

**EMERGENCY ACTION PLAN**  
**ASH SURGE BASIN, BYPASS BASIN, METAL CLEANING BASIN, AND FORMER**  
**ASH BASIN**  
**POWERTON STATION**  
**UPDATED DECEMBER 2022**

This Emergency Action Plan (EAP) has been prepared pursuant to Title 40 of the Code of Federal Regulations (CFR) Part 257, Subpart D, §257.73(a)(3) for the Ash Surge Basin, Bypass Basin at the Midwest Generation, LLC (MWG) Powerton Station (Station) in Pekin, Illinois. This December 2022 update of the EAP has been revised to comply with Title 35 of the Illinois Administrative Code (35 IAC) Part 845, Subpart E, §845.520(b)(3) by revising the code references and includes an updated contact list provided as Table 5. The update has also been expanded to include the Metals Cleaning Basin and Former Ash Basin (collectively referred to as the Basin herein). This written EAP has been prepared to address potential failure the Basins. The EAP is presented as follows:

**Section 1.0:** Definition of the events or circumstances involving the coal combustion residuals (CCR) unit(s) that represent a safety emergency, along with a description of the procedures that will be followed to detect a safety emergency in a timely manner;

**Section 2.0:** Definition of the responsible persons, their respective responsibilities, and notification procedures in the event of a safety emergency involving the CCR unit(s);

**Section 3.0:** Contact information of emergency responders;

**Section 4.0:** Provide site maps which delineate the downstream areas which would be affected in the event of a basin failure and a physical description of the CCR units;

**Section 5.0:** Include provisions for an annual face-to-face meeting or exercise between representatives of the Station and the local emergency responders; and

**Section 6.0:** The owner or operator of the CCR unit(s) must obtain a certification from a qualified professional engineer (PE) stating that the written EAP, and any subsequent amendment of the EAP, meets the requirements of paragraph (a)(3) of this section.



Civil & Environmental Consultants, Inc.

## **1.0 DEFINITION OF THE EVENTS THAT REPRESENT A SAFETY EMERGENCY**

The following tables define the events and/or circumstances involving the Basins that represent a safety emergency, along with a description of the procedures that will be followed to detect a safety emergency in a timely manner.

The information provided in the Tables 1 through 4 provide a listing of problems which may occur at the Basins, how to make a rapid evaluation of the problem, and what action should be taken in response to the problem. This section presents only generalized information to aid in first response to a given problem. Suspected problems should be reported as soon as possible, as discussed in Section 2.0, and assistance from a qualified engineer should be obtained if necessary.

The problems outlined in this section are related to above grade, earthen type embankment dams similar in construction to the Basins. The problems discussed herein include:

- Table 1: Seepage;
- Table 2: Sliding;
- Table 3: Cracking; and
- Table 4: Animal Burrows and Holes.

For each problem, the indicators are discussed followed by evaluation techniques and then by action items for each problem.

**Table 1: Problem Event Definition, Evaluation, and Action: Seepage**

Definition	Evaluation	Action
1A: Wet area on downstream embankment slope or other area downstream of the embankment, with very little or no surface water or very minor seeps.	1B: Condition may be caused by infiltration of rainwater, which is not serious; or may be the start of a serious seepage problem, which would be indicated by a quick change to one of the conditions below.	1C: No immediate action required. Note the location for future comparison.
2A: Same wet area as above, with moderate seeps of clear or relatively clear water and the rate of flow not increasing.	2B: Measure the flow periodically and note changes in clarity.	2C: No immediate action required. Note the location, flow rate, and clarity for future comparison. During reservoir flood stages, the seepage area should be watched for changes.
3A: Same wet area as above, with moderate seeps of clear or relatively clear water and rate of flow increasing.	3B: Measure the flow periodically and note changes in clarity. Inspect downstream area for new seeps.	3C: Contact a qualified engineer for immediate inspection (see Table 5). Observe the condition constantly for further changes in flow rate or clarity, unless notified otherwise by the engineer.
4A: Piping (seepage with the removal of materials from the foundation or embankment), moderate to active flows of cloudy to muddy water.	4B: If the water is cloudy to muddy, and the rate of flow is increasing, this condition could lead to failure of the dam. If, along the piping, there is an upstream swirl (whirlpool) caused by water entering through the abutments of embankment, failure is imminent.	4C: Immediate action is necessary. Notify the appropriate agencies (see Table 5).
5A: Boils (soil particles deposited around a water exit forming a cone, varying from a few inches in diameter spaced 2 to 3 feet apart to isolated locations several feet in diameter in the floodplain downstream of the dam) may show the types of flow as noted above.	5B: Evaluation of the problem is the same as noted above for the various flow conditions, i.e., clear and constant, clear and increasing, and cloudy or muddy and increasing.	5C: Actions to be taken are essentially the same as those noted above.

