UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

January 7, 2011

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Philip Pack
Northern Indian PSC
801 East 68th Avenue
Merrillville, Indiana 46410

Dear Mr. Pack,

On April 26-27, 2010 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the R.M. Schahfer Power Station. The purpose of this visit was to assess the structural stability of the impoundments or other similar management units that contain "wet" handled CCRs. We thank you and your staff for your cooperation during the site visit. Subsequent to the site visit, EPA sent you a copy of the draft report evaluating the structural stability of the units at the R.M. Schahfer Power Station and requested that you submit comments on the factual accuracy of the draft report to EPA. Your comments were considered in the preparation of the final report.

The final report for the R.M. Schahfer Power Station is enclosed. This report includes a specific rating for each CCR management unit and recommendations and actions that our engineering contractors believe should be undertaken to ensure the stability of the CCR impoundment(s) located at the R.M. Schahfer Power Station. These recommendations are listed in Enclosure 2.

Since these recommendations relate to actions which could affect the structural stability of the CCR management units and, therefore, protection of human health and the environment, EPA believes their implementation should receive the highest priority. Therefore, we request that you inform us on how you intend to address each of the recommendations found in the final report. Your response should include specific plans and schedules for implementing each of the recommendations. If you will not implement a recommendation, please explain why. Please provide a response to this request by February 7, 2011. Please send your response to:

Mr. Stephen Hoffman
US Environmental Protection Agency (5304P)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

If you are using overnight of hand delivery mail, please use the following address:

Mr. Stephen Hoffman
US Environmental Protection Agency
Two Potomac Yard
2733 S. Crystal Drive
5th Floor, N-237
Arlington, VA 22202-2733

You may also provide a response by e-mail to hoffman.stephen@epa.gov

You may assert a business confidentiality claim covering all or part of the information requested, in the manner described by 40 C. F. R. Part 2, Subpart B. Information covered by such a claim will be disclosed by EPA only to the extent and only by means of the procedures set forth in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when EPA receives it, the information may be made available to the public by EPA without further notice to you. If you wish EPA to treat any of your response as "confidential" you must so advise EPA when you submit your response.

EPA will be closely monitoring your progress in implementing the recommendations from these reports and could decide to take additional action if the circumstances warrant.

You should be aware that EPA will be posting the report for this facility on the Agency website shortly.

Given that the site visit related solely to structural stability of the management units, this report and its conclusions in no way relate to compliance with RCRA, CWA, or any other environmental law and are not intended to convey any position related to statutory or regulatory compliance.

Please be advised that providing false, fictitious, or fraudulent statements of representation may subject you to criminal penalties under 18 U.S.C. § 1001.

If you have any questions concerning this matter, please contact Mr. Hoffman in the Office of Resource Conservation and Recovery at (703) 308-8413. Thank you for your continued ongoing efforts to ensure protection of human health and the environment.

Sincerely,
/Suzanne Rudzinski/, Director
Office of Resource Conservation and Recovery

Enclosures

4.3 Maintaining and Controlling Vegetation Growth

Large trees and/or uncontrolled vegetation have established themselves along the exterior slopes of the Final Settling Basin, Intake Settling Basin, Retired Waste Disposal Basin, Metal Cleaning Waste Basin, Recycle Basin, and Waste Disposal Area and along the interior slopes of the FGD Landfill Runoff Pond, Material Storage Runoff Basin. Tree roots can concentrate seepage through the embankments, which could lead to internal erosion. Internal erosion would weaken the embankment, reduce stability, and could result in a slope failure and potential release of stored water and ash. In addition, uprooting of trees during storms or other adverse conditions can create voids in the embankment that are then susceptible to erosion. Brush also obscures the embankment surface limiting visual observations, provides a haven for burrowing animals, and retards growth of desirable grass vegetation.

CDM recommends that all trees and brush be cleared from the interior and exterior slopes of all ash pond embankments under the supervision of a Professional Engineer in accordance with the procedures outlined in "FEMA 534 Technical Manual for Dam Owners – Impacts of Plants on Earthen Dams".

CDM further recommends that stumps and all roots greater than 1 inch in diameter be removed. Disturbed areas should then be graded to adjacent contours, using compacted structural fill and reseeded with desirable grass vegetation. CDM also recommends that vegetation be cut on a regular basis to ensure that adequate visual observations can be made during scheduled inspections.

Areas of sparse vegetation were observed on the exterior slopes of the Final Settling Basin, Material Storage Runoff Basin, Metal Cleaning Basin and the Recycle Settling Basin.

CDM recommends performing reseeding maintenance as required yearly to maintain a good grass cover in these areas.

4.4 Erosion Protection and Repair

Erosion rills, surfical slope failures and subsequent loss of grass cover were observed on multiple embankment slopes as discussed in Section 2.

CDM recommends NIPSCO take the following corrective actions:

-Surfical slides/scarps - Excavate un-compacted and eroded materials and organics (grass, brush, other vegetation) in the slide area to neat lines at the slide limits down to competent undisturbed materials. Place and compact structural fill to restore the embankment slope, grading to adjacent existing contours. The area should be reseeded with desirable grass vegetation.

