Report would be based solely on the historical data. Georgia Power has provided the updated slope stability analyses addressing AMEC's recommendations. The submitted stability analysis report uses an acceptable and industry-wide recognized search methodology for the minimum factors of safety for the dikes and shows that these factors of safety are acceptable. Given that all of the slope stability analyses resulted in acceptable minimum factors of safety for the existing dikes, we are confident that the rating for the ash pond will be "Satisfactory" in the final report. Additionally, we request that the ash pond rating in the Draft Report be changed to "Satisfactory". Although we believe that the slope stability analyses show that the Recycle Pond also warrants a "Satisfactory" rating, we reiterate our request that the Recycle Pond be removed from the final report since it is not a diked management unit receiving liquid-borne material for storage or disposal of CCBs.

The Recycle Pond at Plant Scherer Is Not Part of this Inspection

In the March 9, 2009 letter from EPA to the Plant Manager at Plant Scherer, titled "Request for Information Under Section 104 (e) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9604(e)", EPA requested "information from your facilities relating to the surface impoundments or similar diked or bermed management unit(s) or management units designated as landfills which received liquid-borne material from a surface impoundment used for the storage or disposal of residuals or by-products from the combustion of coal, including, but not limited to, fly ash, bottom ash, boiler slag, or flue gas emission control residuals." Also, according to EPA's letter dated July 16, 2010, EPA requested access to Plant Scherer, and other plants, for the purposes stated below:

EPA requests such access as part of its assessment of the structural integrity of:

- coal combustion residue surface impoundments or similar diked or bermed management units at the Facility;
- management units at the Facility that are designated as landfills which receive liquid-borne material from a coal combustion residue surface impoundment or similar diked or bermed management unit; and
- management units at the Facility which may not currently receive coal combustion residue but which has not been closed in accordance with applicable state or federal regulations.

During the EPA inspection at Plant Scherer on May 12, 2010, the contractor, AMEC, inspected the dike for the "Recycle Pond" and has subsequently requested additional information on this structure. The Recycle Pond receives water effluent, not coal combustion residue, from the ash pond which is continually recycled back to plant processes. Georgia Power voluntarily provided information about the Recycle Pond dike during the inspection and has responded to subsequent requests for additional information on this structure. However, as communicated to EPA Jim Kohler on-site and to the contractors in subsequent requests for additional information, this structure does not meet the definition of a coal combustion residue surface impoundment and should not be included in any assessment report. We are confident the structure meets applicable integrity criteria and is managed safely; however, it should not in any way be considered a management unit for storage or disposal of coal combustion residues. We respectfully request that the Recycle Pond at Plant Scherer be removed from the final inspection report.

Inspection Recommendations

Georgia Power and Southern Company will continue the piezometer monitoring and ash pond inspection program for the Plant Scherer ash ponds.

Thank you again for this opportunity to comment. Please continue to direct correspondence to my attention.

Sincerely,

A handwritten signature in black ink, appearing to read "Danya Blacklock" with a stylized flourish underneath.