**Table 2: Problem Event Definition, Evaluation and Action: Sliding**

Indicator	Evaluation	Action
1A: Movement of a portion of the embankment, either the upstream or downstream slope, toward the toe of the dam.	1B: Various degrees of severity of a slide require different responses. The first condition is that the slide does not pass through the crest and does not extend into the embankment for more than 5 feet measured perpendicular to the slope.	1C: For this condition, a qualified engineer (see Table 5) should be consulted before repairs are initiated to determine the cause of the slide and to recommend modifications to prevent future slides. The downstream side of the dam should be watched for the emergence of water, either through the slide or opposite the slide. If water is noted discharging, the area should be treated as a seepage location and monitored as noted above.
2A: Slide passes is the second condition.	2B: In this condition, the slide passes through the crest and that the reservoir elevation is more than 10 feet below the lowered crest.	2C: Use the same actions as noted above, and notify the appropriate MWG personnel (see Table 5) of the situation so they may be prepared to act if the condition worsens.
3A: Slide passes is also the third condition.	3B: In this condition, the slide passes through the crest and that the reservoir elevation is less than 10 feet below the lowered crest.	3C: This condition is critical, and failure of the dam should be considered imminent. Notify the appropriate agencies (see Table 5).

**Table 3: Problem Event Definition, Evaluation and Action: Cracking**

<b>Indicator</b>	<b>Evaluation</b>	<b>Action</b>
1A: Cracks in the embankment can occur either in the longitudinal (along the length of the dam) or transverse (across the dam from upstream to downstream directions).	1B: Some cracking of the surface soils may occur when they become dry. This cracking is to be expected, and no further action is required.	1C: No further action is required.
2A: Longitudinal cracking can indicate the beginning of a slide or be an uneven settlement of the embankment.	2B: Monitor the crack for future changes, and contact a qualified engineer for assistance in the evaluation of the crack and recommended repairs.	2C: Contact a qualified engineer for assistance and recommendations (see Table 5).
3A: Transverse cracking can indicate uneven settlement or the loss of support below the crack. Such cracks usually occur over an outlet conduit, near the abutments, or in the taller portion of the embankment.	3B: Monitor the crack for future changes, and contact a qualified engineer for assistance in the evaluation of the crack and recommended repairs.	3C: Contact a qualified engineer for assistance and recommendations (see Table 5).

**Table 4: Problem Event Definition, Evaluation and Action: Animal Burrows and Holes**

<b>Indicator</b>	<b>Evaluation</b>	<b>Action</b>
1A: Holes in the embankment, varying in size from about 1 inch in diameter to 1 foot in diameter caused by animals.	1B: If the holes do not penetrate through the embankment, the situation is usually not serious. Some animal holes will have soil pushed out around the hole in a circular fashion, which may look like a boil (crayfish or crawdad). Watch for the movement of water and soil particles from these holes to determine whether they are boils.	1C: Backfill as deeply as possible with impervious material. If rodents become a nuisance, an effective rodent control program, as approved by the Illinois Department of Natural Resources District Wildlife Biologist, should be implemented.

## **2.0 RESPONSIBLE PERSONS, RESPECTIVE RESPONSIBILITIES, AND NOTIFICATION PROCEDURES**

The EAP must be implemented once events or circumstances involving the CCR unit that represent a safety emergency are detected, including conditions identified during periodic structural stability assessments, annual inspections, and inspections by a qualified person. The following sections define responsible persons, their respective responsibilities, and notification procedures in the event of a safety emergency involving the Basins. Contact information is provided in Table 5, attached.

### **2.1 Responsible Persons and Responsibilities**

Appropriate parties will be notified based on the nature and severity of the incident as determined by the Station Environmental Specialist or Chemical Specialist. If failure is imminent or has occurred, notification and mitigation procedures are a top priority, particularly for a potentially hazardous situation. The Station Environmental Specialist or Chemical Specialist, in conjunction with the Station Director, is responsible for this determination.

### **2.2 Notification Sequence**

The following notification procedures shall be used by employees in the event of a safety emergency with the Basins:

- (1) Notify the Shift Supervisor and Environmental Specialist, Chemical Specialist, or alternate.
- (2) If unsafe conditions exist, the employee should evacuate the area.
- (3) Only the Environmental Specialist, Chemical Specialist, Corporate Environmental, or designated alternate shall have any official communication with non-employees or regulatory agencies, and only the Communications Director shall have any contact with the media.

