Comments:

EPA: None

State: None

Company: See letter attached dated January 18, 2011

CORPORATE EHS SERVICES

Duke Energy Corporation
526 South Church St.
Charlotte, NC 28202

Mailing Address:
EC13K/PO Box 1006
Charlotte, NC 28201-1006

Via E-Mail and Overnight Courier

January 18, 2011

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

Re: Draft Dam Safety Assessment Report
Cayuga Generating Station
3300 North State Road 63
Cayuga, Indiana 47928

Dear Mr. Hoffman:

Duke Energy Indiana, Inc. received and has reviewed the draft report for Cayuga Generating Station that resulted from the site assessment of Lined Ash Disposal Pond, Ash Disposal Area #1, Primary Settling Basin, and Secondary Ash Settling Basin, conducted by the United States Environmental Protection Agency (EPA) and its engineering contractors on August 10, 2010. Duke Energy supports the EPA's objective to ensure ash basin dam safety and remains committed to the safe operation and maintenance of coal ash basins.

Duke Energy remains committed to meeting all state and federal requirements and managing its coal combustion byproducts impoundments in a safe and responsible manner. Based on ongoing monitoring, maintenance and inspections, Duke Energy is confident that the ash ponds have the structural integrity necessary to protect the public and the environment.

After reviewing the draft "Dam Safety Assessment of CCW Impoundments" report for Cayuga Generating Station, Duke Energy offers the following comments:

Section 2.2 Impoundment Dams and Reservoirs

In the second and third sentences of the second paragraph the following statement is made, "A perimeter dike was constructed to encompass the Original Ash Pond. The Secondary Ash Settling Basin is bounded on the west side by the perimeter dike and on the remaining sides by a separate dike."

The western side of the Original Ash Pond and Secondary Ash Settling Basin are at the same elevation as surrounding ground to the west, without a constructed perimeter dike. There is a ditch, excavated in 2004, that borders the western side of the Primary Ash Pond, but the area between the ditch and Primary Ash Pond is not a constructed dike. Similarly, part of the eastern side of the Ash Disposal Area #1 is bordered by a natural bluff and not a constructed dike.

Section 3.0 Summary of Construction History and Operation

The final sentence of the first paragraph states that, "The second unit was online by 1971." The year should be changed to 1972.

Summary of Construction History and Operation

The report states in the third, fourth, and final paragraphs of section 3.0 that the divider dike creating the Primary Ash Settling Basin may have been constructed on CCW material. After the inspection was complete a soil boring was completed through the divider dike that created the Primary Ash Settling Basin by dividing out part of the Original Ash Pond. No CCW material was present in the boring, which was advanced to bedrock. A copy of the boring log is attached to this letter.

Section 10.1.5 Adequacy of Instrumentation and Monitoring Instrumentation

The report states, "Instrumentation and monitoring programs are considered inadequate for the current facility operations....No piezometers or settlement monuments are installed at any of the ash pond or settling basin dams."

Duke believes that the installation of piezometers in the dikes should be based on additional stability analysis. Piezometers will be installed as deemed appropriate.

Section 11.1 Corrective Measures and Analyses for the Structures

Items number 4 and 5 state that piezometers should be installed in the dikes to monitor the phreatic surface of the embankment.

Duke believes that the installation of piezometers in the dikes should be based on additional stability analysis. Piezometers will be installed as deemed appropriate.

11.5 Acknowledgement of Assessment

The management units were rated to be in "poor" condition. Definitions provided in the report for "poor" and "fair" condition are listed below.

> Fair: Acceptable performance is expected under all required loading conditions (static, hydrologic, seismic) in accordance with the applicable safety regulatory criteria. Minor deficiencies may exist that require remedial action and/or secondary studies or investigations.
> Poor: A management unit safety deficiency is recognized for any required loading conditions (static, hydrologic, seismic) in accordance with the

applicable dam safety regulatory criteria. Remedial action is necessary. Poor also applies when further critical studies or investigations are needed to identify any potential dam safety deficiencies.

No loading condition safety deficiencies were identified in the draft report. Based on the definitions above and the dam safety deficiencies noted in the draft report, only "minor deficiencies" rather than "critical deficiencies" exist. Indeed, the facts outlined in the report are insufficient to support a "poor" rating. Rather, a rating of "fair" condition is warranted for the Cayuga Station management units.

Appendix A- Inspection Checklists

The forms list the Indiana Department of Environmental Management as the state agency regulating the impoundments. This should be changed to the Indiana Department of Natural Resources.

If you have any questions regarding these comments or need additional information, please contact me at 980-373-3719.

Sincerely,

D. Edwin M. Sullivan

D. Edwin M. Sullivan, PE
Corporate EHS Services

Attachment

Soil Boring Log AT-6

ATC ASSOCIATES INC.
7988 Centerpoint Drive, Suite 100
Indianapolis, IN 46256
(317) 849-4990
Fax (317) 849-4278

TEST BORING LOG

CLIENT	Duke Energy	BORING #	AT-6
PROJECT NAME	Cayuga Generating Station	Northing	14494827.9
PROJECT LOCATION	Cayuga, Indiana	Easting	1523107.6
		JOB #	86.15230.0122

DRILLING and SAMPLING INFORMATION

Date Started	8/11/10	Hammer Wt.	140 lbs.
Date Completed	8/11/10	Hammer Drop	30 in.
Drill Foreman	C. Carroll	Spoon Sampler OD	2.0 in.
Inspector	J. Noel	Rock Core Dia.	-- in.
Boring Method	HSA	Shelby Tube OD	-- in.

