HARD HAT SERVICES™
Engineering, Construction and Management Solutions

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VIA EMAIL

October 10, 2016

Mr. Jeffrey Maxted
Alliant Energy – Sr. Environmental Specialist
4902 North Biltmore Lane
Madison, WI 53718-2148

Re: Hazard Potential Classification Assessment - §257.73(a)(2)
Alliant Energy – Interstate Power and Light Company
IPL – Prairie Creek Generating Station
Cedar Rapids, Iowa

Dear Mr. Maxted;

Hard Hat Services (HHS) completed the hazard potential classification assessment for the existing, non-incised CCR surface impoundments located at the Interstate Power and Light Company (IPL) Prairie Creek Generating Station in Cedar Rapids, Iowa.

Background Information
In accordance with the requirements set forth in §257.73(a)(2) of the CCR Rule, an owner or operator of an existing CCR surface impoundment must conduct initial and periodic hazard potential classification assessments of their CCR surface impoundment, except for those existing CCR surface impoundments that are incised. The owner or operator must determine each CCR surface impoundment hazard potential classification through a hazard potential classification assessment.

FEMA (FEMA Publication 333, Federal Guidelines for Dam Safety, Hazard Potential Classification System for Dams, April 2004) developed a "hazard potential" classification in order to classify surface impoundments based on the probable loss of human life, and the impacts on economic, environmental, and lifeline interests in the event of an unintentional release from a surface impoundment. Three hazard potential classification levels are used, as follows:

1. High Hazard Potential – Assigned to surface impoundments where failure or mis-operation will probably cause loss of human life.
2. Significant Hazard Potential – Assigned to surface impoundments where failure or mis-operation results in no probable loss of human life, but can cause economic loss, environmental damage, or disruption of lifeline facilities or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural

or agricultural areas but could be located in areas with population and significant infrastructure.

3. Low Hazard Potential – Assigned to surface impoundments where failure or mis-operation has no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.

Facility Specific Information

The IPL – Prairie Creek Generating Station (PCS) is located at 3300 C Street SW, Cedar Rapids, IA 52404. Figure 1 provides both a topographic map and an aerial of the PCS facility location, with the approximate property boundary of the facility identified. PCS has eight existing CCR surface impoundments (PCS Ponds 1-7 and the PCS Discharge Pond), of which, six impoundments (PCS Ponds 1-6) are incised. IPL has determined that PCS Pond 9, PCS Pond 10 and PCS Pond 11 have not contained or received any CCR on or after October 19, 2015, and therefore, are exempt from the requirements of the CCR Rule.

There are two distinct flow paths within the pond systems, which include the Northern Impoundment System and the Southern Impoundment System. Both the Northern Impoundment System and the Southern Impoundment System discharge to the PCS Discharge Pond. The two existing, non-incised impoundments are identified as follows:

- PCS Pond 7
- PCS Discharge Pond

PCS Pond 7

PCS Pond 7 is located within the Southern Impoundment System west of the generating plant. The impoundment system, from east to west, consists of PCS Pond 5, PCS Pond 6, and PCS Pond 7. PCS Pond 5 receives influent flows from storm water runoff as well as from PCS Pond 10. PCS Pond 10 receives influent flow from PCS Pond 9, which receives influent flows from coal handling sump discharge and influent flow from PCS Pond 11. PCS Pond 11 receives influent flow from Unit 1 and Unit 2 boiler basement sump discharge. In addition, a 24-inch diameter corrugated metal pipe culvert is located in the northeast corner of PCS Pond 5 which hydraulically connects to the southwest corner of PCS Pond 2. During normal conditions, the water in PCS Pond 5 flows to the west through a 24-inch diameter corrugated metal pipe into PCS Pond 6. PCS Pond 6 receives influent flows from PCS Pond 5, as well as storm water runoff. The water in PCS Pond 6 flows to the west through a 24-inch diameter corrugated metal pipe into PCS Pond 7. PCS Pond 7 receives influent flows from PCS Pond 6, as well as storm water runoff. The water in PCS Pond 7 flows to the west and overflows into a 24-inch diameter metal pipe that discharges into the southeast corner of the PCS Discharge Pond.

