

US EPA ARCHIVE DOCUMENT

Indianapolis Power & Light – Petersburg Generating Station Comments

EPA: None

State: None

Company: See attached letter dated August 16, 2010



August 16, 2010

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

**Re: June 4, 2010, Draft Report of Assessment of  
Dam Safety of Coal Combustion Surface Impoundments  
Indianapolis Power & Light Company  
Petersburg Generating Station**

Dear Mr. Hoffman:

On behalf of Indianapolis Power & Light Company (“IPL”), this letter provides comments on the above-referenced draft report. The draft report contains very detailed information and IPL has reviewed the report to the extent possible within the 44 days allotted, but reserves its rights to submit further comments if new information arises. IPL appreciates the opportunity to provide comments on this draft report.<sup>1</sup> IPL provides the following comments:

1. IPL objects to the characterization of Ponds A, A-discharge, B, and C as “POOR” on the basis that there is a “lack of documentation relative to the design and construction of these facilities.” A lack of documentation does not provide any basis to designate a pond’s condition. Such a determination should be made based on the observations of the ponds and not based on the existence or lack of existence of design criteria/documentation. EPA is arbitrarily assessing a “POOR” rating without regard to the actual condition of the dikes simply because documentation was not complete. As noted, lack of documentation does not logically suggest poor dike condition. The definition of “POOR” provided by EPA is not clear in regards to what is considered an acceptable amount of documentation needed to render a rating better than “POOR” and is very subjective. EPA contractors have inconsistently determined what is considered an acceptable amount of documentation. Other utilities inspected by EPA lacked documentation but were rated as fair even though the EPA contractor recommended studies similar to what is recommended for Petersburg (e.g., Duke Energy – Miami Fort Generating Station; Big Sandy Electric Corp. – Coleman Generating Station; AEP – Big Sandy Generating Station; and AEP – Coneville

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<sup>1</sup> IPL intends to undertake EPA’s recommendations. However, nothing in this letter is intended to be a waiver of any legal arguments IPL may have and/or an admission of any liability whatsoever.

IDNR dam guidelines. Per the IDNR classification system, these ponds would be rated as "Fair" (see attached).

2. Regarding the draft report' "recommendations," IPL has the following comments:

a. IPL performs routine internal inspections of its ponds and employs an outside qualified professional (BT SQUARED) to perform independent inspections twice a year. Some of the comments provided in the draft report conflict with the recommendations of IPL's outside consultant. For example, BT SQUARED has opined to limit cutting to prevent rutting caused by mowers. IPL agrees to continue to mow the exterior slopes of the ash ponds prior to the semi-annual inspections. IPL believes that reasonable engineers can differ and intends to continue to follow BT SQUARED's recommendations on issues such as this.

b. Regarding the recommendation for addressing tractor ruts on embankment slopes of Pond B and Pond C, IPL will address such issues as part of its ongoing inspection and maintenance program.

c. Regarding the recommendation to complete a hydraulic study to confirm the conclusion that there is enough storage capacity at the current operating pool levels to safely store precipitation from rainfall events, IPL agrees to perform this analysis. The details associated with such analysis will be specified in a scope of work ("SOW") to be submitted to EPA for review within 45 days of receipt of the final EPA dam assessment report. IPL will complete work as detailed in the SOW, within 12 months of receipt of final EPA approved SOW.

d. Regarding the recommendation that detailed stability analyses be performed for Pond A, Pond A - Discharge, Pond B, and Pond C embankments, IPL agrees to perform these analyses. The details associated with such analyses will be specified in a scope of work ("SOW") to be submitted to EPA for review within 45 days of receipt of the final EPA dam assessment report. IPL will complete work as detailed in the SOW, within 12 months of receipt of final EPA approved SOW.

e. Regarding the stability of the Pond B and Pond C embankments and the recommendation to perform additional test borings into the foundation soils with selected borings drilled down to bedrock to properly evaluate the stability of the embankments, IPL agrees to perform these analyses. The details associated with such analyses will be specified in a scope of work ("SOW") to be submitted to EPA for review within 45 days of receipt of the final EPA dam assessment report. IPL will complete work as detailed in the SOW, within 12 months of receipt of final EPA approved SOW.

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f. Repairs, excluding normal maintenance activities associated with operating the ash pond facilities, such as filling erosion rills/ruts, will be designed by a registered professional engineer experienced with earthen dam and/or ash pond design.

