



VIA EMAIL

September 19, 2016

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

**Re: Liner Design Criteria for Existing CCR Surface Impoundments - §257.71(a)
Alliant Energy – Wisconsin Power and Light Company
WPL – Columbia Energy Center
Pardeeville, Wisconsin**

Dear Mr. Maxted;

Hard Hat Services (HHS) assessed the liner design criteria for the existing CCR surface impoundments located at the Columbia Energy Center in Pardeeville, Wisconsin.

Background Information

In accordance with the requirements set forth in §257.71(a) of the CCR Rule (40 CFR 257.50-107), an owner or operator of an existing CCR surface impoundment must document whether or not the CCR unit was constructed with a liner that meets, at a minimum, one of the following three categories:

- i. A liner consisting of a minimum of two feet of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec,
- ii. A composite liner that meets the requirements of §257.70(b), or;
- iii. An alternative composite liner that meets the requirements of §257.70(c).

Facility Specific Information

The WPL – Columbia Energy Center (COL) is located at W8375 Murray Road, Pardeeville, WI 53954. Figure 1 provides both a topographic map and an aerial of the COL facility location, with the approximate property boundary of the facility identified. COL has two CCR surface impoundments, which are identified as follows:

- COL Primary Ash Pond (existing)
- COL Secondary Ash Pond (inactive)

Liner Determination

After review of the reasonably and readily available documentation, the following CCR Units were determined to not meet the requirements of §257.71(a)(1)(i), (ii), or (iii):

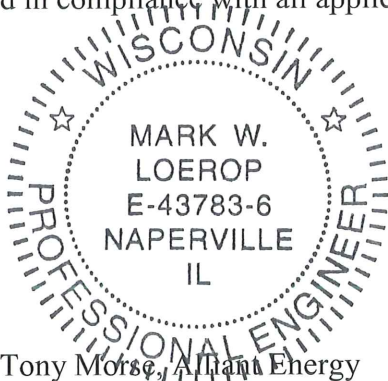
- COL Primary Ash Pond
- COL Secondary Ash Pond

All existing unlined CCR surface impoundments are subject to the closure or retrofit requirements of §257.101(a).

Qualified Professional Engineer Certification

The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer attesting that the documentation as to whether a CCR unit meets the requirements 40 CFR 257.71(a) is accurate.

To meet the requirements of 40 CFR 257.71(b), I Mark W. Loerop hereby certify that I am a licensed Professional Engineer in the State of Wisconsin; 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 257.71(a).



