Dynegy Midwest Generation, LLC

WOOD RIVER POWER STATION

CITY OF ALTON, MADISON COUNTY, ILLINOIS

Emergency Action Plan (EAP)

40 CFR § 257.73(a)(3)
Coal Combustion Residual (CCR) Impoundments & Related Facilities

- Primary East Ash Pond (NID # IL50536)
- West Ash Pond System (NID # IL50281)

Revision Date: June 15, 2017

Revision Record		
Revision	Description	Date
0	Original Issue	April 13, 2017
1	Background Information Updates	June 15, 2017

Qualified Professional Engineer Certification; Emergency Action Plan for the Wood River Power Station Primary East Ash Pond and West Ash Pond System.

In accordance with 40 CFR 257.73(a)(3)(iv), the owner or operator of a CCR unit that is required to prepare a written Emergency Action Plan under 40 CFR 257.73(a)(3) must obtain a certification from a qualified professional engineer stating that the written Emergency Action Plan meets the requirements of 40 CFR 257.73(a)(3).

I, Matthew Hoy, being a Professional Engineer in good standing in the State of Illinois, do hereby certify, to the best of my knowledge, information, and belief that:

1. the information contained in this Emergency Action Plan was prepared in accordance with the accepted practice of engineering; and

2. this Emergency Action Plan meets the requirements of 40 CFR 257.73(a)(3).

SIGNATURE _____ DATE 6/15/17

ADDRESS: Stantec Consulting Services Inc.
1859 Bowles Avenue Suite 250
Fenton MO 63026-1944

TELEPHONE: (636) 343-3880

WOOD RIVER POWER STATION
EMERGENCY ACTION PLAN
CCR IMPOUNDMENTS & RELATED FACILITIES

TABLE OF CONTENTS

List of Tables

List of Figures

WOOD RIVER POWER STATION
EMERGENCY ACTION PLAN
CCR IMPOUNDMENTS & RELATED FACILITIES

PART I – EAP NARRATIVE AND EXHIBITS

1 STATEMENT OF PURPOSE

The Wood River Power Station (Station) is located near the City of Alton in the Village of East Alton in Madison County, Illinois. The location is shown in Figure 1-1. The Station is a coal-fired electricity producing power plant owned and operated by Dynegy Midwest Generation, LLC, a subsidiary of Dynegy. The station which was retired as of June 1, 2016 and the last day of operation was May 31, 2016. This Emergency Action Plan (EAP) was prepared in accordance with 40 CFR § 257.73(a)(3) and covers the following Coal Combustion Residual (CCR) surface impoundments located at the site:

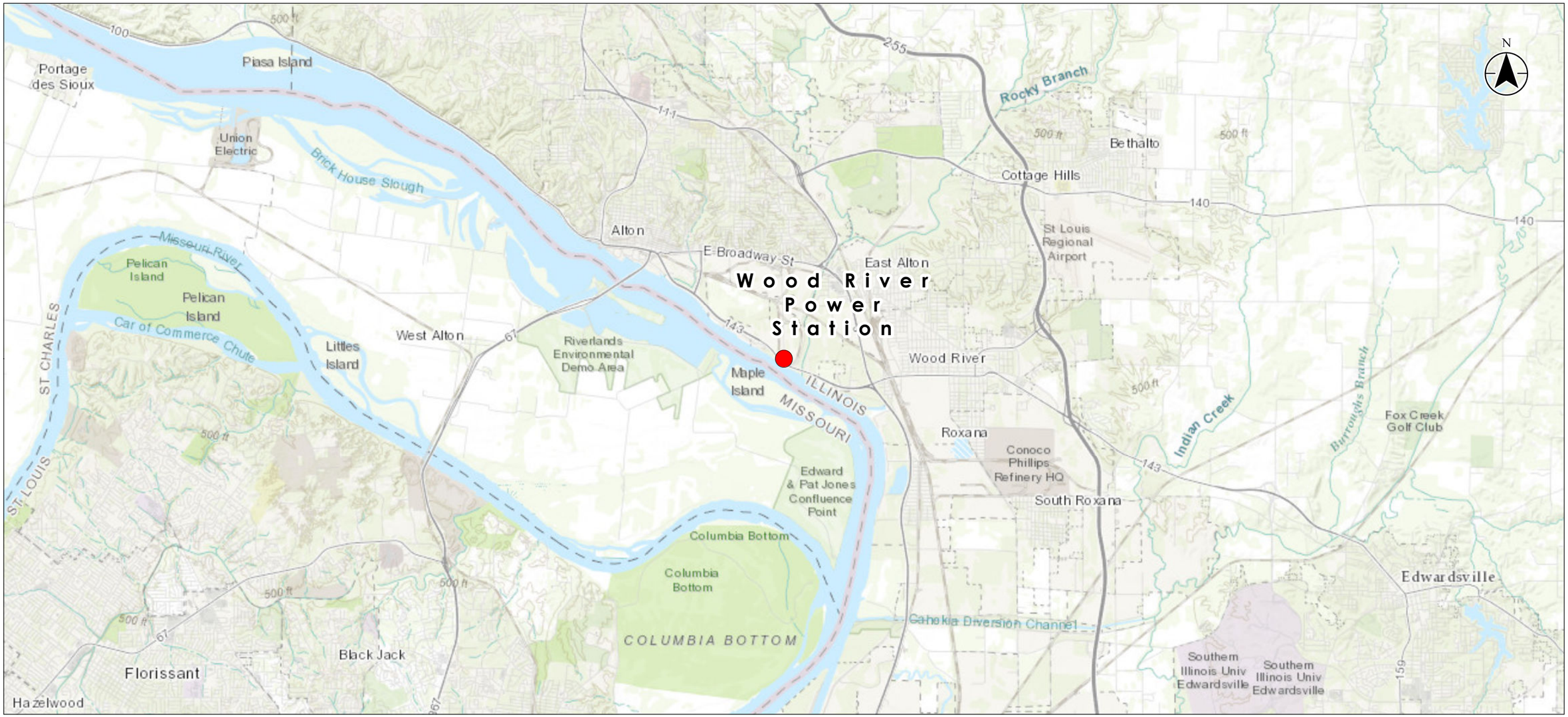
- Primary East Ash Pond (NID # IL50536)
- West Ash Pond System (NID # IL 50281)
    - West Ash Pond No. 1
    - West Ash Pond No. 2W
    - West Ash Pond No. 2E

