

US EPA ARCHIVE DOCUMENT

Comments on Progress Energy- Roxboro

EPA HQ - No comments – CD/JM

EPA Region -

**From:** Karrie-Jo Shell

**Sent:** 11/07/2009 01:54 PM EST

**To:** Dee Stewart

**Cc:** nuhfer.mark@epa.gov

**Subject:** Re: Fw: Comment Request on EPA's Draft Coal Ash Impoundment Assessment Reports

I looked at both reports, but I did not go on the site visit to the Roxboro plant--just to the Belews Creek plant. I have no comments on either report.  
Karrie-Jo Robinson-Shell, P.E.

State -

From: "Frost, Larry" <larry.frost@ncdenr.gov>

To: James Kohler/DC/USEPA/US@EPA, "Werner, Elizabeth" <elizabeth.werner@ncdenr.gov>

Date: 11/04/2009 09:32 AM

Subject: RE: Comment Request on EPA's Draft Coal Ash Impoundment Assessment Reports

James

I have no comment regarding these reports.

Thanks for the opportunity,

Larry

Larry Frost - Larry.Frost@ncdenr.gov

North Carolina Dept. of Environment and Natural Resources

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Also see document dated Nov. 16, 2009 from Autumn Hoban Romanski of NCDENR.

Company -

From: "Holt, Fred" <Fred.Holt@pgnmail.com>  
To: James Kohler/DC/USEPA/US@EPA  
Cc: Stephen Hoffman/DC/USEPA/US@EPA, "Toepfer, John" <John.Toepfer@pgnmail.com>, "Madewell, Alan" <Alan.Madewell@pgnmail.com>, "Sideris, Harry" <Harry.Sideris@pgnmail.com>, "Green, Jodirah" <Jodirah.Green@pgnmail.com>, "Copolo, Tom" <Tom.Copolo@pgnmail.com>  
Date: 11/13/2009 02:12 PM  
Subject: RE: Comment Request on Draft Assessment Report for Progress Energy Carolina's Roxboro facility

Hi. These are our comments on the draft report for our Roxboro plant.

\* p.8 "According to information provided by PGN, the West Ash Pond Dam and Dikes 1, 2, and 4 enclose an approximate area of 2400 acres."

The "2400" acres appears to be a typo. The surface area is approximately 240 acres.

\* p.10 (2.1.2b, first paragraph, 3rd sentence) The sentence as written leads one to believe the flush pond is constructed in the dam whereas it is constructed in an area impounded by the West Ash Pond Dam. The sentence would read better if the word "Dam" was deleted or add "area upstream of the" before "West Ash Pond Dam".

\* p.15 (2.4.3.1) third sentence in first paragraph. It is believed the reference should be to Dike 3 instead of Dike 2.

\* p. 10 of Appendix A, photo 20. We are not sure what the heading "and Gypsum" means. If it refers to the floating material in the picture, that material appears to be cenospheres instead of gypsum.

It is my understanding, based on previous interaction, that we will receive the final report in the next few weeks and be asked to respond to its recommendations. We will be on the lookout for that transmittal. If you have any questions please feel free to contact me.

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

Beverly Eaves Perdue  
Governor

Coleen H. Sullins  
Director

Dee Freeman  
Secretary

November 16, 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 *AHR*  
Raleigh Regional Office, Surface Water Protection Section  
Division of Water Quality

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

Subject: Impoundment Inspection Comments  
Roxboro Steam Electric Power Plant  
**NPDES Wastewater Discharge**  
**Permit No. NC0003425**

On September 1, 2009, Autumn Hoban Romanski of the Raleigh Regional Office (RRO) Surface Water Protection Section (SWP) North Carolina Division of Water Quality (NC DWQ) participated in the Coal Combustion Waste (CCW) Surface Impoundment Assessment conducted at the Roxboro Plant Site in Person County North Carolina. The EPA's Impoundment Condition Assessment was satisfactory for the West Ash Pond Dam and fair for the Flue Gas Desulfurization (FGD) Settling Pond and FGD Flush Pond wastewater treatment units at the Roxboro Plant Site. This memorandum is provided in response to your request for comment on the draft report regarding the subject facility.

A NC DWQ annual NPDES Wastewater Discharge Permit Inspection at the Roxboro Steam Electric Power Plant was conducted on May 27, 2009. This inspection was conducted to verify/determine the compliance status of this facility with the conditions and limitations specified in NPDES Wastewater Permit No. NC0003425.

While the facility was reported to be compliant with NPDES permit conditions, the site has been required to provide additional sampling and monitoring to NC DWQ since March of 2008.

