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

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

NOV 13 2009

Alan R. Wood, PE
Manager
Water & Ecological Resource Services Section
Environmental Services Division
American Electric Power
1 Riverside Plaza
Columbus, OH 43215-2373

Re: Request for Information Pursuant to Section 308 of the Clean Water Act (33 U.S.C. § 1318)

Dear Mr. Wood:

Enclosed is an Information Request issued pursuant to Section 308(a) of the Clean Water Act, 33 U.S.C. § 1318(a). Section 308 of the Clean Water Act authorizes the Administrator of the United States Environmental Protection Agency ("EPA") to require those subject to the Act to furnish information, conduct monitoring, provide entry to the Administrator or authorized representatives, and make reports as may be necessary to carry out the objectives of the Act. This authority has been re-delegated to the undersigned Director of the Water Enforcement Division in the Office of Enforcement and Compliance Assurance. The enclosures, which are hereby made part of this letter, provide details of the information the American Electric Power ("AEP") Philip Sporn Generating Plant ("Facility") must provide to EPA and contain instructions on how this information is to be submitted to EPA.

Section 308(a) of the Clean Water Act, 33 U.S.C. § 1318(a) authorizes EPA to require any person to provide information required to carry out the objectives of the Clean Water Act. Accordingly, you are requested to respond to the enclosed Information Request (Enclosure 1). Please read the instructions in the enclosure carefully before preparing your response. Answer each request as clearly and completely as possible. To the extent that AEP has any of the requested data currently on file, that data may be submitted in the requested format as part of your response. Your response to this request must be accompanied by a certificate that is signed and dated by you or the person who is authorized by you to respond to the request. The certification must state that the response is complete and contains all information and documentation available to you pursuant to the request. A Statement of Certification is enclosed with this letter (Enclosure 2).

Please submit your written responses in accordance with the deadlines set forth in the request to:

Ginny Phillips
U.S. Environmental Protection Agency
Water Enforcement Division
1200 Pennsylvania Avenue, NW
Mail Code 2243A; Room 4118A
Washington, DC 20460
(For deliveries by courier use the Zip Code 20004)

You are entitled to assert a business confidentiality claim pursuant to the regulations set forth in 40 C.F.R. Part 2, Subpart B. If EPA determines the information you have designated meets the criteria in 40 C.F.R. § 2.208, the information will be disclosed only to the extent and by means of the procedures specified in Subpart B. Unless a confidentiality claim is asserted at the time the requested information is submitted, EPA may make the information available to the public without further notice to you.

Compliance with the provisions of this Information Request is mandatory. If you do not respond fully and truthfully to this Information Request or adequately justify your failure to do so, you may be subject to civil penalties or criminal fines under Section 309 of the Clean Water Act, 33 U.S.C. § 1319.

We appreciate your cooperation and prompt attention to this matter. Please contact Ginny Phillips of my staff at 202-564-6139 (phillips.ginny@epa.gov) within 72 hours of receipt this Information Request to inform us of your intention to comply with this request. If you or your staff would like an opportunity to confer, have any questions, or would like to schedule a meeting relating to this Information Request, please contact Ginny Phillips. Thank you for your cooperation in this matter.

Sincerely,

Mark Pollins, Director
Water Enforcement Division

Enclosures

cc: Michael Zeto, West Virginia Department of Environmental Protection
Brian Long, West Virginia Department of Environmental Protection
Rick Rogers, EPA Region 3

Enclosure 1

INFORMATION REQUEST

I. STATUTORY AUTHORITY

1. This information is requested pursuant to Section 308 of the Clean Water Act, 33 U.S.C. § 1318.

II. INSTRUCTIONS

1. Respond to Each Request Completely. Provide a separate report for each of the three reports requested. Within each report, indicate the subpart of the request being addressed.

2. Provide the Best Information Available. If any request or subpart of the request cannot be responded to in full, respond to the extent possible along with an explanation of why the request cannot be responded to in full.

3. Source(s) of Response. Include with each report, the name, position, and title of each person(s) who participated in developing the report.

4. Source(s) of Data. Any existing field and laboratory data relied upon by you to develop the reports required by this Information Request must be identified in the report and include an explanation of how the data are representative of the conditions at the site.

5. Indicate Objections to Requests. While you may indicate that you object to certain requests contained in this Information Request, you must provide responsive information notwithstanding those objections. To object without providing responsive information may subject you to the penalties discussed in the cover letter.

