COMMENTS

Comments received for CHA Draft Report *(July 6, 2009,* CHA Project No. 20085.1000.1510*)* for the Assessment of Dam Safety of Coal Combustion Surface Impoundments, Progress Energy Carolinas – Cape Fear Plant. Comments include;

- EPA comments received on July 22, 2009;
- NC-DENR comments on August 11, 2009; and
- Progress Energy Carolinas comments received on September 4, 2009.

Final Report
Assessment of Dam Safety of Coal Combustion Surface Impoundments
Progress Energy Carolinas – Cape Fear Plant
Moncure, NC

Comments Received from the EPA *(July 22, 2009)*
In Response to CHA Draft Report (July 17, 2009)

CHA Project No. 20085.3000.1510

Everleth, Jennifer

From: Nattress, Annette
Sent: Thursday, July 23, 2009 10:54 AM
To: Everleth, Jennifer
Subject: FW: Comments on CHA's Draft Assessment Report for: Progress Energy's Cape Fear Plant

Annette Nattress
Administrative Assistant
CHA ~ Imagine What We Can Do For You!
(518) 453-4503
anattress@chacompanies.com
www.chacompanies.com
P Please consider the environment before printing this email.
-----Original Message-----
From: Killeen, Deborah A [mailto:deborah.a.killeen@lmco.com]
Sent: Wednesday, July 22, 2009 11:11 AM
To: Nattress, Annette; Harris IV, Warren
Cc: Hoffman.Stephen@epamail.epa.gov; Kohler.James@epamail.epa.gov; Miller, Dennis A
Subject: RE: Comments on CHA's Draft Assessment Report for: Progress Energy's Cape Fear Plant

Here are EPA's comments on CHA's Draft Assessment Report for: Progress Energy's Cape Fear Plant:

1) No hazard rating marked on checklist for 1970 ash pond; "significant" rating given on inspection form. Verify and complete checklist.

2) Expand Table of Contents, indicate Figure names.

3) Page 31, first sentence, change "unit" to "units"

Deborah A Killeen
Quality Assurance Officer
Lockheed Martin/REAC
732-321-4245 (office)
609-865-9308 (cell)
732-494-4021 (fax)

Final Report
Assessment of Dam Safety of Coal Combustion Surface Impoundments
Progress Energy Carolinas – Cape Fear Plant
Moncure, NC

Comments Received from the NC-DENR *(August 11, 2009)*
In Response to CHA Draft Report (July 17, 2009)

CHA Project No. 20085.3000.1510

Everleth, Jennifer

From: Harris IV, Warren
Sent: Tuesday, August 11, 2009 4:08 PM
To: Everleth, Jennifer; Adnams, Katy; Hargraves, Malcolm
Subject: FW: State Comments on Progress Energy - Cape Fear Plant Draft Report

-----Original Message-----
From: Killeen, Deborah A [mailto:deborah.a.killeen@lmco.com]
Sent: Tuesday, August 11, 2009 4:05 PM
To: Harris IV, Warren
Cc: Hoffman.Stephen@epamail.epa.gov; Kohler.James@epamail.epa.gov; Miller, Dennis A
Subject: RE: State Comments on Progress Energy - Cape Fear Plant Draft Report

Attached are comments from the state on the Progress Energy - Cape Fear Plant Draft Report.

EPA has reviewed the comments and believe they are limited to factual/editorial issues. They should be verified and incorporated accordingly.

Ultimately, EPA would like to include all original comments (EPA/state/facility) in a separate appendix in the Final Report. EPA will prepare a response to comments page which will be placed in front of the original comments in the Appendix.

An impressive amount of information was evaluated and compiled for the report.

Below are items that may or may not need to be corrected, but no item affects the report outcome.

General Corrections: NC-DENR (not NC EPD)
Elizabeth Werner (not Warner)
Geof Little (not Jeff)

Report Page 2: Spelling: 1.2 10th Line: 1985 Ash Pond (1985Ash Pond)
Report Page 23: Spelling 3.3.1: First Sentence: Performed (preformed)
CCW Impoundment Inspection Form for 1985 Ash Pond: The response to question 'Is water or ccw currently being pumped into the impoundment' is marked 'No.' Is this correct?
Coal Combustion Dam Inspection Checklist Form for 1970 Ash Pond: Question 6
regarding instrumentation is marked 'Yes.' Is this correct?
Coal Combustion Dam Inspection Checklist Form for 1963 Ash Pond: Footnote for
17, 18: Misspelled word 'Vegated'
regarding instrumentation is marked 'Yes.' Is this correct?
Photograph No. 39: Is the picture of the East interior dike? (labeled North)
Photograph No. 90: Is the direction northwest? (labeled northeast)
Photograph No. 97: Spelling: Free (Fee)

