

**EMERGENCY ACTION PLAN
ASH POND 2
JOLIET 29 STATION
UPDATED NOVEMBER 2022**

This Emergency Action Plan (EAP) was initially prepared pursuant to Title 40 of the Code of Federal Regulations (40 CFR) Part 257, Subpart D, §257.73(a)(3) for Ash Pond 2 at Midwest Generation, LLC (MWG) Joliet 29 Station (Station) in Joliet, Illinois. An October 2021 update of the initial EAP was prepared to comply with 35 Illinois Administrative Code (35 IAC) Part 845, Subpart E, §845.520(b)(3) by revising the code references. This November 2022 update includes an updated contact list provided as Table 5. The EAP is presented as follows:

Section 1.0: Definition of the events or circumstances involving the 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 an Ash Pond 2 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 Joliet Station 29 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 stating that the written EAP, and any subsequent amendment of the EAP, meets the requirements 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 Ash Pond 2 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 provides a listing of problems which may occur at Ash Pond 2, 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 Ash Pond 2. 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: Ash Pond 2 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: Ash Pond 2 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: Ash Pond 2 Event Definition, Evaluation and Action: Cracking

Indicator	Evaluation	Action
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: Ash Pond 2 Event Definition, Evaluation and Action: Animal Burrows and Holes

Indicator	Evaluation	Action
1A: Holes in the embankment, varying in size from about one inch in diameter to one 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 Ash Pond 2. 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, chemical specialist or designated alternate. 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 Ash Pond 2.

- (1) Notify the shift supervisor and environmental specialist or chemical specialist.
- (2) If unsafe conditions exist, the employee should evacuate the area.
- (3) Only the environmental specialist or chemical specialist shall have any official communication with non-employees or regulatory agencies, and only the communications director shall have any contact, and/or the media.

The environmental specialist, chemical specialist or designated alternate should follow these procedures in the event of a safety emergency involving Ash Pond 2:

- (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 potential inundation areas 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 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 and consultants will be used 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 Ash Pond 2. A site vicinity map is provided as Figure 1, and a site plan is provided as Figure 2, attached. Drawings depicting the locations of, and the downstream areas affected by, a potential failure of Ash Pond 2 were prepared by Geosyntec in October 16, 2016 and are provided in Appendix A.

3.1 Basin Locations and Descriptions

The physical address for Joliet Station 29 is Illinois & Michigan Canal State Trail, 1800 Channahon Road (U.S. Route 6) in Joliet, Illinois. As shown in Figure 1, the Station is bound by Channahon Road on the north and the Des Plaines River on the south. Ash Pond 2 is situated east of the Station Entrance/Guard House and Pond 1, and west of the Wastewater Treatment Plant immediately adjacent to U.S. Route 6 (see Figure 2). Ash Pond 2 is situated northeast of the Main Power Block Building.

From our observations and review of construction and engineering documentation provided by MWG, the lined ash pond was constructed with elevated earthen berms or embankments on three sides. The north side of the basin is at grade. Run-on is limited to precipitation contained within the earthen berm. Physical characteristics of the Ash Pond 2 are provided in Table 6, below.

Table 6: Basin Characteristics

	Ash Pond 2
Estimated Capacity (acre-feet)	45.0
Estimated Maximum Basin Depth (feet)	19
Elevation Maximum Crest (feet msl.)	535

3.2 Delineation of Downstream Areas

The potential impacts from failure of EAP - Ash Pond 2 were evaluated and reported by Geosyntec in the Hazard Potential Classification Assessment (HPCA), dated October 2016. A copy of the HPCA is contained on the CCR Rule Compliance Data and Information web site (<http://www.nrg.com/legal/coal-combustion-residuals/>).

Results of the HPCA indicate that Ash Pond 2 is classified as significant hazard potential CCR surface impoundments. The evaluation reports no loss of life resulting from failure of Ash Pond 2 is probable because no occupied buildings are located within the anticipated inundation areas. However, potential failure during flood conditions could result in off-site economic or environmental impacts. Inundation maps are provided in Appendix A.

4.0 ANNUAL FACE-TO-FACE MEETING

A face-to-face meeting or an exercise between representatives of Joliet 29 Station and the local emergency responders shall be offered and, if acceptable, be 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.

The 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: _____

Name: M. Dean Jones, P.E.