6. Claims of Privilege. If you claim that an entire document submitted in response to this Information Request is privileged communication, identify the document and provide the basis for the privilege. If you claim that any particular section of a document is privileged communication, identify that section and provide the basis for the privilege. Regardless of the assertion of a privilege, you must respond to the Information Request in full.

7. New Information. If you become aware of any information not previously known or not available to you as of the date of submission of your response to this Information Request, you must supplement your response to EPA within five (5) business days. Moreover, should you find, at any time after the submission of your response, that any portion of the submitted information is false or misrepresents the truth, you must notify EPA of this fact immediately and provide a corrected response within two (2) business days.

8. Submission of Response by U.S. Mail. Submit a paper copy and an electronic .pdf file on CD of your response to:

Ginny Phillips
U.S. Environmental Protection Agency
Water Enforcement Division
1200 Pennsylvania Avenue, NW
Mail Code 2243A; Rm. 4118A
Washington, DC 20460
202-564-6139
(For deliveries by courier use the Zip Code 20004)

9. Submission of Response by E-mail. Submit an electronic .pdf file of your response to phillips.ginny@epa.gov.

10. Retention of Records. All records and documents that were created and/or relied upon in responding to any part of this request must be maintained until EPA informs you that maintenance is no longer required.

11. Inclusion of Statement of Certification. The Statement of Certification found in Enclosure 2 must be submitted along with each submission made pursuant to this Information Request. This statement must be signed by you or a person authorized by you to respond to the Information Request.

III. DEFINITIONS

Unless otherwise defined herein, terms used in this request shall have the meaning given to those terms in the Act, 33 U.S.C. § 1251 et seq., the regulations promulgated thereunder at 40 CFR § 122, and in AEP's NPDES Permit, No. WV0001058.

1. The terms "and" and "or" shall be construed either disjunctively or conjunctively as necessary to bring within the scope of this Information Request any information which might otherwise be construed to be outside its scope.

2. The term "any," as in "any documents," for example, shall mean "any and all."

3. The term "describe" means to detail, depict, or give an account of the requested information, or to report the content of any oral and/or written correspondence, communication, or conversation, or to report the contents of any document, including the title, the author, the position or title of the author, the addressee, the position or title of the addressee, indicated or blind copies, date, subject matter, number of pages, attachment or appendices, and all persons to whom the document was distributed, shown, or explained.

4. "State" shall mean the State of West Virginia.

5. "Person" means an individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a State, or an interstate body.

6. "Facility" is defined as:

   AEP Philip Sporn, State Route 62, New Haven, WV 25265

7. "Permit" is defined as AEP Philip Sporn, National Pollutant Discharge Elimination System Permit Number WV0001058. Expiration Date: June 30, 2013.

IV. SUPPLEMENTAL REPORTS TO BE SUBMITTED

AEP shall develop supplemental reports for the requests below to ensure that the coal combustion waste impoundments at the Facility are structurally sound and will continue in safe and reliable operation. AEP shall develop and submit a supplemental report for the following requests in accordance with this section:

1. Site-specific study of the potential for liquefaction of foundation ash under design earthquake loading conditions for the raised eastern dike at the Fly Ash Pond;
2. Site-specific assessment of the effect of railway-induced ground vibrations on the embankments at both the Fly Ash Pond and the Bottom Ash Pond; and
3. Analysis of slope stability under design earthquake loading conditions for the upper sections of the eastern dike of the Fly Ash Pond.

1. Report on Earthquake-Induced Liquefaction for Eastern Dike of Fly Ash Pond: Within ninety (90) days of receipt of this request, AEP shall perform a study and submit an engineering report to EPA addressing the potential for earthquake-induced liquefaction of sluiced ash deposits upon which the raised eastern dike of the Fly Ash Pond was constructed at the Facility. The study shall be based on the specific site characteristics, subsurface conditions, material properties and parameters existing at the raised Fly Ash Pond dike, as determined by field exploration and laboratory tests. Existing field and laboratory data may be used to the extent that the data are representative of the conditions at the ash pond dike. Additional test borings and laboratory tests shall be performed if needed to adequately and accurately characterize the subsurface profiles and evaluate the densities, strengths, moisture contents, classification and index properties of the soil and ash layers that comprise the subsurface profiles. The Experimental Investigation approach used in The Ohio State University Research Project # 60005876 reported in "*Draft Final Report of Evaluation of Liquefaction Potential of Impounded Fly Ash*," dated October 17, 2005 and adapted from The Indian Institute of Technology (Madras, India) "*Liquefaction Analysis of Pond Ash*" contained in the Proceedings of the 15th International Conference on Solid Waste Technology & Management held on December 12-15, 1999 in Philadelphia, Pennsylvania, may be used in this study to evaluate the liquefaction potential of foundation ash supporting the raised dike of the Fly Ash