Charles H. Huling

CHH/
Attachments

PLANT SCHERER				
PAGE	SECTION	CURRENT STATEMENT READS	RECOMMENDED CHANGE	ADDITIONAL NOTES
0	Cover Page	Report of Geotechnical Investigation Dam Safety Assessment of Coal Combustion Surface Impoundments	Report of Dam Safety Assessment of Coal Combustion Surface Impoundments	This Report is an assessment, not a Report of Geotechnical Investigations.
3	1.2.1	The state of Georgia	The State of Georgia	
3	1.2.1	There are no Category I impoundments at Plant Scherer...	There are no Category I CCR impoundments at Plant Scherer...	Plant Scherer has a water storage pond dam that is categorized by the Georgia EPD-Safe Dams Program as a Category I dam, but it does not contain CCRs and therefore is not part of this assessment.
4	1.4.1	Bottom ash, the heavier and coarser of the two, is wet sluiced into the Ash Pond, where it remains. Fly ash is either sent to the ash pond as a wet slurry or placed into a tanker truck and conditioned with water from a pug mill. Both forms of fly ash are spread or dedged at the Ash Pond with a bulldozer. Dried fly ash can be taken from on-site silos by an ash vendor, loaded into usually sealeted tanker trucks, and driven off site for sale.	Bottom ash, the heavier and coarser of the two, is wet sluiced into the Ash Pond, where it remains. Fly ash is either sent to the ash pond as a wet slurry or is marketed off-site. Bottom ash is spread at the Ash Pond with a bulldozer.	
5	1.5	However, six quarterly reports of the five year data review period were not included in the documentation provided to AMEC.	However, Georgia Power personnel explained to AMEC during the inspection that six quarterly written reports of the five year data review period do not exist.	
5	1.6	These soil types are consistent with piedmont soils.	These soil types are consistent with Piedmont soils.	
6	2.2	The Ash Pond, commissioned in 1980, is used as a dewatering and storage facility.	The Ash Pond, commissioned in 1980, is used as a coal combustion residue disposal facility.	The Ash Pond is not a dewatering facility.
7	2.2.1	A large, recent surface slough repair is located on the entire downstream slope on the east half of the south dike (photos AP-450 and AP-51). The slough, which is about 3 feet by 100 feet long and extends about 20 feet up from the toe, developed recently.	A recent surface slough, which has been repaired, is located on a portion of the downstream slope situated on the south dike (Photo AP-52). The slough is about 3 feet by 100 feet long and extends about 20 feet up from the toe.	The first sentence is not factual, and there is no photo AP-450 and Photo AP-51 does not depict the slough area. The slough repair was carried out between June 22 and July 8, 2010. See photos below.
8	2.2.2	The outlet structure consists of a weir that regulates flow to a decant basin with a 72-inch diameter pipe.	The outlet structure consists of a skimmer that regulates flow to a decant basin with a 72-inch diameter pipe.	
8	2.2.2	...approximately 285 feet to discharge to a concrete ditch located east of the emergency spillway.	...approximately 285 feet to discharge to a concrete ditch located south of the emergency spillway.	
8	2.3.1	An animal burrow was observed on the downstream slope above the end of the rip-rap on the right abutment side (SP-8)	An animal burrow was observed on the downstream slope above the end of the rip-rap on the left abutment side (SP-8)	Right should be left in sentence and in the caption of Photo (SP-8)
8	2.3.1	Georgia Power reported loss of embankment material at the toe of the left downstream abutment. Georgia Power has placed rip-rap at the toe of the slope and is monitoring conditions (Photo SP-4)	Georgia Power reported erosion of material at the toe of the right downstream abutment. Georgia Power has placed rip-rap at the toe of the slope and is monitoring conditions (Photo SP-4)	Please clarify the comment. The left abutment is shown in SP-8, and the right abutment is shown in SP-4. Both cases had minor erosion, but there was no loss of embankment material.
9	2.4	Inspection reports note that PZ-APA4 was damaged first quarter 2009 and is abandoned.	Inspection reports note that PZ-APA4 was damaged during first quarter 2009. The well was subsequently abandoned in accordance with the Water Well Standards Act, O.C.G.A. 12-5-120.	
10	3.2.1	Georgia Power did not provide AMEC with hydrologic or hydraulic calculations for the Ash Pond in the time available to prepare this report.	Georgia Power did not provide AMEC with hydrologic or hydraulic calculations for the Ash Pond in the time available to prepare this Draft Report.	These studies are attached to these comments.