The Environmental Specialist, Chemical Specialist, or designated alternate should follow these procedures in the event of a safety emergency involving the Basins:

- (1) Organize appropriately trained Station personnel and/or other employees or contractors as necessary to assist with the safety emergency.
- (2) After consultation with appropriately trained Station personnel, contact the proper civil authorities (e.g., fire, police, etc.) if necessary. Notify the appropriate agencies where there has been a reportable release of material(s) into the environment. See Table 5, attached for contact information. Notify MWG Corporate via the Intelix online

notification system within twenty-four hours in the event of a reportable release. A reportable release is a Material Release defined as a spill or leak that materialized in the waterway. A Non-Material Release is a spill or leak that did not come into contact with the waterway.

- (3) Be prepared to evacuate the inundation area at any time during the safety emergency response.
- (4) If the emergency is beyond the facility's response capabilities, contact one or more emergency response contractors as necessary.
- (5) Corrective actions should only be performed by properly trained individuals.

### **2.3 Emergency Responders Contact Information**

Contact information for emergency responders, contractors, and consultants are provided in Table 5, attached. The Station Environmental Specialist, Chemical Specialist, or alternate will determine who to notify, including any affected residents and/or businesses, in the case of an imminent or actual CCR surface impoundment dam failure. The Station Environmental Specialist, Chemical Specialist, or alternate will ensure proper notifications are made.

Appropriate contractors will be utilized to assist the Station Environmental Specialist, Chemical Specialist, or alternate with mitigated actions being undertaken in order to minimize the impact of an event that has occurred.

### **3.0 SITE MAP AND A SITE MAP DELINEATING THE DOWNSTREAM AREA**

The following section provides a physical description of the Basins. A site plan is provided as Figure 1, attached.

#### **3.1 Basin Locations and Descriptions**

The Basins are located in the eastern portion of the Station (see Figure 1). The Basins are northeast of the Main Power Block Building situated east the Old Intake Channel. The Metal Cleaning Basin is adjacent to the intake channel beyond which to the east is the Ash Surge Basin. The Former Ash Basin is northeast of and the Ash Bypass Basin is immediately southeast of the Ash Surge Basin.

From our observations and review of construction and engineering documentation provided by MWG, except for the Former Ash Basin, the Basins were constructed with flexible membrane liners with elevated earthen berms or embankments. Primarily incised the Former Ash Basin is unlined constructed with elevated earthen berms or embankments. Run-on is limited to

precipitation contained within the earthen berm. Physical characteristics of the Basins are provided in Table 6, below.

**Table 6: Basin Characteristics**

	<b>Metal Cleaning Basin</b>	<b>Ash Surge Basin</b>	<b>Bypass Basin</b>	<b>Former Ash Basin</b>
<b>Estimated Capacity (acre- feet)</b>	14.0	92.1	5.1	310.0
<b>Estimated Maximum Basin Depth (feet)</b>	10.0	16.0	10.0	10.0
<b>Elevation - Maximum Crest (ft msl.)</b>	467.6	467.6	467.6	467.6

### 3.2 Delineation of Downstream Areas

The potential impacts from failure for the Basins were evaluated and reported by various consultants. Results of the hazard potential classification assessment indicate that the Basins are classified as Class 2 and/or as significant hazard potential CCR surface impoundments in accordance with 35 IAC §845.440(a)(1) and 40 CFR §257.73(a)(2), respectively. The evaluations report no probable loss of life resulting from failure of the basin embankments because no occupied buildings are located within the anticipated inundation areas. However, potential failure during flood conditions could result in offsite economic or environmental impacts.

### 4.0 ANNUAL FACE-TO-FACE MEETING

A face-to-face meeting or an exercise between representatives of the Station and the local emergency responders shall be offered and, if accepted, held on an annual basis. The purpose of the annual meeting is to review the EAP to assure that contacts, addresses, telephone numbers, etc. are current. The annual meeting will be held whether or not an incident occurred in the previous year. In the event an incident occurs, the annual meeting date may be moved up in order to discuss the incident closer to the date of occurrence. If no incidents have occurred, the annual meeting will be held to inform local emergency responders on the contents of the EAP and changes from the previous year. Documentation of the annual face-to-face meeting will be recorded and placed in the operating record for the Station.