By: *[Signature]*
 Name: MARK LOEROP
 Date: SEP 19, 2016

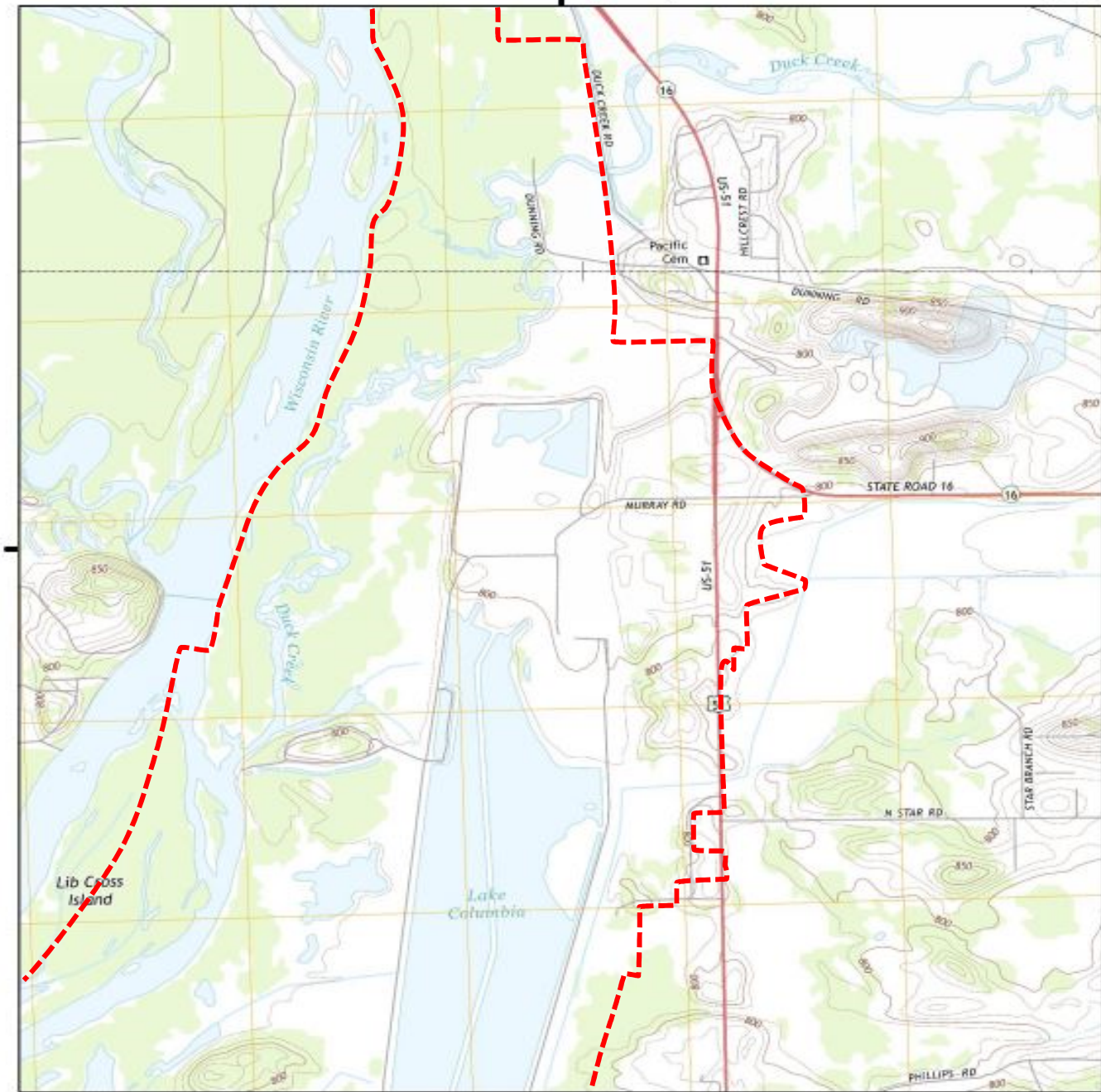
cc: Tony Morse, Alliant Energy

att: Figure 1 – Site Location
Figure 2 – Storm Water Routing

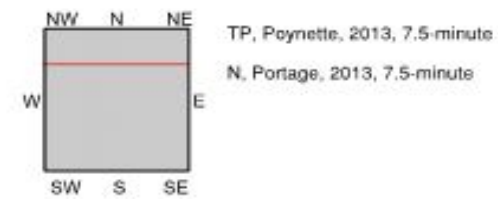
MWL/tjh/CTS

Historical Topo Map

2013



This report includes information from the following map sheet(s).



SITE NAME: Columbia Energy Center
ADDRESS: W8375 Murray Road
Pardeeville, WI 53954
CLIENT: Environmental Site Assessors