3.0 Data Evaluation Page 19/20: Refers to the requirement to safely store or pass as 1/3 of the Probable Maximum
Precipitation (PMP) [p.19] and 1/2 PMP [p.20]
3.2.3 1963/1970 Ash Ponds Page 21: Refers to the storage requirement as
1/3 and 1/2 PMP
4.8 Hydraulic Analysis Recommendations Page 34: Refers to the storage requirement as 1/3 and 1/2 PMP

Deborah A Killeen
Quality Assurance Officer
Lockheed Martin/REAC
732-321-4245 (office)
609-865-9308 (cell)
732-494-4021 (fax)

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Water Quality

Beverly Eaves Perdue
Governor

Coleen H. Sullins
Director

Dee Freeman
Secretary

August 18, 2009

MEMORANDUM

To: Mr. Jim Kohler, P.E.
Environmental Engineer LT, U.S. Public Health Service
U.S. Environmental Protection Agency
Office of Resource Conservation and Recovery

From: Autumn Hoban-Romanski
Raleigh Regional Office, Surface Water Protection Section
Division of Water Quality

Through: Danny Smith
Raleigh Regional Office, Surface Water Protection Section
Division of Water Quality

Subject: Impoundment Inspection Comments
Cape Fear Steam Electric Power Plant
NPDES Wastewater Discharge
Permit No. NC0003433

On June 15, 2009, Autumn Hoban-Romanski of the Raleigh Regional Office Surface Water Protection Section (SWP) Division of Water Quality (DWQ) participated in the Coal Combustion Waste (CCW) Surface Impoundment Assessment conducted at the Cape Fear Plant Site. This memorandum is provided in response to your request for comment on the draft report regarding the subject facility.

Additionally, it is noted that the Raleigh Regional Office of DWQ is scheduled to conduct an annual NPDES Wastewater Discharge Permit Inspection at the Cape Fear Steam Electric Power Plant on September 23, 2009. This inspection will be conducted to verify/determine the compliance status of this facility with the conditions and limitations specified in NPDES Wastewater Permit No. NC0003433 (this permit includes stormwater).

Prior to the June 15, 2009 EPA visit at this facility, the Cape Fear Plant was inspected by DWQ staff on June 5, 2008 and January 5, 2006. While the facility was reported to be compliant with DWQ-SWP NPDES permit conditions, the 1985 ash pond was observed full of product/solids with little freeboard during both inspections. A facility response and attention to this issue was required and noted in (2) below.

With respect to the 2006 and 2008 NPDES inspection reports, and the results of the June 15, 2009 impoundment inspection, please see the below listed items:

(1) The impoundment inspection provided an opportunity for DWQ staff to better understand the NPDES stormwater outfalls at this site. The inspection of the impoundment dike at the 1956 inactive ash impoundment revealed evidence of concentrated stormwater flow to the Cape Fear River/Haw River, this area is located near confluence of these rivers. This impoundment is currently forested, densely covered by a trees and woody/shrub understory. However, storm-event overland flows have been allowed to concentrate and produce gullies and rills. These areas are eroding through the berm such that both stormwater and possibly CCW is conveyed to surface waters in response to storm event flows. These outfalls are not currently permitted, the closest permitted stormwater outfall to this area is SW-1 (to Shaddox Creek). This area must be addressed by the facility and this issue will be revisited during the 2009 annual NPDES Wastewater Inspection scheduled for September 23, 2009.

(2) The impoundment inspection was also an opportunity to follow up on past observations noted in NPDES Wastewater Inspections from 2006 and 2008 on the active 1985 impoundment/ash pond. In 2007 work was completed to construct a "pond within a pond" at the active 1985 impoundment (historically referred to as the East/West Ash Pond). It was noted that this change would give an additional 4-6 years of storage capacity. However, as noted above, in the 2008 DWQ NPDES inspection it was reported that this may not be the case, because the pond was filling up quicker than anticipated. In a written response to the NPDES inspection Progress Energy Cape Fear facility responded as follows:

(a) the pond will likely fill up between 1 to 2 years, which is dependent on generation and ash content of coal;

(b) we will be adding a 10 Foot vertical extension to the ash pond that will add between 2 or 4 additional years based on generation and ash content of the coal;

(c) there is currently an effort underway to determine areas where ash can beneficially be reused (such as industrial parks).

It is evident that the active 1985 impoundment/ash pond is continuing to fill up to capacity and is cause for concern to the Raleigh Regional Office.