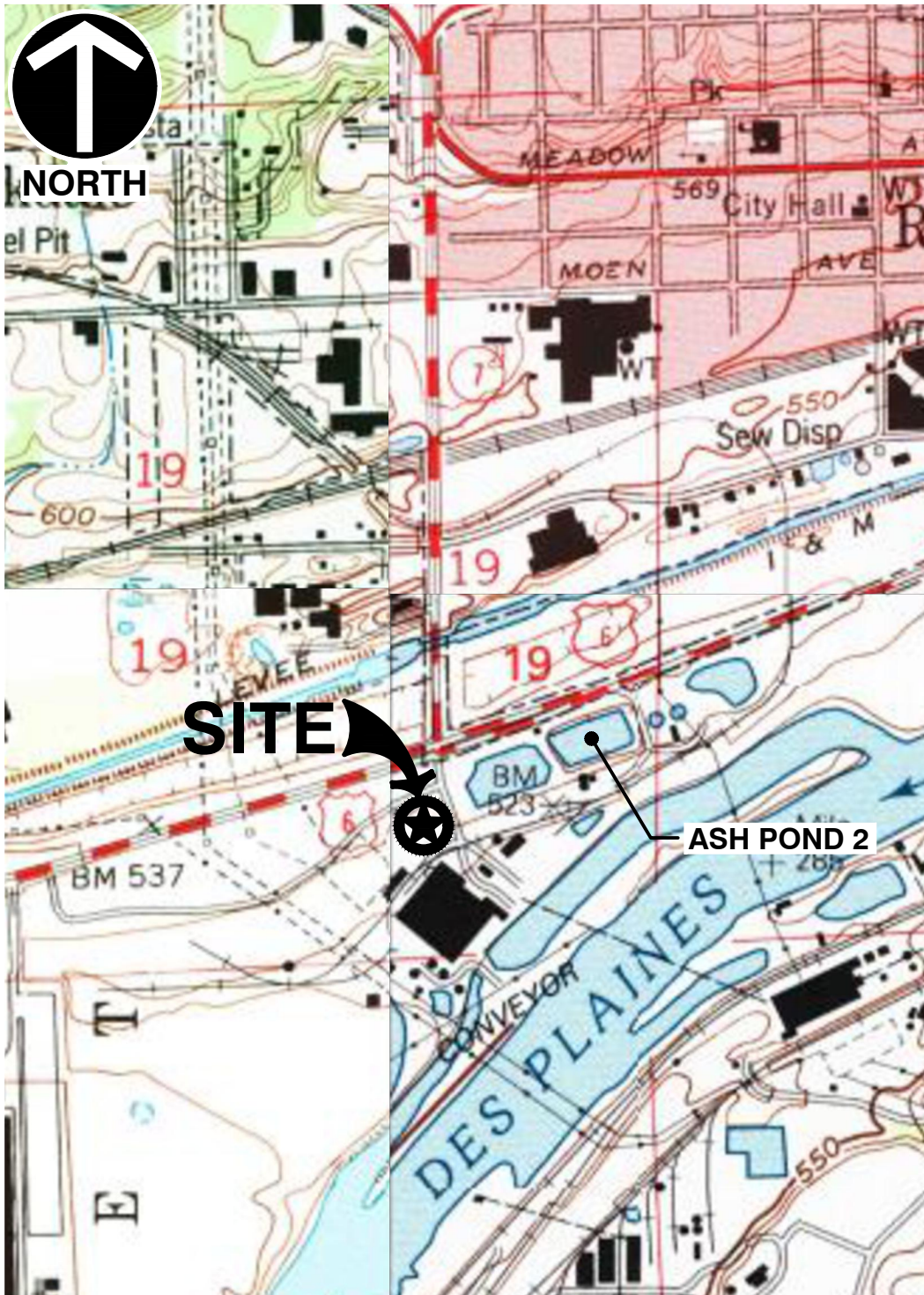
Date of Certification: November 30, 2022

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2023

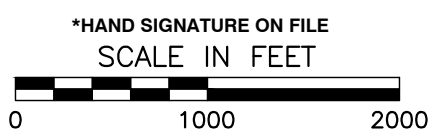
FIGURES

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REFERENCE

1. U.S.G.S. 7.5' TOPOGRAPHIC MAP, ELWOOD QUADRANGLE, ILLINOIS DATED: 1999.



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MIDWEST GENERATION LLC
 JOLIET 29 STATION
 ASH POND 2
 JOLIET, ILLINOIS

SITE VICINITY MAP

DRAWN BY: CAC	CHECKED BY: MDJ	APPROVED BY: MDJ*	FIGURE NO.:
DATE: 10/25/2021	DWG SCALE: 1"=1000'	PROJECT NO: 302-771.0121	1



NORTH

CHANNAHON ROAD (U.S. ROUTE 6)



