HOOSIER ENERGY
RURAL ELECTRIC COOPERATIVE, INC.
A Touchstone Energy® Cooperative

August 2, 2011

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Stephen Hoffman
U.S. Environmental Protection Agency
Two Potomac Yard
2733 S. Crystal Drive
5th Floor, N-5838
Arlington, VA 22202-2733

RE: EPA Letter Requesting Response to Frank E. Ratts Coal Combustion Residual Site Final Recommendations

Dear Mr. Hoffman:

This letter and attachment responds to Ms. Rudzinski's letter of June 27 and the above-referenced final recommendations related to the Frank E. Ratts facility. Hoosier is committed to generating power for our member distribution cooperatives in harmony with our environment. Hoosier Energy has a long-standing commitment to environmental stewardship, and we appreciate EPA's efforts to evaluate our facilities to make sure they are stable and protective even under unusual conditions.

Ms. Rudzinski's letter requested that Hoosier inform you of how we intend to address each of the recommendations found in the final report prepared by your contractor. Enclosed as Attachment 1, please find an Action Plan developed by SCS Engineers that includes specific plans and schedules for implementing each recommendation.

If you have any questions regarding the information provided with this letter, please contact me directly at (812) 935-4712. Thank you for your consideration.

Sincerely,

Michalene Reilly

Michalene Reilly, CHMM
Manager, Environmental Services

Enclosure

P.O. BOX 908 • BLOOMINGTON, INDIANA 47402-0908 • PHONE: 812-876-2021 • FAX: 812-876-3476

Environmental Consultants

11260 Roger Bacon Drive
Suite 300
Reston, VA 20190-5282

703 471-6150
FAX 703 471-6676
www.scsengineers.com

SCS ENGINEERS

July 29, 2011
File No. 23210035.02

Ms. Michalene Reilly, Manager of Environmental Services
Hoosier Energy
P.O. Box 908
Bloomington, Indiana 47402-0908

Subject: Action Plan to Address EPA Comments
Frank E. Ratts Generating Station, Petersburg, IN

Dear Michalene:

We have reviewed the June 27 letter to you from Ms. Suzanne Rudzinski of the U.S. Environmental Protection Agency's Office of Resource Conservation and Recovery. Enclosed with her letter was a final report prepared by AMEC entitled "Report of Dam Safety Assessment of Coal Combustion Surface Impoundments, Hoosier Energy, Frank E. Ratts Generating Station, Petersburg, IN" and a summary of recommendations for further actions. Following is a listing of those recommendations:

- Hydrologic and Hydraulic Recommendations
  - Hydrologic and hydraulic calculations are to be completed for Ponds 1, 2, 3 and 4 per AMEC's September 10, 2010 Draft Report.
  - An appropriate operating freeboard, per MSHA, should be determined and applied to these calculations
- Geotechnical and Stability Recommendations
  - Perform slope stability analyses for Ponds 1, 2, 3 and 4 per AMEC's Draft Report that considers maximum design water levels, phreatic surfaces, critical stages of the facility life and non-circular failure surfaces.
- Monitoring and Instrumentation Recommendations
  - Provide additional instrumentation to monitor slope stability including slope inclinometers, piezometers and gauges to monitor water surface changes.
- Inspection Recommendations
  - Develop an inspection program by a Professional Engineer to be performed annually, with monthly inspections by facility personnel.
- Vegetation Removal
  - Remove trees and brush from interior and exterior embankment slopes, and eliminate animal burrows.

We understand that the last of these recommendations (Vegetation Removal) already has been accomplished by Hoosier Energy. The remaining recommendations will be accomplished following a systematic investigation and evaluation by an independent professional engineer licensed in Indiana as described in the following paragraphs.