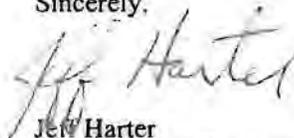
g. IPL will review its current inspection procedures and revise, if necessary. IPL will submit a revised bi-weekly inspection form, if necessary, within 45 days of receipt of the final EPA dam assessment report.

h. Regarding the recommendation that inspection procedures should include the recording of data from existing piezometers on Pond B and Pond C, IPL does not object to this recommendation and will install staff gauges and additional piezometers as specified in a detailed scope of work ("SOW") to be submitted to EPA for review within 45 days of receipt of the final EPA dam assessment report. IPL will complete work as detailed in the SOW, within 12 months of receipt of final EPA approved SOW.

Attached are IPL's administrative comments that address specific issues with the information in the draft report.

IPL recommends that it meet with EPA to discuss these comments prior to finalization of the report.<sup>2</sup> Please contact Nysa Hogue at 317-261-5473 at your earliest convenience to arrange such a meeting and/or if you have any questions.

Sincerely,



Jen Harter  
Plant Leader - Environmental

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<sup>2</sup> IPL's intent to undertake EPA's recommendations as evidenced by this response to EPA's Assessment of Dam Safety for the Petersburg Generating Station's ponds does not waive IPL's position that it believes that EPA does not have the legal authority to perform these pond inspections or to require any remedial actions since there has not been a release of hazardous substance from these ponds as is required under the applicable statutory program. Nothing in this letter is intended to waive IPL's position in this regard.

## Administrative Comments

June 4, 2010, Draft Report

### Assessment of Dam Safety of Coal Combustion Surface Impoundments Indianapolis Power & Light Company Petersburg Generating Station

**Section 1.1** Revised first sentence in second paragraph as follows: “The Petersburg Generating Station is located in Petersburg, Pike County, Indiana ...”

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**Section 1.4.1** Revise as follows:

The Petersburg Generating Station began operation in June 1967. The CCW is generated by Unit ST1 (online since 1967), Unit ST2 (online since 1969), Unit ST3 (online since 1977), and ST-4 (online since 1986). Based on the last sentence 3 years of operation, the plant burns 15,000 tons of coal on average producing approximately 1,500 tons of CCW.

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The original CCW impoundment was constructed between 1964 and 1967. The impoundment was constructed in the vicinity of the footprint of current Pond A and Pond A – Discharge. A typical cross-section of the embankment is presented on Figure 3. The embankment was constructed with native soil to a crest elevation of approximately El. 430 which was approximately 15 feet in height above the then existing site grades....

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In 1978, the Pond A embankment crest was raised to elevation El. 435....

In 1982 the original embankment crest was raised to El. 440.... [This information was not provided by EPA. EPA needs to identify its source.]

In 1986, a second CCW impoundment was commissioned to the north of the existing impoundment. The impoundment was constructed at the edge of the floodplain to the east of the White River. The specifications and geotechnical report indicate the site was cleared and grubbed and the foundation subgrade was prepared prior to construction. Unsuitable and granular material was specified to be removed and replaced with compacted clay. The subgrade was then specified to be compacted to at least 95% of the maximum dry density as determined by the Standard Proctor Test (ASTM D-698). The clay soil in the floodplain to the west of the impoundment and inside the impoundment was specified to be borrowed to construct the embankment. The embankment was designed to be constructed with 2.5H:1V side slopes on the interior and exterior. The bottom of the interior portion of the impoundment was designed to be sloped at approximate 8H:1V and be excavated approximately 4 to 5 feet below existing grades creating a partially incised storage area. A typical cross-section of the embankment is presented in Figure 4. The embankment was constructed to a crest elevation of El. 457 [per CERCLA response] within a 20-foot-wide crest. The slopes were specified to be covered with 6 to 8 inches of topsoil and seeded.

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In 1999, the second CCW embankment crest was raised to elevation El. 452 [per CERLCA response].,...

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**No historical information on Pond C is included in Section 1.4.1. Please add information on Pond C as provided by IPL in its 2009 CERCLA 104(e) Information Collection.**

**Section 1.4.2** The fourth paragraph should be revised as follows:

The southern impoundments consist of Pond A and Pond A – Discharge. Pond A and Pond A – Discharge are approximately 67.3 and 5.4 acres in size, respectively. The embankment crest elevation of both impoundments is approximately El. 437,...

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The second paragraph on page 1-5 should be revised as follows and IPL provides the following response:

The northern impoundments consist of Pond B and Pond C. Pond B and Pond C are approximately 35 and 30 acres in size, respectively. The embankment crest elevation of both impoundments is approximately El. 452. The two impoundments are currently inactive. Standing water in Pond C was limited to the immediate vicinity of the outlet structure and was at approximately El. 445.4.