10	3.3	<i>The regulations state that all Category I dams</i>	The regulations state that all earthen dams...	
10	3.3	<i>...at least the minimum safety factors shown in Table 4.</i>	...at least the minimum safety factors shown in Table 3.	
12	3.3.1	<i>...collected periodically beginning in Fall 1991....</i>	...collected regularly (semi-annually to bi-yearly)...	
12	3.3.1	<i>AMEC was not able to locate drawings or other information regarding the location of Ash Pond Monitoring Points BM5 through BM8 or any of the reported Storage Pond Dike Monitoring Points</i>	AMEC was not able to locate drawings or other information regarding the location of Ash Pond benchmarks BM5 through BM8.	Georgia Power is attaching a copy of the plan (drawing number M-154-6) which shows the benchmarks. Reference to the storage pond (Lake Juliette) should be deleted because it does not contain CCRs.
13	3.3.1	<i>"The historic data did not provide sufficient information to assess the stability of the Plant Scherer Ash Pond."</i>	"Except for the downstream steady state and the downstream steady state with earthquake loading conditions, the historic data did not provide sufficient information to fully assess the stability of the Plant Scherer Ash Pond."	
13	3.3.2	<i>"Georgia Power did not provide data relating to the structural stability of the Settling Pond's main or saddle dam."</i>	Georgia Power did not provide data relating to the structural stability of the Settling Pond's main or saddle dam in the time available to prepare this Draft Report. This structure was added by the EPA on the day of the site inspection.	
14	3.5	<i>SCG Hydro Services performs quarterly safety and surveillance inspections for the embankments at Plant Scherer and provides summary reports...</i>	SCG Hydro Services performs quarterly safety and surveillance inspections for the embankments at Plant Scherer and provides reports...	Reports are more detailed reports rather than summary reports.
14	3.5	<i>Reportedly, plant personnel inspect the ponds and embankments weekly, however, they are not normally documented and no documentation was provided for these inspections.</i>	Plant personnel inspect the ponds and embankments weekly. They are normally documented and provided to SCG Hydro Services.	AMEC did not request the plant conducted weekly inspection reports at the time of the inspection.
15	4.1	<i>I certify that the management unit (Ash Pond) referenced herein was personally assessed by me and was found to be in the following condition: POOR</i>	I certify that the management unit (Ash Pond) referenced herein was personally assessed by me and was found to be in the following condition: SATISFACTORY	Georgia Power has provided, with these comments, the additional studies or information requested by AMEC which shows the loading conditions and resulting Factors of Safety for the impoundment dikes meet or exceed the required minimums as stipulated by the Rules for Dam Safety, Chapter 391-3-8. Georgia Power respectfully requests that, based on this submittal, the rating be raised to "SATISFACTORY" .
15	4.2	<i>AMEC recommends that Georgia Power determine what rainfall event the Ash and Settling Ponds are capable to safely containing or passing. A more complete evaluation would determine the effect of the PMP rainfall event on the Ash Pond and the Plant Scherer site. The analyses should include evaluation of Lake Juliette's ability to safely contain or pass the design storm event.</i>	Please delete these sentences as they are no longer applicable.	Since Georgia Power is submitting, with these comments, a storm routing study showing that the Ash Pond and Settling Pond can safely pass the PMP, this recommendation is no longer pertinent. Lake Juliette can pass the PMP with 5.9 feet of freeboard.
15	4.2	<i>AMEC recommends that dam breach analysis should be performed to evaluate the potential for a failure to inundate these homes.</i>	Please delete this recommendation, as it is not appropriate for Category II dams, as defined by the Georgia Safe Dams Act and Rules for Dam Safety.	