-Erosion rills - Place and compact structural fill in the rills and grade to adjacent existing contours. Where rills exists on slopes exceeding 25 feet in length, install temporary erosion resistant matting or sod after regrading. If sod is not installed, the area should be reseeded with desirable grass vegetation.

All repairs should be designed by a professional engineer familiar with earthen dam construction.

4.5 Seepage

Areas of possible seepage and and seepage were observed on embankment slopes of the Final Settling Basin, Intake Settling Basin, and Gypsum Storage (Units 14&15) A, as discussed in Section 2. Regular monitoring is essential to detect and monitor seepage and to reduce the potential for failure. Without knowledge of the dam's history, the owner may not be able to determine whether the seepage condition is in a steady or changing state.

CDM recommends NIPSCO take the following actions:

- Install v-notch weir(s) to facilitate quantifiable seepage volume and flow rate measurements and sample collection.
-Develop a regular surveillance program to monitor areas of seepage and potential seepage to determine the rate, volume, and turbidity of flow emerging from the embankment slopes.
-Develop and execute a geotechnical exploration program that includes test borings and installation of piezometers and other instrumentation to analyze and regularly monitor embankment seepage and stability.

All repairs should be designed by a professional engineer familiar with earthen dam construction.

4.6 Animal Control

Evidence of rodent burrows was observed on the south and southwest embankment exterior slope of the Final Settling Basin, the south embankment exterior slope of Intake Settling Basin, and the west embankment exterior slope of the Gypsum Storage Area (Units 14&15) A. Although not observed on other embankments, vegetation cover may have hidden additional rodent burrows.

CDM recommends NIPSCO accurately document burrows and other areas disturbed by animal activity, remove the burrowing animals, and backfill the burrows with compacted structural fill to protect the integrity of the embankments.

4.7 Instrumentation

NIPSCO provided CDM the most recent 12 months of pond level readings for the Final Settling Basin, Intake Settling Basin, and Recycle Settling Pond. No information regarding further instrumentation was available to CDM.

An earth embankment that is safe under current conditions may not be safe in the future if conditions change. Conditions that may change include changes in the phreatic surface, embankment deformation, or changes in seepage patterns.

CDM recommends the installation of staff gauges to all outlet structures to monitor the water levels in all active impoundments and routinely monitoring water levels installed as recommended in Section 4.5 of this report.

4.8 Impoundment Hydraulic and Stability Analysis

NIPSCO was not able to provide CDM with a hydraulic analysis showing the ability of the ash ponds to safely pass the 50% or 100% PMP event. However, a preliminary evaluation performed by CDM suggests there is enough storage capacity at the current operating pool levels to safely store precipitation.

CDM recommends NIPSCO perform a complete study to confirm this opinion and update the study if operating parameters of the ponds change in the future.

CDM was not provided with information regarding stability analyses performed prior to or following construction of the R.M. Schahfer Generating Station's CCW surface impoundments or information regarding properties of the embankment and foundation materials.

It is recommended that detailed stability analyses be performed for these embankments utilizing the results of the subsurface program noted Section 4.5 above. The geotechnical investigation should also evaluate the existing soil conditions and engineering characteristics in the embankments and their supporting foundation soils. Stability analyses should consider all appropriate operating and loading conditions including rapid drawdown if applicable, and a seismic stability and liquefaction analysis of the upstream and downstream embankment slopes and foundation.

4.9 Retired Waste Disposal Basin Closure

The Retired Waste Disposal Basin has been back-filled and is inactive. Although it has been back-filled, an undetermined volume of water is likely still held within the embankments as evidenced by the seepage observed on the west embankment of Retired Waste Disposal Basin.

If NIPSCO does not plan to re-activate these impoundments, then CDM recommends that NIPSCO cap and decommission the Retired Waste Disposal Basin impoundment in a manner consistent with Indiana and USEPA regulations. Closure should include a geotechnical evaluation of the long term stability of the embankments. The evaluation should include test borings and piezometers to characterize subsurface conditions for use in the stability analysis.

4.10 Inspection Recommendations

Based on the information reviewed by CDM it appears that NIPSCO is currently performing periodic informal inspections, however they are not fully documented.

CDM recommends that NIPSCO develop detailed inspection documentation procedures to aid in ensuring that they are adequately documenting observations over time. Documentation should include a sketch of relevant features observed, and the documentation should be periodically reviewed to identify if conditions are worsening and/or if significant changes are occurring that could lead to additional maintenance issues or safety concerns.

Inspections should be made following heavy rainfall and/or severe weather and should be documented. It is recommended that inspection records be retained at the facility for a minimum of three years.

4.11 Emergency Action Plan

NIPSCO does not have an Emergency Action Plan (EAP) for the Final Settling Basin and Intake Settling Basin, judged by CDM to be High Hazard structures.

CDM recommends that NIPSCO develop an EAP for the Final Settling Basin and Intake Settling Basin.