SURFACE ELEVATION 527.78

SOIL CLASSIFICATION	Stratum Elevation, ft	Stratum Depth, ft	Depth Scale, ft	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Groundwater	Standard Penetration Test, Blows per 6 in. Increments	Remarks
SILTY SANDY CLAY, dark brown (10YR 4/4, broken, dry), non-plastic, non-sticky, slightly effervescent, with rocks and pebbles				1	SS			10-10-7-8	Note: Northing and Easting are UTM NAD 27 coordinates.
				2	SS			8-6-8-8	
			5	3	SS			7-10-6-3	
	520.4	7.4		4	SS			5-9-7-11	
CLAYEY SAND, dark brown (10YR 4/6, broken, moist), medium to coarse, non-plastic, non-sticky, non-effervescent -coarse to very coarse, effervescent, with rocks from 8.0 ft to 12.0 ft -fine to very coarse, poorly sorted, with rocks below 12.0 ft				5	SS			16-37-40-32	
			10	6	SS			9-18-19-33	Wet sand seam at 11 ft
				7	SS			26-30-29-26	
			15	8	SS			7-30-33-42	Pushed rock after 0.8 ft on Sample 8
				9	SS			16-20-22-24	
				10	SS		●	8-16-15-20	
			20	11	SS			43-50/0.5'	Poor recovery from 20-22 ft - pushed rock
				12	SS			15-11-9-7	
	503.8	24.0							
SAND and GRAVEL, dark brown (10YR 4/6, broken, wet), very fine to very coarse, non-plastic, non-sticky, effervescent, poorly sorted -light brown (10YR 6/2) below 28.0 ft			25	13	SS			8-9-10-12	
				14	SS			9-7-8-10	
				15	SS			5-7-6-5	Clayey sand seam from 27.7-28 ft
			30	16	SS			2-2-2-2	
				17	SS			4-2-3-2	
			35	18	SS			3-3-2-3	
				19	SS			2-3-2-4	
				20	SS			2-2-4-2	

Sample Type
- SS - Driven Split Spoon
- ST - Pressed Shelby Tube
- CA - Continuous Flight Auger
- RC - Rock Core
- CU - Cuttings
- CT - Continuous Tube

Depth to Groundwater
- ● Noted on Drilling Tools 19.5 ft.
- ▽ At Completion ____ ft.
- ▼ After ____ hours ____ ft.
- ⊠ Cave Depth ____ ft.

Boring Method
- HSA - Hollow Stem Augers
- CFA - Continuous Flight Augers
- DC - Driving Casing
- MD - Mud Drilling
- HA - Hand Auger

ATC ASSOCIATES INC.
7988 Centerpoint Drive, Suite 100
Indianapolis, IN 46256
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TEST BORING LOG

CLIENT: Duke Energy
PROJECT NAME: Cayuga Generating Station
PROJECT LOCATION: Cayuga, Indiana

BORING #: AT-6
Northing: 14494827.9
Easting: 1523107.6
JOB #: 86.15230.0122

DRILLING and SAMPLING INFORMATION

Date Started	8/11/10	Hammer Wt.	140	lbs.
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Drill Foreman	C. Carroll	Spoon Sampler OD	2.0	in.
Inspector	J. Noel	Rock Core Dia.	--	in.
Boring Method	HSA	Shelby Tube OD	--	in.

TEST DATA

SOIL CLASSIFICATION (continued)	Stratum Elevation, ft	Stratum Depth, ft	Depth Scale, ft	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Groundwater	Standard Penetration Test, Blows per 6 in. Increments	Remarks
SAND and GRAVEL, dark brown (10YR 4/6, broken, wet), very fine to very coarse, non-plastic, non-sticky, effervescent, poorly sorted	484.8	43.0		21	SS			4-3-3-3	
CLAY, black (smooth, moist), plastic, sticky, effervescent			45	23	SS			6-1-1-2	
				24	SS			2-2-2-3	
				25	SS			2-6-7-6	
	477.8	50.0	50						Black clay, gravel and sand below 49 ft
CLAYEY SAND and GRAVEL, gray (2YR 5/1, broken, wet), non-plastic, non-sticky, effervescent	476.4	51.4		26	SS			10-8-11-11	
				27&28	SS			4-8-12-14	
SAND and GRAVEL, brown (10YR 5/6, broken, wet), non-plastic, non-sticky, effervescent			55	29	SS			12-13-12-11	
	471.5	56.3							
SHALE, gray (5YR 7/1, dry), non-plastic, non-sticky, non-effervescent	470.6	57.2		30	SS			8-10-10-19	Weathered shale bedrock at 56.3 ft
				31	SS			10-29-50/0.2'	
Bottom of Test Boring at 57.2 ft									

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Depth to Groundwater
Noted on Drilling Tools 19.5 ft.
At Completion ____ ft.
After ____ hours ____ ft.
Cave Depth ____ ft.

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling
HA - Hand Auger