The RRO SWP staff of the NC DWQ has reviewed the draft EPA report and offers the following corrections and observations for consideration in the final report development:

- 1) The report identifies/explains that the toe drains from the West Ash Pond Dam outlet to Hyco Lake. This is not accurate. The toe drains from the West Ash Pond outlet to a mixing zone, at the confluence of outfall 002 and the heated water discharge canal, prior to the final outfall at 003 to Hyco Lake. The toe drains are an internal outfall.

- 2) The report accurately explains that the West Ash Pond Dam is regulated by the NC Utilities Commission. However, NC DWQ regulates the NPDES wastewater treatment units and respective discharges associated with the wet ash.
- 3) The draft report states “ the treatment units are at approximately the same elevation as the top of the West Ash Pond Dam and dikes for the West Ash Pond within which they are located.”

The statement underlined above is accurate. In keeping with the findings of the EPA report, NC DWQ observed the West Ash Impoundment and the permitted wastewater treatment units constructed within the West Ash Pond. These treatment units discharge under the current NPDES Discharge Permit. It is noted that current construction plans for repairs of the existing FGD Settling Pond and the design of a new FGD Settling Pond indicate the elevation of the new FGD Settling Pond will be raised an additional 4 feet. (Saturation of ash/groundwater table elevations are recorded in Progress Energy's geotechnical data.)

In a written response to the NC DWQ's NPDES inspection from May 2009, the Progress Energy Roxboro facility explained the following:

- Progress Energy recently completed bathymetry work for the existing ash pond (excluding the footprint of the currently constructed FGD wastewater treatment units ). The volume of the Roxboro Ash Pond as surveyed on September 17 & 18, 2009 is 563,217 cubic yards. This is based on the water surface elevation of 462.13 ft MSL (NAVD88) taken at the time of the bathymetry survey. The volume of the pond after the 2007 bathymetry survey was 445,149 cubic yards at a water surface elevation of 458.7 ft MSL (NAVD88).
  - Available freeboard – The elevation of the ash pond dam crest is 470 ft. The design water elevation is 463 ft with a maximum water elevation of 465 ft. Water elevation surveyed during the last bathymetry event was 462.13 at the time of the survey.
4. The Roxboro Plant is located within the Piedmont Physiographic Province and near the Milton and Charlotte Belts. More specific geologic details of the site can be found on the North Carolina Geologic Map last dated 1985, as well as, in Progress Energy's geotechnical data.
  5. The Roxboro Steam Electric Plant is located approximately 6.5 miles **downstream** of the Town of Roxboro's surface water supply intake. This intake is located on South Hyco Creek and is classified as Water Supply (WS-II) High Quality Waters (HQW) critical area (CA) in the Roanoke River Basin.
  6. The power plant intakes and discharges water from Hyco Lake classified as Class B Primary Recreation, Water Supply (WS-V) waters in the Roanoke River Basin.
  7. Much of the vegetative cover and side slopes of the Ash Pond Dam consisted of a tall, thick vegetative cover that inhibited full observation of all slopes. The toe drain slopes of the West Ash Pond were clear of vegetation.
  8. The EPA report explains the discharge ends of the concrete swales are undermined. Further the report states that this was not part of a dam safety concern due to the distance from the toe of the dam. NC DWQ staff agrees that the toe drains of the dam showed signs of erosion around the cement. These drains which convey internal dam seepage should be inspected frequently (e.g. weekly) to ensure stability and proper operation of the dam. [During the site visit seven toe drains with the exception of the middle toe drain were discharging]
  9. The #3 Summary Recommendation in the EPA report is to quantify the seepage/discharge rate from the toe drains. The RRO concurs with this recommendation. [Note: EPA and NC DWQ observations indicated that one of the toe drains showed evidence of soil transport, the subject of the # 2 Summary Recommendation in the EPA report.]

10. The northwest berm of the West Ash Pond by the NPDES internal outfall 002, had apparent seepage at the discharge weir from beneath the concrete abutment that appears to be coming from the rock foundation, as described in the EPA report. This is of concern to the Raleigh Regional Office from an NPDES discharge standpoint. The additional flow could alter measurements/sampling results at other NPDES outfalls. (Note: Based on boring data recorded in the geotechnical data received by the Raleigh Regional Office on January 26, 2009, no groundwater was found at 9 feet (depth of augur refusal) at location GP-8 (the closest boring data location to outfall 002). This paragraph is the subject of the #5 Summary Recommendation in the EPA report.
11. The EPA report # 4 Summary Recommendation is to continue monitoring the seepage at the toe of the West FGD Settling Pond.

Note: repair efforts are currently ongoing and permitted/addressed through NPDES permit conditions. The FGD Flush Pond was under construction, as repairs for this treatment unit were underway the day of this inspection.

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

Cc: Raleigh Regional Office – DWQ SWP and DLQ Files