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**At the time of the inspection by CDM, the ash in Pond C was being dredged for a beneficial use project and there was virtually no “standing water” in Pond C.**

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**Section 2.2.3** First and second paragraphs on page 2-3, IPL provides the following response:

During the site visit, active piping/erosion of the crest was observed (Photo 15). The water had eroded the recently placed ash and formed an erosion cavity in the original embankment. The water was clear and had a constant estimated flow of 10 to 20 gpm. At the time of the site visit IPL staff did not know the source of the water (i.e., if it was an unmarked pipeline in the embankment). The staff was in the process of identifying the source and addressing the situation.

During the site visit four sets of sluice pipes were observed. The CCW sluice pipes on the south embankment appeared to be in fair condition (Photo 8). The two sets of active sluice pipes on the west embankment (Photo 20) and at the west embankment headwall also appeared to be in fair condition (Photo 36). A fourth set of inactive or abandoned pipes appeared to be in poor condition (Photo 30, 33, and 35). The IPL staff did not know the origin or purpose of these pipes. The excavator operator placed ash over the 24-inch-diameter RCP at the fourth set of pipes.

**After further investigation, IPL determined the source of the water as Unit #2 cooling tower blowdown. The erosion denoted in this paragraph was corrected by placing riprap on the western and southern portions of Pond A’s interior slope. This corrective action was completed on May 14, 2010.**

**Section 2.3.4** Page 2-4, IPL provides the following response:

The outlet structure and Recycle Pump Station appeared to be in fair condition (Photos 41, 65, and 72). The inlet was free of debris and water was flowing through the trashrack. The outfall in the discharge canal appeared to be in poor condition (Photo 69). The pipe showed signs of deterioration and had previously collapsed. Based on our review of the information provided by IPL, BT SQUARED recommended IPL perform an inspection of the pipe. IPL staff stated an inspection has not yet been conducted.

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On July 28, 2009, as denoted in BT SQUARED report dated October 2009, the pipe was repaired and determined to be in acceptable condition by external geotechnical firm BT SQUARED. IPL did not inspect internal piping via camera based on the BT SQUARED assessment.

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**Section 2.5.4** Page 2-7, IPL provides the following response:

The outlet structure in Pond C was in fair condition (Photos 132 and 136). The inlet was free of debris and stoplogs were still in place. Surface water was flowing into the outlet structure. Discharge from the outlet to the drainage ditch at the toe of the east embankment was observed in the thick vegetation.

The equalizer pipe in Pond C was in poor condition (Photos 141 and 142). The "T" at the end of the pipe was filled half way with ash.

**IPL agrees that there was ash observed in the "T" at the end of the Pond C equalizer pipe. However, at the present time, Ponds B and C are not "tied" together and thus the pipe is not actively being utilized. If in the future IPL determines to "tie" Ponds B and C together, IPL will clear the pipe of all debris, including ash.**

**HAZARD CLASSIFICATION FOR DAMS**

DAMAGE TO:	AREA AFFECTED BY DAM BREACH		
	LOW	SIGNIFICANT	HIGH
<b>LOCATION</b>	<i>Rural or Agricultural</i> Damage would be minimal and would mostly occur on dam owner's property. No building, road, railroad, utility, or individual significantly affected. Damage is limited to farm buildings, agricultural land, and local roads.	<i>Predominantly Rural or Agricultural</i> but roads, buildings, utilities or railroads may be damaged.	<i>Developing or Urban</i> Where individuals could be seriously injured or killed. Buildings, roads, railroads or utilities seriously damaged.
<b>POTENTIAL LOSS OF LIFE</b> Flood depths greater than 1 foot in occupied quarters. Potential of loss of human life may occur.	No	No	Yes
<b>ROADS</b> County roads, state two-lane highways, or U.S. highways Serving as the only access to a community. Multilane divided state or US highway, including an interstate highway.	No Damage	<i>May Damage</i> Interruption of service for not more than 1 day.	<i>Serious Damage</i> Interruption of service for more than 1 day.
<b>RAILROADS</b> Operating Railroads	No Damage	<i>May Damage</i> Interruption of service for not more than 1 day.	<i>Serious Damage</i> Interruption of service for more than 1 day.
<b>OCCUPIED QUARTERS</b> Homes-Single family residences, apartments, nursing homes, motels and hospitals	No Damage	<i>May Damage</i> Damage that would not render the structure unusable	<i>Serious Damage</i> Damage where the flow velocity at the building compromises the integrity of the structure for human occupation.
<b>UTILITIES</b>	No Damage	<i>May Damage</i> Damage may occur to important utilities where service would not be interrupted for more than 1 day but either of the following may occur: 1) buried lines can be exposed by erosion, or 2) towers, poles and above ground lines can be damaged by undermining or debris loading.	<i>Serious Damage</i> Interruption of service to interstate and intrastate utility, power or communication lines serving towns, communities or significant military and commercial facilities in which disruption of power and communication would adversely affect the economy, safety, and general well-being of the area for more than 1 day.