Pond at the Facility. However, the cyclic triaxial testing shall be on representative samples of Philip Sporn fly ash remolded to relative densities that bracket the in-situ relative densities of the fly ash. Alternatively, semi-empirical procedures may be used to evaluate liquefaction potential of the foundation ash, such as those presented in the paper "*Semi-Empirical Procedures for Evaluating Liquefaction Potential During Earthquakes*," by I. M. Idriss and R.W. Boulanger, Proceedings of The Joint11th International Conference on Soil Dynamics & Earthquake Engineering (ICSDEE) & 3rd International Conference on Earthquake Geotechnical Engineering (ICEGE) (pp. 32-56), January 7-9, 2004. The design earthquake ground acceleration shall be at least 0.06g. At a minimum, the report shall include the following:

(a) description of background information and approach of the study;
(b) description of the methodology and procedures used in the analysis;
(c) description of any additional field testing performed and the results obtained;
(d) description of any additional laboratory testing performed and the results obtained;
(e) description of the site(s) including site map(s) depicting planimetric and topographic features and the location of critical section(s) selected for analysis;
(f) description of the subsurface conditions at the critical sections and illustration of the analysis profiles;
(g) discussion of the design soil and ash properties and parameters and the basis of selection of these values or the source of the values;
(h) presentation of analysis results, including appropriate charts and graphs illustrating the results, and discussion of the results;
(i) conclusions regarding liquefaction potential under design earthquake loading conditions at the Philip Sporn Fly Ash Pond dike;
(j) recommendations for remedial action to eliminate or minimize liquefaction potential should the foundation ash be found susceptible to liquefaction under design earthquake loading;
(k) list of references;
(l) tables as needed to facilitate presentation of data;
(m) figures as needed for illustration purposes;
(n) an appendix containing summary descriptions of field and laboratory test procedures that may be used to develop additional soil and ash data as needed for the study;
(o) an appendix containing all test boring logs and other field data considered in the study, including existing data and additional data that may be obtained to fully characterize the analysis profiles;
(p) an appendix containing all laboratory test data considered in the study, including existing data and additional data developed for the study;
(q) an appendix containing calculations, including analysis calculations, *e.g.*, program SHAKE runs, and calculations for calculated values used in the analysis, *e.g.*, calculation of shear modulus values (G_{max}); and

(r) certification of the study and report by a professional engineer registered in the state of West Virginia.

2. Report on Railway-Induced Ground Vibration for Fly Ash Pond Dike and Bottom Ash Pond Dike: Within ninety (90) days of receipt of this request, AEP shall perform assessment and submit a report to EPA addressing the effect of railway-induced ground vibrations on the slope stability at the Fly Ash Pond dike and the Bottom Ash Pond dike located at the Facility. In addition, the study shall evaluate the potential for liquefaction of foundation ash under the raised eastern dike of the Fly Ash Pond due to railway-induced ground vibrations. The study shall be based on the specific site characteristics, railway loading conditions, subsurface conditions, material properties and parameters existing at the Fly Ash Pond dike and at the Bottom Ash Pond dike, as determined by field measurement, field exploration and laboratory tests. Existing field and laboratory data may be used to the extent that the data are representative of the conditions at the ash pond dikes. The study shall also examine the cause of apparently shallow sloughing of the dike slopes and determine whether the root cause of the sloughing is railway-induced ground vibration or some other cause, such as saturation of the thick topsoil layer on the relatively steep slopes and consequential loss of its nominal cohesive strength, leading to failure due to insufficient frictional shearing resistance, or a combination of causes. In light of the results of this examination, the study shall review plans for repairs of the sloughing and determine whether modifications to the plans ought to be made to ensure long-term success of the repair. At a minimum, the report shall include the following:

(a) a description of the site including a site map depicting the location of the railway superstructure, embankments and other planimetric and topographic features;
(b) description, procedures and summary of field measurements of railway-induced ground vibrations generated by loaded railway traffic under dynamic conditions at various speeds and stopping conditions;
(c) description, procedures and summary of field exploration and laboratory tests of in-situ subsurface conditions, including, but not limited to:
    (i) soil test & instrumentation location map;
    (ii) cross-sectional geometry of embankment sections depicting phreatic surface; and
    (iii) soil test boring logs and laboratory analyses of soil testing.
(d) description, procedures and summary of slope stability analysis including, but not limited to:
    (i) soil strength parameters modeled and basis of values used;
    (ii) loading conditions modeled from measured railway-induced ground vibrations generated by railway traffic;
    (iii) factors of safety against shallow slope failures and global slope instability.
(e) evaluation of the potential liquefaction of fly ash under the raised eastern dike of the Fly Ash Pond from instantaneous, as well as long term exposure, to railway induced ground vibrations from the west side of the Fly Ash Pond;