Approximately 300 feet west of the PCS Pond 7, the U.S. Fish and Wildlife Service National Wetlands Inventory has identified a 4.48 acre "Freshwater Forested/Shrub Wetland" with Classification Codes: PFO1A. North of the impoundments and rail road tracks there are both "Freshwater Emergent Wetland" and "Freshwater Forested/Shrub Wetland", although the CCR surface impoundments are considered incised along the northern boundary.

The surface area of the PCS Pond 7 is approximately one acre and has an embankment height of approximately five feet from the crest to the toe of the downstream slope. The interior storage depth of the PCS Pond 7 is unknown but is estimated to be ten feet. The total volume of impounded CCR and water currently within PCS Pond 7 is approximately 14,000 cubic yards.

PCS Discharge Pond

The PCS Discharge Pond is the final impoundment and is located after both the Northern Impoundment System and the Southern CCR Impoundment System.

The impoundment system, from east to west, consists of PCS Pond 1, PCS Pond 2, PCS Pond 3, and PCS Pond 4. PCS Pond 1 is the primary receiver of sluiced bottom ash at PCS. It also receives boiler ash overflow discharges from Units 3 and 4, Unit 3 and Unit 4 boiler basement sump discharges. The CCR is sluiced from the generating plant to the southeast end of PCS Pond 1. The water within PCS Pond 1 flows to the west through a narrow channel into PCS Pond 2. PCS Pond 2 receives influent flows from PCS Pond 1, as well as storm water runoff. In addition, a 24-inch diameter corrugated metal pipe culvert is located in the southwest corner of PCS Pond 2, which hydraulically connects to the northeast corner of PCS Pond 5. During normal conditions, the water in PCS Pond 2 flows to the west through a narrow channel into PCS Pond 3. PCS Pond 3 receives influent flows from PCS Pond 2, as well as storm water runoff. The water in PCS Pond 3 flows to the west through an 18-inch diameter metal pipe culvert into PCS Pond 4. PCS Pond 4 receives influent flows from the PCS Pond 3, as well as storm water runoff. The water in PCS Pond 4 flows to the west and overflows into a 30-inch diameter high-density polyethylene pipe that discharges into the northeast corner of the PCS Discharge Pond.

Approximately 300 feet west of the PCS Discharge Pond, the U.S. Fish and Wildlife Service National Wetlands Inventory has identified a 4.48 acre "Freshwater Forested/Shrub Wetland" with Classification Codes: PFO1A. North of the impoundments and rail road tracks there are both "Freshwater Emergent Wetland" and "Freshwater Forested/Shrub Wetland", although the CCR surface impoundments are considered incised along the northern boundary.

The surface area of the PCS Discharge Pond is less than one tenth of an acre and has an embankment height of approximately five feet from the crest to the toe of the downstream slope. The interior storage depth of the PCS Discharge Pond is unknown but is estimated to be six feet. The total volume of impounded CCR and water currently within the PCS Discharge Pond is approximately 1,000 cubic yards.

Hazard Potential Classification

Each existing non-incised CCR surface impoundment has been assigned a hazard potential classification, as identified below.

PCS Pond 7

PCS Pond 7 has been assigned a **Low Hazard Potential** classification. Mis-operation or failure will likely not result in loss of life as there are no occupied buildings or residences located in the immediate vicinity of the CCR surface impoundment. The north, east, and south sides are incised. If a failure of the embankment to the west were to occur, a release would likely be

contained either on facility property or near the facility property. In all cases of a release, CCR from the surface impoundment would principally be limited to the facility property resulting in low economic losses and environmental damages.

PCS Discharge Pond

PCS Discharge Pond has been assigned a **Low Hazard Potential** classification. Mis-operation or failure will likely not result in loss of life as there are no occupied buildings or residences located in the immediate vicinity of the CCR surface impoundment. The north, east, and south sides are incised. If a failure of the embankment to the west were to occur, a release would likely be contained either on facility property or near the facility property. In all cases of a release, CCR from the surface impoundment would principally be limited to the facility property resulting in low economic losses and environmental damages.

Qualified Professional Engineer Certification

To meet the requirements of 40 CFR 257.73(a)(2)(ii), I Mark W. Loerop hereby certify that I am a licensed Professional Engineer in the State of Iowa; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in 40 CFR 257.73(a)(2).

