



North Carolina Department of Environment and Natural Resources
Division of Energy, Mineral, and Land Resources
Land Quality Section

Tracy E. Davis, PE, CPM
Director

Pat McCrory, Governor
John E. Skvarla, III, Secretary

February 14, 2014

Mr. R. Scott Harris, P.E.
Senior Geotechnical Engineer
Central Engineering & Services
Duke Energy
526 South Church Street
Charlotte, NC 28202
Office: 980.373.9308
Mobile: 704.560.6012

Re: Dan River Primary Ash Pond Dam (ROCKI-237)
Stormwater Conduits Beneath the Ash Pond Reservoir

Dear Mr. Harris:

Thank you for meeting with me and other Land Quality Section staff at the Dan River plant site this past Tuesday, February 11, 2014. During our meeting we discussed the approach Duke Energy is taking at the Dan River plant in response to the ash material release from the Primary Ash Pond on or about February 2, 2014 as authorized under NCGS 143-215.27(b). This release was caused by a sudden break in the 48-inch conduit which carries stormwater discharge from the plant area beneath the Primary Ash Pond reservoir to a discharge point at the Dan River.

Current emergency efforts are focused on grout filling the 48-inch conduit beneath the ash pond reservoir to prevent further flow from it. A grout plug has been successfully installed at the outlet of the 48-inch conduit to serve as bulkhead for the grouting operation which is still in the design phase. During our meeting, we discussed various requirements the Division of Energy, Mineral, and Land Resources (DEMLR) would like incorporated in the final grouting process. At the conclusion of our meeting you provided me with video of the pipe inspections recently performed at the site which included the 48-inch conduit, a second 36-inch conduit which traverses beneath the ash pond reservoir to outfall at the Dan River, and several other smaller pipe networks on the west side of the Primary Ash Pond.

During our meeting, we discussed the 36-inch conduit which was confirmed by the video as reinforced concrete pipe (RCP). You and Mr. Randy Paulson of Duke Energy mentioned that you were considering grouting this pipe also but not in conjunction with the 48-inch pipe grouting effort. We mentioned at the meeting that we would request a schedule on this and followed up by email on February 12, 2014.

Yesterday, February 13, 2014, I had the opportunity to view the pipe inspection videos. I was particularly interested in the 36-inch conduit as it has the potential by configuration to release ash material in a way similar to the 48-inch conduit. The 36-inch conduit is laid in four foot pipe sections so there are many joints along the alignment. I noted in particular the following:

1. Infiltration was occurring through a number of joints where dripping and flowing (termed “dripper” and “runner” in the video) was observed.
2. Water jets from pressurized infiltration (termed “gusher” in the video) were observed at three joints.
3. Separation had occurred in one joint near the outfall point.
4. Sections of ponding water exist indicating irregular vertical alignment.

These deficiencies warrant further review and mitigation. Please provide a schedule within 10 days of receipt of this letter for design and implementation of mitigation measures. Please contact me if you have any questions in this regard. Thank you.

Sincerely yours,



Steven M. McEvoy, PE
State Dam Safety Engineer

cc: Mr. Tracy Davis, PE, Director, DEMLR
Mr. Matt Gantt, PE, Land Quality Regional Engineer

File name: ROCKI-237_20140214_LtrtoOwner_Dan River Primary Ash Pond Dam