(3) In keeping with the findings of your report, DWQ observed 3 inactive ash ponds that are located adjacent to Hall River that combines with the Deep River to form the main-stem Cape Fear River. We also observed 2 permitted ash ponds, one of which is the currently active ash pond that discharges under the current NPDES Discharge Permit. Accordingly, the landscape position of this facility includes Triassic Basin Soil System [Soils formed from sandstone and siltstone parent materials, with typically low infiltration rates, and high shrink swell potential] as well as floodplain-alluvial soils.

As stated above, this facility is located immediately adjacent to the Cape Fear River. Also, a water supply watershed - critical area (the location of the City of Sanford surface water supply intake) is located approximately 3 miles downstream. Another water supply intake for the Town of Lillington is located approximately 18 miles downstream.

The cover, side slopes and toe of ash ponds varied with respect to vegetation cover. Some areas had even aged growth of pine/hard woods, with shrub/herbaceous understory, while other areas had thick layer of Elaeagnus and Blackberry Briers. That said, certain portions of the site and berm walls were well maintained and stable, with a thick grassy cover. It was clear that large portions of the berms and side slopes are not maintained such that routine confident/detailed inspection of structural stability can be readily determined.

If you have any questions or if I can be of further assistance, please do not hesitate to contact me.

Attachments
Cc: Raleigh Regional Office – DWQ SWP and DLQ Files

Final Report
Assessment of Dam Safety of Coal Combustion Surface Impoundments
Progress Energy Carolinas – Cape Fear Plant
Moncure, NC

Comments Received from
Progress Energy Carolinas *(September 4, 2009)*
In Response to CHA Draft Report (July 17, 2009)

CHA Project No. 20085.3000.1510

From: Miller, Dennis A [mailto:dennis.a.miller@lmco.com]
Sent: Monday, September 14, 2009 9:00 AM
To: Harris IV, Warren; Killeen, Deborah A
Subject: FW: Progress Energy Carolinas, Inc - Comments on Asheville (Call Required) and Cape Fear Ash Pond Draft Reports

Warren: the company comments for the Progressive Energy Cape Fear draft assessment report were previously sent to you on 9/4/09.

-----Original Message-----
From: Miller, Dennis A
Sent: Friday, September 04, 2009 9:03 AM
To: Harris IV, Warren; Killeen, Deborah A
Cc: Hoffman.Stephen@epa.gov; 'Kohler.James@epamail.epa.gov'
Subject: FW: Progress Energy Carolinas, Inc - Comments on Asheville (Call Required) and Cape Fear Ash Pond Draft Reports

Warren: Attached are the company comments for the Progressive Energy Carolinas Cape Fear draft assessment report.

-----Original Message-----
From: Kohler.James@epamail.epa.gov [mailto:Kohler.James@epamail.epa.gov]
Sent: Friday, September 04, 2009 8:25 AM
To: Miller, Dennis A; Killeen, Deborah A
Cc: Hoffman.Stephen@epamail.epa.gov
Subject: Progress Energy Carolinas, Inc - Comments on Asheville (Call Required) and Cape Fear Ash Pond Draft Reports

Dennis and Deb:

We have reviewed the comments for the Cape Fear Ash Pond Report and believe they are limited to factual/editorial issues. They should be verified and incorporated accordingly.

If you have any questions or concerns with these directions please feel free to call me or Steve. Thanks!

Jim

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Jim Kohler, P.E.
Environmental Engineer
LT, U.S. Public Health Service
U.S. Environmental Protection Agency
Office of Resource Conservation and Recovery
Phone: 703-347-8953
Fax: 703-308-8433
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----- Forwarded by James Kohler/DC/USEPA/US on 09/03/2009 02:26 PM -----
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|"Holt, Fred" <Fred.Holt@pgnmail.com>
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|James Kohler/DC/USEPA/US@EPA
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|Progress Energy Carolinas, Inc - Comments on Asheville and Cape Fear Ash
Pond InspectionReports |
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Here are our comments. Let me know if you have any questions.

Fred Holt
Progress Energy Carolinas, Inc.
Environmental, Health and Safety Services Section
Mail Code PEB 4
V-Net 770 - 5286
External 919 546 - 5286
Mobile 919 632 - 8165
fred.holt@pgnmail.com

-----Original Message-----
From: Kohler.James@epamail.epa.gov [mailto:Kohler.James@epamail.epa.gov]

Sent: Thursday, September 03, 2009 8:59 AM
To: Holt, Fred
Subject: RE: Comments on Asheville and Cape Fear Reports

Great, thank you.