Historical Aerial Photo 6/12/2014



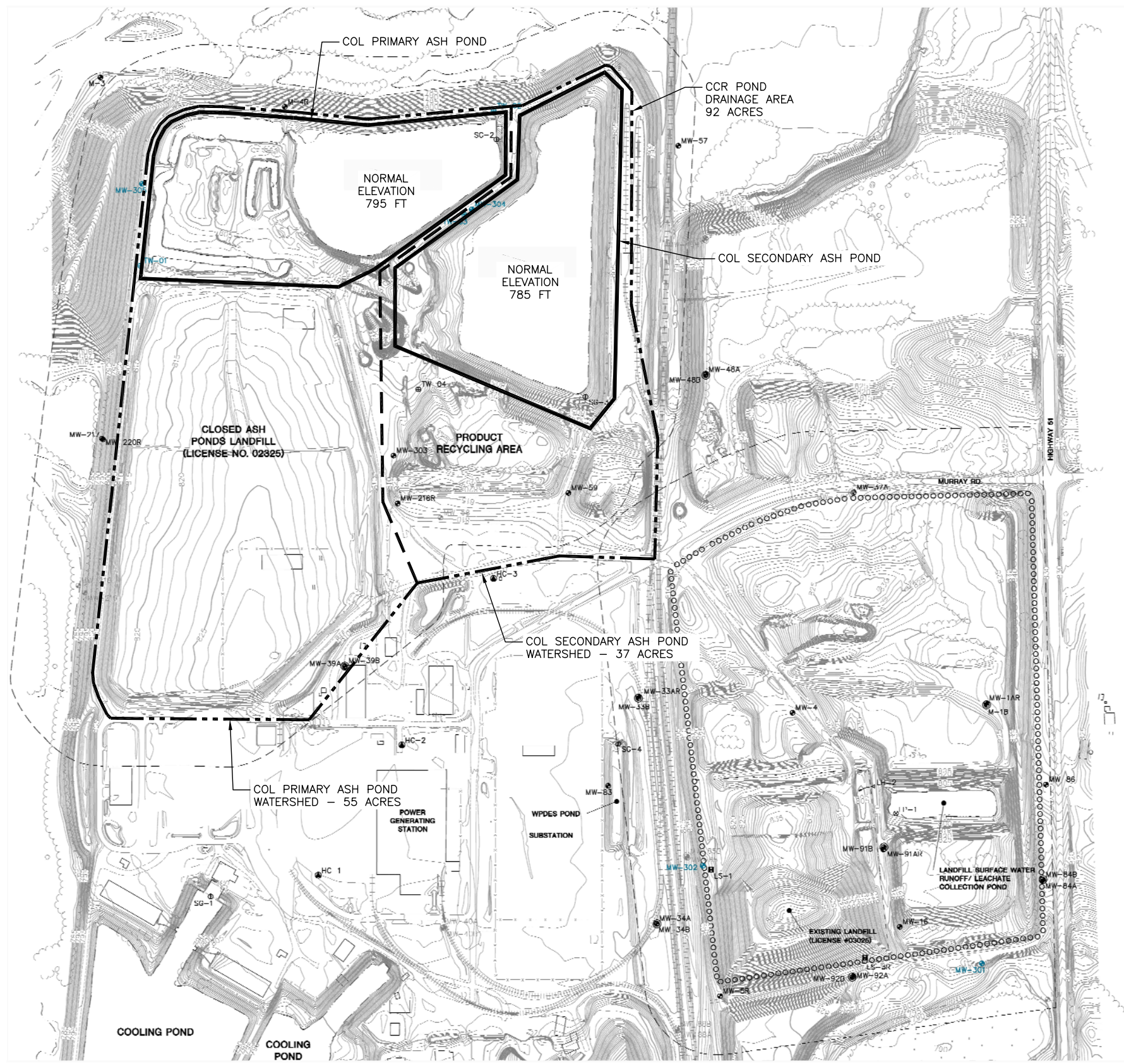
----- Approximate Property Boundary



HARD HAT SERVICESTM
Engineering, Construction and Management Solutions

Site Location
Columbia Energy Center
Wisconsin Power and Light Company

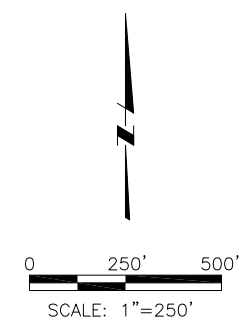
Drawing
Figure 1
Date
7/12/2016



MAP SOURCE:
 SCS ENGINEERS
 COLUMBIA ASH PONDS AND DRY
 ASH DISPOSAL FACILITIES;
 WELL LOCATION MAP; FIGURE 2
 REV. DATE 2-2-16

- LEGEND**
- 10' — EXISTING MAJOR CONTOUR (10' INTERVAL)
 - 2' — EXISTING MINOR CONTOUR (2' CONTOUR)
 - - - - - EXISTING FINCHLINE
 - ==== EXISTING TRACKS
 - ===== EXISTING PAVED ROAD
 - EXISTING UNPAVED ROAD
 - - - - - FDGF OF WATER
 - - - - - DESIGN MANAGEMENT ZONE
 - APPROVED LIMITS OF WASH
 - CONSTRUCTION LIMITS OF WASH
 - WATER SUPPLY WELL
 - STAFF GAUGE
 - ⊙ WATER TABLE WELL
 - ⊗ IP/COMPILER
 - ⊕ SURFACE WATER SAMPLE LOCATION
 - ⊖ TYSMPILER
 - ⊙ ABANDONED WATER TABLE WELL
 - ⊗ ABANDONED IP/COMPILER
 - ⊖ FRACATE HEADWELL
 - ⊕ TEMPORARY WELL
 - NEW WATER TABLE WELL

- NOTES:**
1. BASE MAP CREATED FROM AERIAL SURVEY BY KBM, FLOWN 10-2-2014.
 2. MONITORING WELL LOCATIONS AND ELEVATIONS SURVEYED BY WISCONSIN POWER AND LIGHT, INC. IN OCTOBER 1984, NOVEMBER 1986, APRIL 2003, AND AUGUST 2012.
 3. SUPPLY WELL LOCATIONS ARE APPROXIMATE AND ASSUMED BASED ON JANUARY 2013 DRAWINGS BY ERC.
 4. THE LOCATIONS OF THE ASH POND FACILITY DESIGN MANAGEMENT ZONE DEMARCATION LINES ARE APPROXIMATE AND BASED ON THE WATER TABLE MAP (OCTOBER 2012) FIGURE BY KBM.
 5. THE LOCATION OF THE ACTIVE DRY ASH LANDFILL DESIGN MANAGEMENT ZONE DEMARCATION LINE IS BASED ON A 500 FOOT OFFSET FROM THE DESIGN LIMITS OF ASH EXCITATION CRITERIA WOULD EXCEED THE PROPERTY LINE.



NOTICE
 THIS DRAWING IS THE PROPERTY OF HARD HAT SERVICES AND IS NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT PRIOR WRITTEN PERMISSION. ALL RIGHTS RESERVED.

| | | | | |
|-----|------|----|-------------|--|
| △ | | | | |
| △ | | | | |
| △ | | | | |
| △ | | | | |
| REV | DATE | BY | DESCRIPTION | |



| | |
|-----------|----------|
| SCALE: | AS SHOWN |
| DATE: | 8-1-16 |
| DRAWN BY: | JFD |
| CHKD BY: | TJH |
| APRVD BY: | MWL |

| | |
|-------------------|---|
| CLIENT / LOCATION | WISCONSIN POWER AND LIGHT (WPL) COMPANY COLUMBIA ENERGY CENTER PARDEEVILLE, WISCONSIN |
|-------------------|---|

| | |
|---------------------|--|
| DRAWING DESCRIPTION | Liner Design Criteria STORM WATER ROUTING |
|---------------------|--|

| | |
|------|----------------|
| JOB | 154.010.025 |
| SHT. | FIGURE 2 |
| DWG. | 154.010.025-D1 |