ACTION PLAN

Task 1 – Hydrologic and Hydraulic Analysis

The impoundments will be evaluated to measure their respective drainage areas and associated 100-year, 24-hour rainfall and Probable Maximum Precipitation (PMP) events using appropriate antecedent moisture conditions as provided in Chapter 8 of the U.S. Department of Labor, Mine Safety and Health Administration (MSHA) *Coal Mine Impoundment Inspection and Plan Review Handbook* (Number PH07-01, October 2007).

Per AMEC's recommendations, Impoundments 1, 2 and 3 must have appropriate operating freeboards when subjected to the 100-year, 24-hour storm, and Impoundment 4 must have an appropriate operating freeboard when subjected to ½ the PMP storm event.

Current elevations and geometry for embankments, discharge structures, and emergency spillways will be determined and then evaluated in light of the estimated storm conditions to determine what operating freeboards would result. The results of this analysis will be summarized in a written report, together with any recommendations for improvements to the impoundments that may be warranted applying the principles contained in Chapter 8 of the MSHA handbook.

Task 2 – Geotechnical and Stability Analysis

The existing impoundments will be evaluated for slope stability using a combination of existing information and new geotechnical data. The first subtask will be to evaluate existing geotechnical information and to identify data gaps where additional geotechnical or hydrostatic information data are necessary to perform the analysis.

Under the next subtask, standard penetration test (SPT) borings will be performed at locations and to depths necessary to collect information on subsurface conditions, including water levels, material types and density, for stability modeling to be performed. SPT borings will allow for collection of samples for subsequent laboratory testing of representative geotechnical such as moisture content, textural classification, Atterberg Limits and other parameters. If soft soil conditions are encountered, undisturbed tube samples (Shelby tubes) may be obtained for shear strength testing to supplement SPT N-values. Piezometers will be installed in selected borings to augment the existing monitoring points (see Task 3 below).

As the next subtask, a sufficient number of cross sections will be developed using current elevations and geometry for the impoundments and coupled with laboratory testing to select critical cross-sections for stability modeling of impoundments under different conditions (e.g., normal pool elevations, rapid drawdown, and flood conditions). Slope stability analysis will be

performed using standard tools such as PCSTABL, or similar limit-equilibrium methods, to calculate the factors of safety for the current impoundment configurations under the different operating conditions.

Finally, the results of the analysis will be summarized in a written report, together with recommendations for any modifications to the impoundments and/or monitoring and instrumentation systems.

Task 3 – Monitoring, Instrumentation and Inspection Program

Based on the foregoing analyses, the existing monitoring and instrumentation systems for the impoundments will be evaluated to determine if upgrades and/or additional features are needed. At a minimum, this will include changes to the monitoring program to include use of new piezometers installed as a part of Task 2. If the stability analysis under Task 2 results in one or more estimated factors of safety of less than 1.4, then new instrumentation such as inclinometers may be recommended.

The results of this Task will be a written report summarizing recommended improvements to the monitoring and instrumentation systems for the four impoundments. Following implementation of the recommendations, a revised inspection program will be prepared to include review of monitoring data produced by new instrumentation, periodic inspections by facility personnel (i.e., inspections monthly and following storm events), and periodic inspections by a licensed professional engineer (i.e., annually).

SCHEDULE

The three tasks are somewhat interrelated, in the sense that the output of one is an input to the next. The approximate schedule for each task is as follows:

Task 1: Draft report two months after notice-to-proceed, with final report two weeks after receipt of comments on the draft report.

Task 2: Draft report two months after completion of Task 1, with final report two weeks after receipt of comments on the draft report.

Task 3: Draft report one month after completion of Task 2, with final report two weeks after receipt of comments on the draft report.

We appreciate the opportunity to continue providing engineering and environmental services to Hoosier Energy. Please contact either of the undersigned at 703-471-6150, or via email, if you have any questions or comments.

Sincerely,

Robert H. Isenberg, PE, CPG
Vice President
SCS ENGINEERS

Michael W. McLaughlin, PE
Senior Vice President
SCS ENGINEERS

MWM:bpc