15	4.3	Embankment soil strength parameters are shown in SCH-API 026 and 027, but their genesis is not provided.	Embankment soil strength parameters for the 1976 and 1986 stability analyses are shown in SCH-API 026 and 027, but the supporting documentation for these parameters could not be provided. However, the 2010 stability analysis utilizes embankment strength parameters determined from the 2010 laboratory test results on undisturbed samples of the embankment soils.	
15	4.3	AMEC recommends that clarification of how the engineering soil strength parameters for the embankment soil were determined be provided.	Please delete this recommendation.	Refer to the revised statement above. The lab test results for these embankment soils could not be located in the Georgia Power files. Clarification of this 34 year old data may be remote at best and meeting this recommendation would be impossible. In this case, emphasis should be given to the results of current (2010) testing.
15	4.3	AMEC recommends that the stability analyses 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 conditions. Furthermore, the previous analyses limit the failure surfaces to circular surfaces; AMEC recommends that the slope stability analyses include slip surface optimization to allow for non-circular failure surfaces.	Please delete these recommendations as they are no longer pertinent.	Since Georgia Power is submitting this additional information with these comments to the Draft Report, please delete these recommendations as they are no longer pertinent.
17	5	...history of Plant Hammond impoundments...	...history of Plant Scherer impoundments	This Report is for Plant Scherer.
Appendix A	Checklist	Ash Pond - Has there been a failure at this site? Yes	There has never been a failure at this site.	The reference is to the recent surface slide on the face of South Dike. As discussed with AMEC during ash pond dike inspections on May 12 and 13, this is a shallow surface slide and is not a dike failure. As described in Checklist, Slide plane appears to be less than 3 feet deep and about 100 feet long and extends about 20 feet up the slope from toe.
Appendix B	Photo AP-49	SOUTH DIKE, TIE-IN OF LEFT ABUTMENT	SOUTH DIKE, TIE-IN OF RIGHT ABUTMENT	
Appendix B	Photo AP-52	SOUTH OF SOUTH DIKE LOOKING NORTH AT LARGE REPORTED SURFACE SLOUGH ON ENTIRE DOWNSTREAM SLOPE. WAITING FOR WEATHER AND DRYING TO COMPLETE	SOUTH OF SOUTH DIKE LOOKING AT AREA OF REPORTED SURFACE SLOUGH; WAITING FOR DRY WEATHER TO COMPLETE SLOPE REPAIR	
Appendix B	Photo AP-6	CREST OF EAST DIKE, LOOKING SOUTH (SETTLEMENT MONUMENT #6) REPAIRED SURFACE SLOUGHING AREA (RESEEDED AND MATTED) ON DOWNSTREAM SLOPE AT FAR LEFT OF PHOTO	CREST OF EAST DIKE, LOOKING SOUTH (SETTLEMENT MONUMENT #6) REPAIRED SURFACE EROSION AREA (RESEEDED AND MATTED) ON DOWNSTREAM SLOPE AT FAR LEFT OF PHOTO	

Appendix B	Photo SP-1	CREST IF SETTLING POND, LOOKING EAST AT RIGHT ABUTMENT TIE-IN	CREST IF SETTLING POND, LOOKING EAST AT LEFT ABUTMENT TIE-IN	
Appendix B	Photo SP-4	CREST OF SETTLING POND, LOOKING SOUTH AT RIP RAP ON DOWNSTREAM TOE OF LEFT ABUTMENT	CREST OF SETTLING POND, LOOKING SOUTH AT RIP RAP ON DOWNSTREAM TOE OF RIGHT ABUTMENT	
Appendix B	Photo SP-5	CREST OF SETTLING POND, LOOKING SOUTHWEST AT BLANKET DRAIN AND GROIN AREA OF LEFT ABUTMENT	CREST OF SETTLING POND, LOOKING SOUTHWEST AT BLANKET DRAIN AND GROIN AREA OF RIGHT ABUTMENT	
Appendix B	Photo SP-6	CREST OF SETTLING POND, LOOKING WEST AT LEFT ABUTMENT TIE-IN	CREST OF SETTLING POND, LOOKING WEST AT RIGHT ABUTMENT TIE-IN	
Appendix B	Photo SP-8	CREST OF SETTLING POND, LOOKING SOUTH AT TOE OF GROIN AREA AT RIGHT ABUTMENT, OBSERVED LARGE ANIMAL BURROW AT TOE OF DOWNSTREAM SLOPE IN THIS AREA	CREST OF SETTLING POND, LOOKING SOUTH AT TOE OF GROIN AREA AT LEFT ABUTMENT, OBSERVED LARGE ANIMAL BURROW AT TOE OF DOWNSTREAM SLOPE IN THIS AREA	
FIGURES			The figures provided by Georgia Power to AMEC should be treated as CBI and redacted. Please see separate submittal to the EPA on CBI matters, for this report. Also, for all figures and documents that were developed by Georgia Power or Southern Company Services, Georgia Power or Southern Company	