DES PLAINES RIVER

REFERENCE

1. TOPOGRAPHIC INFORMATION PROVIDED BY AERO-METRIC, INC. DATE OF AERIAL PHOTOGRAPHY: JUNE 19, 2008.

LEGEND

TOPOGRAPHY
 (1-FOOT INTERVAL)

*HAND SIGNATURE ON FILE

SCALE IN FEET



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MIDWEST GENERATION LLC
JOLIET 29 STATION
ASH POND 2
JOLIET, ILLINOIS

SITE PLAN

DRAWN BY:	CAC	CHECKED BY:	MDJ	APPROVED BY:	MDJ*	FIGURE NO.:
DATE:	10/25/2021	DWG SCALE:	1"=100'	PROJECT NO.:	302-771.0121	2

F:\300-000\302-771\CADD\Dwg\302771-CV01-U29 EAP\302771-CV01-C102-Site Plan.dwg[LAYOUT] LS:(10/26/2021 12:11 PM) - LP: 10/26/2021 12:11 PM

TABLE 5

EAP NOTIFICATION LIST

**Table 5: Midwest Generation Joliet 29 Station CCR Surface Impoundment
EAP Notification List**

Plant Contacts:

Name	Title	Contact Info
Ms. Tori Countryman	Environmental Specialist	(O) 815-207-5489 (C) 779-279-2321
Mr. Harrison Estep	Chemical Specialist Class K WWT Operator	(O) 815-207-5416 (C) 773-617-7515
Mr. Phillip Raush	Station Director	(O) 815-207-5412 (C) 815-715-8532
Mr. David Leyva	Operations Manager	(O) 815-207-5402 (C) 815-409-6611
Mr. John Shields	Maintenance Planner	(O) 815-207-5415 (C) 815-409-6611

Corporate Support:

Name	Title	Contact Info
Ms. Sharene Shealey	Director, Environmental	(C) 724-255-3220
Ms. Jill Buckley	Environmental Manager	(C) 724-448-9732
Mr. Tony Shea	Director - Environmental Compliance	(O) 609-524-4923 (C) 609-651-6478
Mr. David Schrader	Stations Communications Director (point of public contact)	(O) 267-295-5768 (C) 267-294-2860

Emergency Response Agencies:

Agency	Address	Contact Info
National Response Center (NRC) - U. S. Army Corp of Engineers	Brandon Road Lock and Dam, Joliet, Illinois Illinois River; Des Plaines River 286.0 RDB	Phone: 800-424-8802 Emergency: 815-744-1714
Illinois Department of Natural Resources, Office of Water Resources	One Natural Resources Way, 2nd Floor Springfield, Illinois 62702-1271	8:30 a.m.-5:00 p.m. 217-785-3334
Illinois Emergency Management Agency (IEMA)	110 East Adams Street Springfield, Illinois 62701	800-782-7860
Illinois Environmental Protection Agency (IEPA)	Bureau of Water 1021 North Grand Avenue East Springfield, Illinois 62794	217-782-3637
Will County Emergency Management Agency Operations Center	302 North Chicago Street Joliet, Illinois 60432	Phone: 815-740-8351 24-hour: 815-740-0911
Will County ETSB: Dispatches to Fire, Police and Emergency Medical services	302 North Chicago Street Joliet, Illinois 60432	Emergency: 9-1-1 Non-Emergency: 815-740-8376
Rockdale Police Department	79 Moen Avenue Rockdale, Illinois 60436	Emergency: 9-1-1 Non-Emergency: 815-725-2171 Front Desk: 815-725-0360
Rockdale Fire Department	603 Otis Avenue Rockdale, Illinois 60436	Emergency: 9-1-1 Non-Emergency: 815-725-6928

Environmental Response Contractors/Consultants:

Contractor/Consultant	Address	Contact Info
Civil & Environmental Consultants, Inc.	1230 East Diehl Road, Suite 200 Naperville, Illinois 60563	630-963-6026
Bluff City Materials (Earthwork Contractor)	2252 Southwind Boulevard Bartlett, Illinois 60103	630-497-8700
SET Environmental (Spill Response)	450 Sumac Road Wheeling, Illinois 60090	847-850-1056 877-437-7455 (24-hour)
Heritage Environmental (Spill Response)	15330 Canal Bank Road Lemont, Illinois 60439	800-48-SPILL

APPENDIX A

GEOSYNTEC HPCA INUNDATION MAPS



**Joliet 29 - Ash Pond 2
Flood Conditions - Maximum Flow Depth**
Midwest Generation, LLC
Joliet, Illinois

Geosyntec
consultants

San Diego | October 2016

Figure
2