(f) evaluation of the potential liquefaction of fly ash under the raised eastern dike of the Fly Ash Pond from train collision and derailment on the west side of the Fly Ash Pond;

(g) determination of the root cause of apparently shallow sloughing of the dike slopes;

(h) evaluation of the plans for sloughing repairs in consideration of the determination of the root cause and description of potential changes, if any, that may need to be made to the plans to ensure long-term success of the repair;

(i) conclusions regarding railway vibrations and their effect on slope stability and liquefaction potential at the Philip Sporn Fly Ash Pond dikes and on slope stability at the Bottom Ash Pond dike;

(j) conclusions regarding train wreck and its effect on liquefaction potential at the raised eastern dike of the Philip Sporn Fly Ash Pond;

(k) recommendations for remedial action to enhance slope stability to acceptable safety margins and/or eliminate or minimize liquefaction potential, as may be required, depending on the results of the assessment;

(l) list of references;

(m) tables as needed to facilitate presentation of data;

(n) figures as needed for illustration purposes;

(o) an appendix containing summary descriptions of field and laboratory test procedures that may be used to develop vibration data and additional soil and ash data as needed for the assessment;

(p) an appendix containing the vibration monitoring data and all test boring logs and other field data considered in the study, including existing data and additional data that may be obtained;

(q) an appendix containing all laboratory test data considered in the assessment, including existing data and additional data developed for the assessment;

(r) an appendix containing all calculations, including slope stability analyses and liquefaction analyses; and

(s) certification of the assessment and report by a professional engineer registered in the state of West Virginia.

3. Report on Analysis of Seismic Slope Stability of Fly Ash Pond Eastern Dike Upper Section: Within ninety (90) days of receipt of this request, AEP shall submit a report to EPA of the "Seismic Slope Stability Analysis" to characterize the seismic stability of the Upper Section of the Fly Ash Pond eastern dike, which was constructed over sluiced fly ash deposits, at the Facility. The analysis shall be based on the specific site characteristics, subsurface conditions, material properties and parameters existing at the raised Fly Ash Pond dike, as determined by field exploration and laboratory tests. The analysis shall be based on a design earthquake ground acceleration of at least 0.06g. Pseudo-static design methodologies may be used. Existing field and laboratory data may be used to the extent that the data are representative of the conditions at the ash pond dike. A report of the analysis shall be prepared and at a minimum the report shall include:

(a) a description of the geotechnical properties used for each soil and ash layer used in the analysis including total and effective shear strength parameters;
(b) a description of the data collection and modeling methodologies utilized by AEP in the evaluation of seismic slope stability;
(c) an analysis of embankment internal stresses, including static pore pressures under expected seepage conditions;
(d) an analysis of embankment internal stresses, including static pore pressures during normal and maximum waste placement conditions;
(e) analyses of embankment stability shall consider both slope and base sliding conditions;
(f) analyses of slope stability shall include evaluation of critical full height and partial height potential failure planes;
(g) computed minimum safety factors during the design earthquake event for both slope and base sliding conditions;
(h) conclusions regarding seismic slope stability under design earthquake loading conditions of upper section of the Fly Ash Pond eastern dike at the Facility;
(i) recommendations for remedial action to enhance seismic stability of the upper section of the Fly Ash Pond eastern dike to acceptable safety margins, as may be required, depending on the results of the assessment;
(j) list of references;
(k) tables as needed to facilitate presentation of data;
(l) figures as needed for illustration purposes;
(m) an appendix containing summary descriptions of field and laboratory test procedures that may be used to develop additional soil and ash data as needed for the analysis;
(n) an appendix containing all test boring logs and other field data considered in the analysis, including existing data and additional data that may be obtained;
(o) an appendix containing all laboratory test data considered in the analysis, including existing data and additional data developed for the analysis;
(p) an appendix containing all stability analysis calculations; and
(q) certification of the analysis by a professional engineer registered in the state of West Virginia.

Enclosure 2

STATEMENT OF CERTIFICATION

I certify that the information contained in or accompanying this submission is true, accurate, and complete.

As to the identified portion(s) of this submission for which I cannot personally verify its truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting under my direct instructions, made the verification, that this information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

By _____
(Signature)

_____
(Title)

_____
(Date)