This EAP requires modification whenever there is a change in conditions that would substantially affect the EAP in effect. Changes to the plan shall be made as appropriate, and a copy of the changes will be kept at the station, with the revised EAP placed in the facility's operating record.



The written EAP must be evaluated, at a minimum, every five years to ensure the information is accurate.

## 5.0 LIMITATIONS AND CERTIFICATION

This emergency action plan was prepared to meet the requirements of both 35 IAC §845.520 and 40 CFR §257.73(a)(3) and was prepared under the direction of Mr. M. Dean Jones, P.E.

By affixing my seal to this, I do hereby certify to the best of my knowledge, information, and belief that the information contained in this report is true and correct. I further certify I am licensed to practice in the State of Illinois and that it is within my professional expertise to verify the correctness of the information. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Seal:



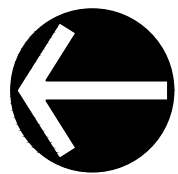
Signature: Dean Jones

Name: M. Dean Jones, P.E.

Date of Certification: December 12, 2022

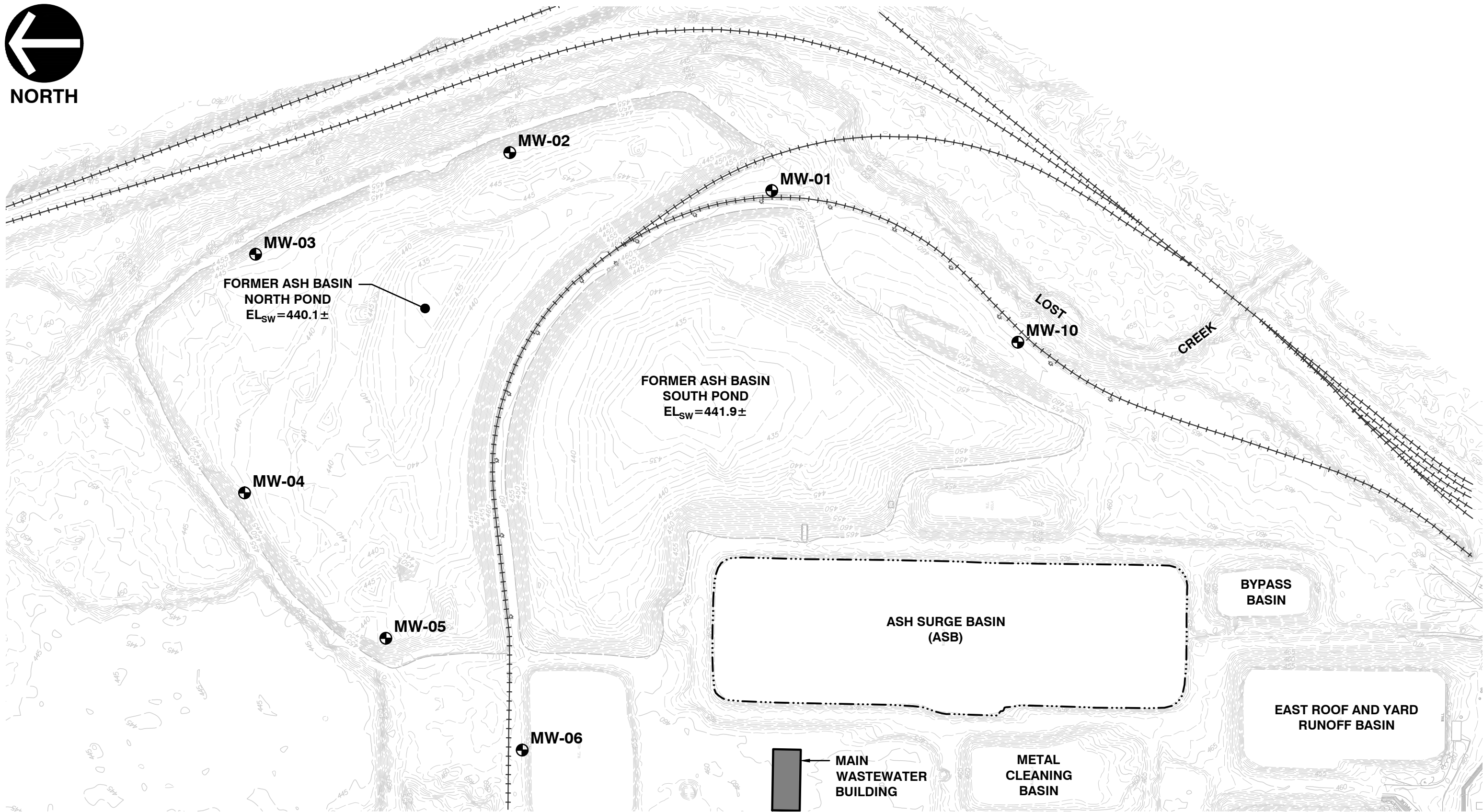
Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2023