By: _____

Name: MARK LOEROP

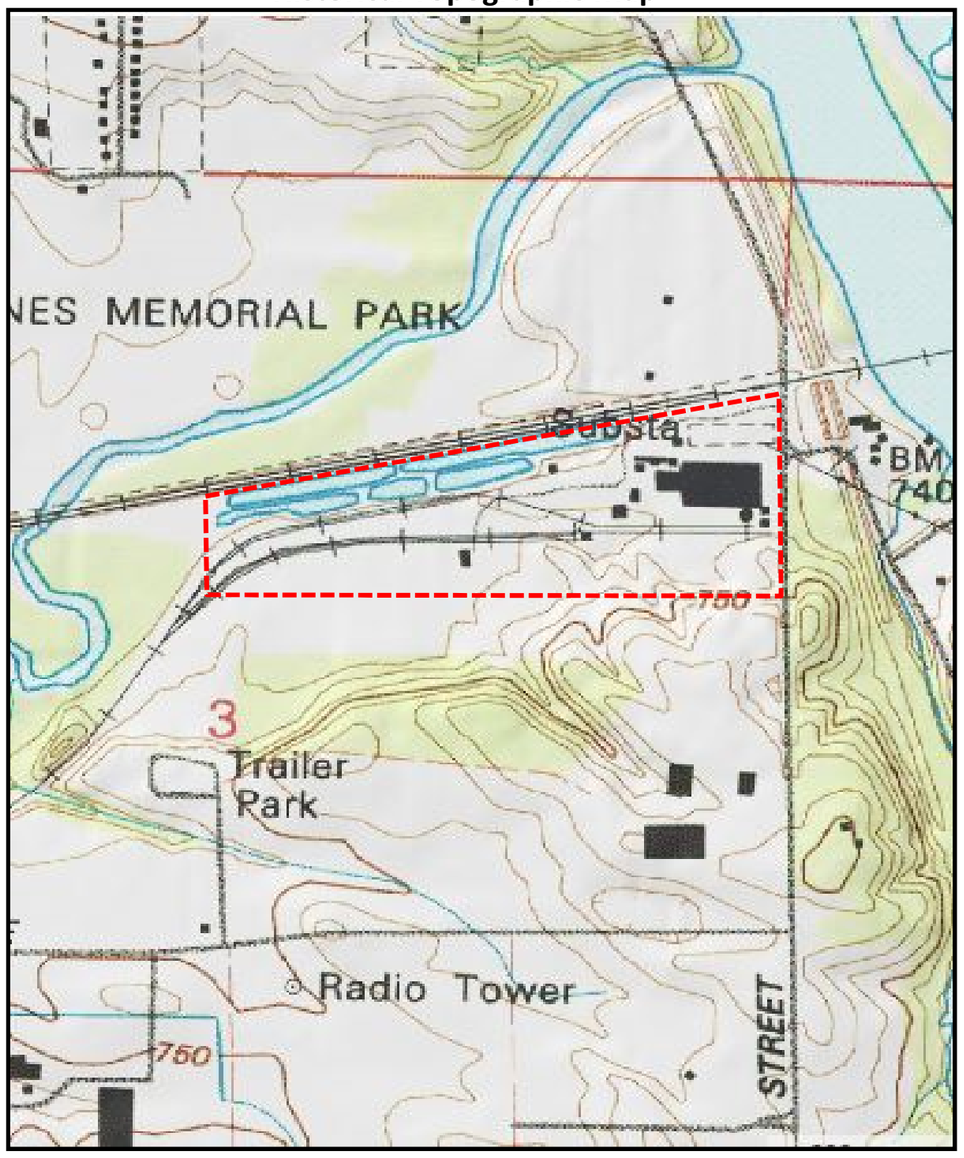
Date: OCT 10, 2016

cc: Jenni Hynek, IPL – Prairie Creek Generating Station
Tony Morse, Alliant Energy

att: Figure 1 – Facility Location
Figure 2 – Wetland Map

MWL/tjh/CTS
C:\Egnyte\Shared\Projects\154 - Alliant Energy\154.018 - CCR Projects\012 - 2016 CCR Compliance Program\004 - PCS\Hazard Potental Classification\PCS Hazard Potential Analysis - FINAL.docx

