

US EPA ARCHIVE DOCUMENT

**COMMENTS RECEIVED TO DATE REGARDING
THE ALLEN STEAM STATION COAL ASH RETENTION DAM
BELMONT, NORTH CAROLINA**

The following comments were received with respect to the Allen Steam Facility. All were addressed in the Report version entitled Draft Final Report-Version 1. **Note GZA has yet to receive any comments on the Allen Steam Facility from Lockheed Martin or the North Carolina State Regulators.**

COMMENTS ON ALLEN STEAM FROM EPA

From: Killeen, Deborah A [mailto:deborah.a.killeen@lmco.com]
Sent: Thursday, August 06, 2009 8:23 AM
To: peter.baril@gza.com
Cc: Hoffman.Stephen@epamail.epa.gov; Kohler.James@epamail.epa.gov; Miller, Dennis A; James Guarente
Subject: RE: EPA Comments on GZA's Draft Assessment Report for: Duke Energy - Allen Steam Station

Peter,

Here are EPA's comments on GZA's Draft Assessment Report for: Duke Energy - Allen Steam Station:

- 1) Page 5, section 2.0, list other state/EPA/company participants beyond GZA inspectors.
- 2) 6th line down in section 2.1, water elevation in impoundment is blank.
- 3) Page 6, section 2.1.1: Figures 6-7 show dam in plan and locations of photos, not Figure 5. Clarify.

Deborah A Killeen
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The following additional comment was received with respect to the Allen Steam Facility.

From: "Miller, Dennis A"
Date: Thu, 23 Jul 2009 11:28:01 -0400
To: peter.baril@gza.com<peter.baril@gza.com>
Subject: FW: TDF 5

Please note the additional questions that Steve wants addressed in revised CCW impoundment assessment reports.

From: Hoffman.Stephen@epamail.epa.gov [mailto:Hoffman.Stephen@epamail.epa.gov]
Sent: Thursday, July 23, 2009 11:09 AM
To: Miller, Dennis A; Killeen, Deborah A
Cc: Ur.Nancy@epamail.epa.gov; Kane.Gloria@epamail.epa.gov; Zownir.Andy@epamail.epa.gov
Subject: TDF 5

The TVA failure mode analysis report for the Kingston embankment failure was made public several weeks ago. One of the key findings was that the unit may have failed because the embankment was built upon coal ash slimes. I am directing LM to contact all of its subs and have them reassess each of the draft reports it has already completed and have them answer the following questions for each facility and unit studied:

- Concerning the embankment foundation, was the embankment construction built over wet ash, slag, or other unsuitable materials? If there is no information just note that.
- Did the dam assessor meet with, or have documentation from, the design Engineer-of-Record concerning the foundation preparation?
- From the site visit or from photographic documentation, was there evidence of prior releases, failures, or patchwork on the dikes?

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In addition to it being addressed in the Report, GZA also sent the following email response to Mr. Dennis Miller.

From: James Guarente [mailto:james.guarente@gza.com]
Sent: Friday, August 21, 2009 4:28 PM
To: 'dennis.a.miller@lmco.com'
Cc: 'abjarngard@gza.com'; 'frank.vetere@gza.com'; 'pbaril@gza.com'; 'Walter Kosinski'; 'rpalermo@gza.com'; 'whoever@gza.com'
Subject: responses to questions

Dennis,

Below are GZA's responses to your recent set of questions. Each will be expanded upon (as necessary) and incorporated into the respective assessment report as appropriate.

Regarding the Allen Steam Facility:

Question 1. "Concerning the embankment foundation, was the embankment construction built over wet ash, slag, or other unsuitable materials? If there is no information just note that." - **The east dike is built on natural ground or earth fill. The initial construction of the north dike was built on natural ground or**

earth fill. Overtime as the facility expanded ash was deposited such that it built up against the embankment geometry. To allow for additional ash storage, the north dike was raised and widened over several iterations. During the widening/raising(s) earth was placed over ash which prior to the widening/raising(s) had built up against the previous embankment geometry. Details of the raising/widening efforts are depicted on Drawing A-3350-1A which was provided by Duke Energy and reviewed by GZA.

Question 2. "Did the dam assessor meet with, or have documentation from, the design Engineer-of-Record concerning the foundation preparation?" - The inspection team did not meet with the original designer Law Engineering. In fact Law no longer exists. GZA did review several design level drawings provided to us by Duke Energy, but said drawing do not reference the firm that produced them.

Question 3. "From the site visit or from photographic documentation, was there evidence of prior releases, failures, or patchwork on the dikes?" - The central portion of the north dike experienced a failure during initial ash filling (circa 1982). This issue was remedied by the addition of stabilization berms and drainage blankets. Remediation work was also implemented at the east dike apparently because the results of borings and calculations undertaken to assess the north failure also indicated other potential stability problems and less than acceptable factors of safety. The geometry of the berms at both structures therefore was augmented as appropriate such that potential critical failure arcs where forced up the embankment to less critical areas between the top of the stability berm and the crest. It was reasoned that minor sloughing in these zones could be handled as routine maintenance.

COMMENTS ON ALLEN STEAM FROM UTILITY

-----Original Message-----

From: Killeen, Deborah A [mailto:deborah.a.killeen@lmco.com]

Sent: Wednesday, August 12, 2009 2:04 PM

To: peter.baril@gza.com

Cc: Hoffman.Stephen@epamail.epa.gov; Kohler.James@epamail.epa.gov; Miller, Dennis A; James Guarente

Subject: Company Comments on Duke Energy: Allen (GZA) Steam Station Report

Peter,

Attached are comments from Duke Energy on the Allen Steam Draft Report.

For the Allen (GZA) Steam Report, EPA has reviewed the comments and believe they are limited to factual/editorial issues. They should be verified and incorporated accordingly.

Remember not to finalize any reports until we inform you that all comments (from EPA/state/company) have been received.

Review of USEPA Inspection Report - Allen (GZA)

1. In section 1.2.2, the owner should be listed as "Duke Energy Carolinas, LLC" not "Duke Power".
2. "Duke Power" should be replaced by "Duke Energy" everywhere throughout the document.
3. Section 1.3.1 is Marshall information from the Marshall Inspection Report. This is not pertinent to the Allen Report.
4. Section 1.2.5, 2nd paragraph says, "The Steam Station currently

uses a dry methodology for removing ash from its system. Inflow to the impoundment is thus limited to a minimal amount of slurry resulting from cleaning of system residue." Actually, the amount of ash is significantly reduced; however, all bottom ash and pyrites continue to be sluiced to the pond.

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