NORTH

Z:\Projects\2018\180-205-CADD\Dwg\C101-FAB Hazard Assessment\180205-CV01-C101-Site Plan.dwg[LAYOUT] LS:(4/12/2018 - mkarpf) - LP: 12/9/2022 11:12 AM



**REFERENCE**

1. TOPOGRAPHIC INFORMATION BASED ON SURVEY BY RIDGELINE CONSULTANTS PERFORMED IN FEBRUARY AND MARCH 2016 AND APPENDED TO AERIAL SURVEY PERFORMED BY AEROMETRIC, INC. DATED JUNE 19, 2008.
2. SURFACE WATER ELEVATION, EL<sub>SW</sub>, DATED JUNE 23, 2017.

**LEGEND**

- TOPOGRAPHY (1-FOOT INTERVAL)
- WATER LINE
- MW-01 MONITORING WELL (LOCATION APPROXIMATE)

SCALE IN FEET



MAIN WASTEWATER BUILDING

METAL CLEANING BASIN

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POWERTON STATION  
 PEKIN, ILLINOIS

SITE PLAN

DRAWN BY: MSK	CHECKED BY: MDJ	APPROVED BY: MDJ	FIGURE NO.: 1
DATE: 04/12/2018	DWG SCALE: 1"=200'	PROJECT NO: 302-771.0322	

**Table 5: Midwest Generation Powerton Station CCR Surface Impoundment EAP Notification List**
**Plant Contacts:**

Name	Title	Contact Info
Joseph Kotas	Environmental Specialist	Office: 309-477-5216 Cell: 815-901-6549
Sunish Shah	Chemical Specialist	Office: 309-477-5243 Cell: 773-410-3225
Todd Mundorf	Plant Manager	Office: 309-477-5212 Cell: 847-456-4642
Chris Valentine	Operations Manager	Office: 309-477-5215 Cell: 309-201-1938
Mark Vannaken	Maintenance Manager	Office: 309-477-5221 Cell: 309-824-5686
Sunish Shah	Class K Wastewater Treatment Operator	Office: 309-477-5243 Cell: 773-410-3225

**Corporate Support:**

Name	Title	Contact Info (Cell Phone #)
Sharene Shealey	Director, Environmental	724-255-3220
Jill Buckley	Environmental Specialist	724-448-9732
Tony Shea	Senior Director - Environmental	609-651-6478
Dave Schrader	Senior Manager, Communications, East	267-295-5768 267-294-2860

**Emergency Response Agencies:**

Agency	Address	Contact Info
National Response Center (NRC)	NA	800-424-8802
Illinois Department of Natural Resources, Office of Water Resources	One Natural Resources Way, 2nd Floor Springfield, IL 62702-1271	8:30 a.m. – 5:00 p.m. 217-785-3334
Illinois Emergency Management Agency (IEMA)	110 East Adams Springfield, IL 62701	800-782-7860
Illinois Environmental Protection Agency (IEPA)	Bureau of Water 1021 North Grand Avenue East Springfield, IL 62794	217-782-3637
Tazewell County Emergency Management Agency Operations Center	21304 IL State Rt. 9 Tremont, IL 61568	Phone: 309-925-2271 24-Hr: 309-477-2234
Tazewell County ETSB: Dispatches to Fire, Police and Emergency Medical services	101 South Capitol Street Pekin, IL 61554	Emergency: 9-1-1 Non-Emergency: 309-478-5796
Pekin Police Department	111 South Capitol Street, #100 Pekin, IL 61554	Emergency: 9-1-1 Non-Emergency: 309-346-3132 Front Desk: 309-478-5330
Pekin Fire Department	3232 Court Street Pekin, IL 61554	Emergency: 9-1-1 Non-Emergency: 309-477-2388

**Environmental Response Contractors/Consultants:**

Contractor/Consultant	Address	Contact Info
Civil & Environmental Consultants, Inc. Dean Jones	1230 East Diehl Road, Suite 200 · Naperville, IL 60563	630-963-6026
SET Environmental - Project Manager JR Bonnot	450 Sumac Road Wheeling, IL 60090	847-850-1056
SET Environmental 24-hr Emergency Response		877-437-7455