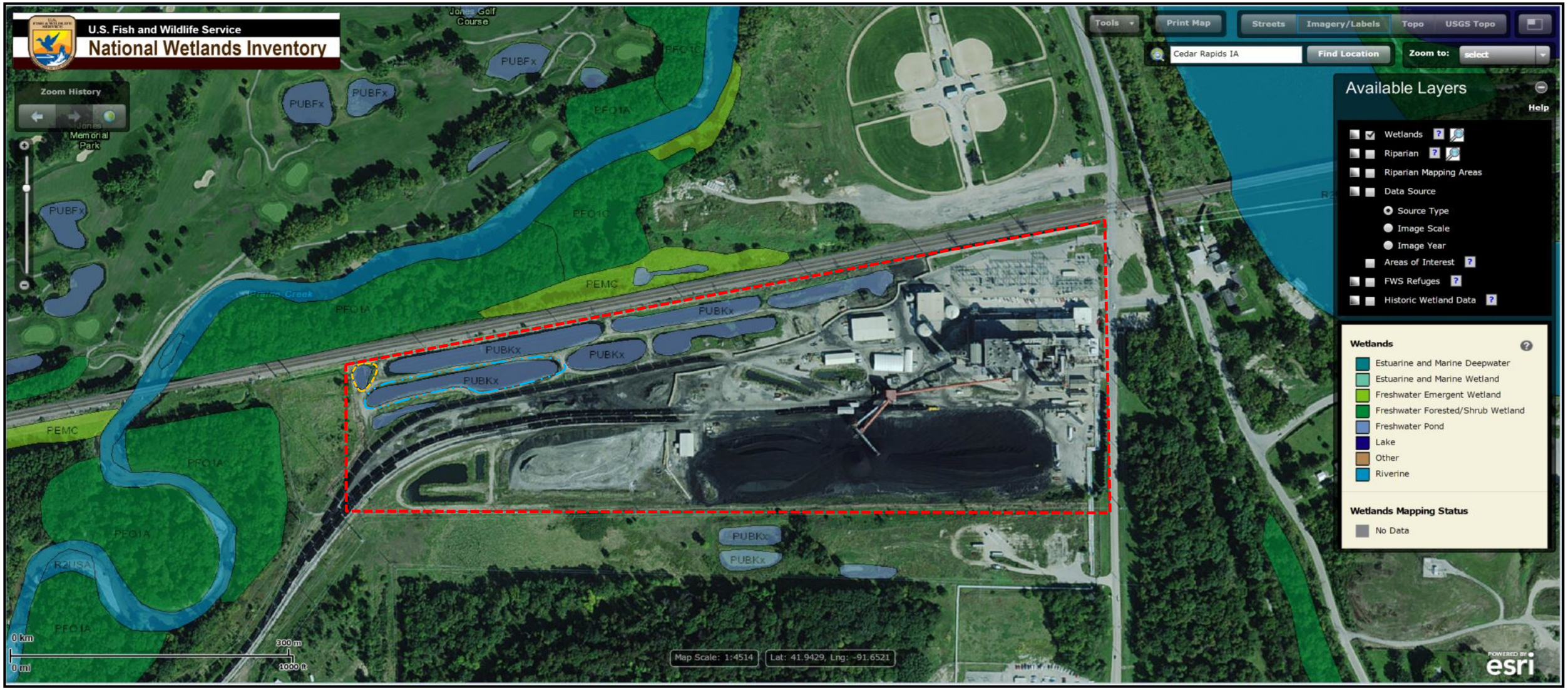
Historical Topographic Map



Historical Aerial Photo 3/10/2016

Approximate Property Boundary

HARD HAT SERVICES™ Engineering, Construction and Management Solutions	Site Location Prairie Creek Generating Station Interstate Power and Light Company	Drawing Figure 1 Date 7/13/2016



Approximate Property Boundary
PCS Pond 7
PCS Discharge Pond

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Wetland Location Map
Prairie Creek Generating Station
Interstate Power and Light Company

Drawing
Figure 2

Date
7/13/2016