****
Jim Kohler, P.E.
Environmental Engineer
LT, U.S. Public Health Service
U.S. Environmental Protection Agency
Office of Resource Conservation and Recovery
Phone: 703-347-8953
Fax: 703-308-8433
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| From: |
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|"Holt, Fred" <Fred.Holt@pgnmail.com>
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|James Kohler/DC/USEPA/US@EPA
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Good Morning. Yes, we are finalizing comments as I type. We lost of couple of days review time because the people who needed to review the comments were involved with one of the contractor's inspections this week. We should have something to you by mid-afternoon today. Hope that is OK.

Fred Holt
Progress Energy Carolinas, Inc.
Environmental, Health and Safety Services Section
Mail Code PEB 4
V-Net 770 - 5286
External 919 546 - 5286
Mobile 919 632 - 8165
fred.holt@pgnmail.com

-----Original Message-----
From: Kohler.James@epamail.epa.gov [mailto:Kohler.James@epamail.epa.gov]

Sent: Thursday, September 03, 2009 8:55 AM
To: Holt, Fred
Cc: Hoffman.Stephen@epamail.epa.gov
Subject: Comments on Asheville and Cape Fear Reports

Fred,

Did did you have any comments on the Asheville and Cape Fear Reports? We are looking to finalize them. Thanks-

Jim

****
Jim Kohler, P.E.
Environmental Engineer
LT, U.S. Public Health Service
U.S. Environmental Protection Agency
Office of Resource Conservation and Recovery
Phone: 703-347-8953
Fax: 703-308-8433
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(See attached file: Asheville dam safety report comments.docx)(See attached file: Cape Fear Dam Safety Report comments.docx)

Cape Fear Steam Electric Plant
Dam Safety Inspection Report Comments

(1) Throughout, reference to “Progress Energy” should be “Progress Energy Carolinas”.

(2) Section—1.1 Introduction

The Progress Energy Carolinas employee Danny Wimberly is misspelled.

(3) Section—1.2.1 State Issued Permits

The effective date of the NPDES permit was September 1, 2006.

(4) Section—1.3 Site Description and Location

Reword third sentence. Recommendation: “A system of levees, flood walls, and flood gates was constructed around the power plant as protection against high river levels, a problem that has been controlled with the construction of the B. Everett Jordan Dam upstream on the Haw River.”

(5) Section—2.4 1963/1970 Ash Ponds

In the last sentence in the second paragraph, the statement is made that this ash pond is not considered to be a permitted facility. To be more accurate, we recommend the following wording to replace the last sentence: “This ash pond was constructed prior to regulatory purview under the NC Dam Safety Law. However, the storm water discharge from this pond is permitted by the site’s NPDES Permit.”

(6) Section—2.5 1956 Ash Pond

In the last sentence in the first paragraph, the statement is made that this ash pond is not considered to be a permitted facility. To be more accurate, we recommend the following wording to replace the last sentence: “This ash pond was constructed prior to regulatory purview under the NC Dam Safety Law. However, the storm water discharge from this pond is permitted by the site’s NPDES Permit.”

(7) Section—3.2.4 1956 Ash Pond

In this section, freeboard is defined as the difference in elevation between the surface of impounded ash and the top of the dike. This provides a mistaken claim that there may be insufficient freeboard for prevention of overtopping during a storm flood event. Freeboard is the difference in the top of the dam and the maximum expected water elevation; the water elevation will be the same at any point in the impoundment,

regardless of where or how high the ash delta may be. Of course, this assumes the dike crest is at the same elevation for its entire length.

(8) Section—4.1 Acknowledgment of Management Unit Condition

Progress Energy Carolinas recommends that the possible classifications and their definitions be included with this report to ensure understanding of the condition rating by readers.

(9) Section—4.8 Hydraulic Analysis Recommendations

It states in the second bullet that CHA observed that the freeboard ranges from about 0 feet at the north end of the 1978 Ash Pond to 3 to 8 feet at the south end of the pond. Freeboard is the difference in the top of the dam and the maximum expected water elevation; the water elevation will be the same at any point in the impoundment, regardless of where or how high the ash delta may be. Of course, this assumes the dike crest is at the same elevation for its entire length.

(10) Coal combustion Dam Inspection Checklist Form for the 1985 Ash Pond

The answer to the question “Is water or ccw currently being pumped into the impoundment?” should be YES.

(11) Coal combustion Dam Inspection Checklist Form for the 1978 Ash Pond

The answer to the question “Is water or ccw currently being pumped into the impoundment?” should be YES. Low volume waste is currently being routed to this pond. Note, although not currently receiving ccw, it is permitted to do so.

(12) Photo 96

The caption should read “free” instead of “fee”.