The locations of these impoundments are shown in Figure 1-2. Section 6 of this EAP includes a description of each impoundment.

The purpose of this Emergency Action Plan (EAP) is to:

1. Safeguard the lives, as well as to reduce property damage, of citizens living within potential downstream flood inundation areas of CCR impoundments and related facilities at the Wood River Power Station.
2. Define the events or circumstances involving the CCR impoundments and related facilities at the Wood River Power Station that represent atypical operating conditions that pose a safety hazard or emergency and how to identify those conditions.
3. Define responsible persons, their responsibilities, and notification procedures in the event of a safety emergency.
4. Provide contact information of emergency responders.
5. Identify emergency actions in the event of a potential or imminent failure of the impoundments.
6. Identify the downstream area that would be affected by failure of the impoundments.
7. Provide for effective facility surveillance, prompt notification to local Emergency Management Agencies, citizen warning and notification responses, and preparation should an emergency occur.

Information provided by Dynegy was utilized and relied upon in preparation of this report.



0 1 2 3 Miles

1:126,720 (1" = 2 miles at original document size of 11x17)

Notes

1. Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
2. Basemap Source: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Stantec DYNEGY

Project Location
Latitude: 38.863714
Longitude: -90.134158
Madison County, Illinois

175605019
Prepared by EC on 2017-03-08
Technical Review by TS on 2017-03-29
Independent Review by MM on 2017-03-23

Client/Project
Wood River Power Station
Emergency Action Plan

Figure No.
1-1

Title
Location Map

Legend

CCR Surface Impoundment Boundary

0 1,000 2,000 Feet

1:12,000 (At original document size of 11x17)

Stantec DYNEGY

Project Location
Latitude: 38.863714
Longitude: -90.134158
Madison County, Illinois

175666013
Prepared by EC on 2017-03-08
Technical Review by TS on 2017-03-29
Independent Review by MM on 2017-03-23

Client/Project
Wood River Power Station
Emergency Action Plan

Figure No.
1-2

Title
CCR Impoundments

Notes
1. Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
2. Basemap Source: USDA-FSA-APFO Aerial Photography Field Office, Illinois State Geological Survey
3. Impoundment Boundaries Provided by Client (Dated 9/9/2015)

2 COMMUNICATION

To facilitate understanding among everyone involved in implementing this EAP, four response levels are used to identify the condition of an impoundment. These are:

Response Levels:

- **Level 0:** Normal conditions and routine operations, including surveillance and initial investigation of unusual conditions and effects of storm events.
- **Level 1:** Potentially hazardous condition exists, requiring investigation and possible corrective action.
- **Level 2:** Potential failure situation is developing; possible mode of failure is being assessed; corrective measures are underway.
- **Level 3:** Failure is occurring or is imminent, public protective actions are required.

The 4-Step Incident Response Process is outlined in Figure 2-1. This should be used in conjunction with the Notification Flowchart (Figure 2-2) and EAP Decision Tree (Figure 2-3). Section 4 provides guidance tables for determining Response Levels and a table providing emergency actions to be taken given various situations. Table 2-1 lists contact information for the emergency responders.

Figure 2-1. Summary/Sequence of Tasks 4-Step Incident Response Process

Step 1: Detection, Evaluation, and Response Level Determination

Sequence of Tasks:

- Notify 911, EAP Coordinator, and Dynegy Dam Safety Manager of unusual condition detected and confer on next steps needed.
- Conduct technical evaluation of conditions as needed.
- Determine Response Level based on evaluation. **(Table 4-1)**
- Reset Response Level as revised evaluations warrant.

Step 2: Notification

Sequence of Tasks:

- Notify authorities, designated personnel, and external response partners of change in Response Level, using the Notification Flowchart. **(Figure 2-2)**
- *Re-notify authorities, designated personnel, and external response partners as Response Level is changed.*

Step 3: Emergency Actions

Sequence of Tasks:

- Perform emergency actions with goal of saving the impoundment and minimizing impacts to life, property, and environment. **(Table 4-3)**
- Take continuous actions to include situation assessment, information sharing, remediation, and public safety advisories or warnings, as warranted.
- *Revise action plan as changes in conditions warrant.*

Step 4: Follow-up

Sequence of Tasks:

- Document conditions and decisions in the Emergency Incident Log.
- Notify authorities, designated personnel, and external response partners that condition is stabilized; limit incident termination declarations to conditions at the site.
- Conduct and document after-action review of incident and response.

Figure 2-2. Notification Flowchart

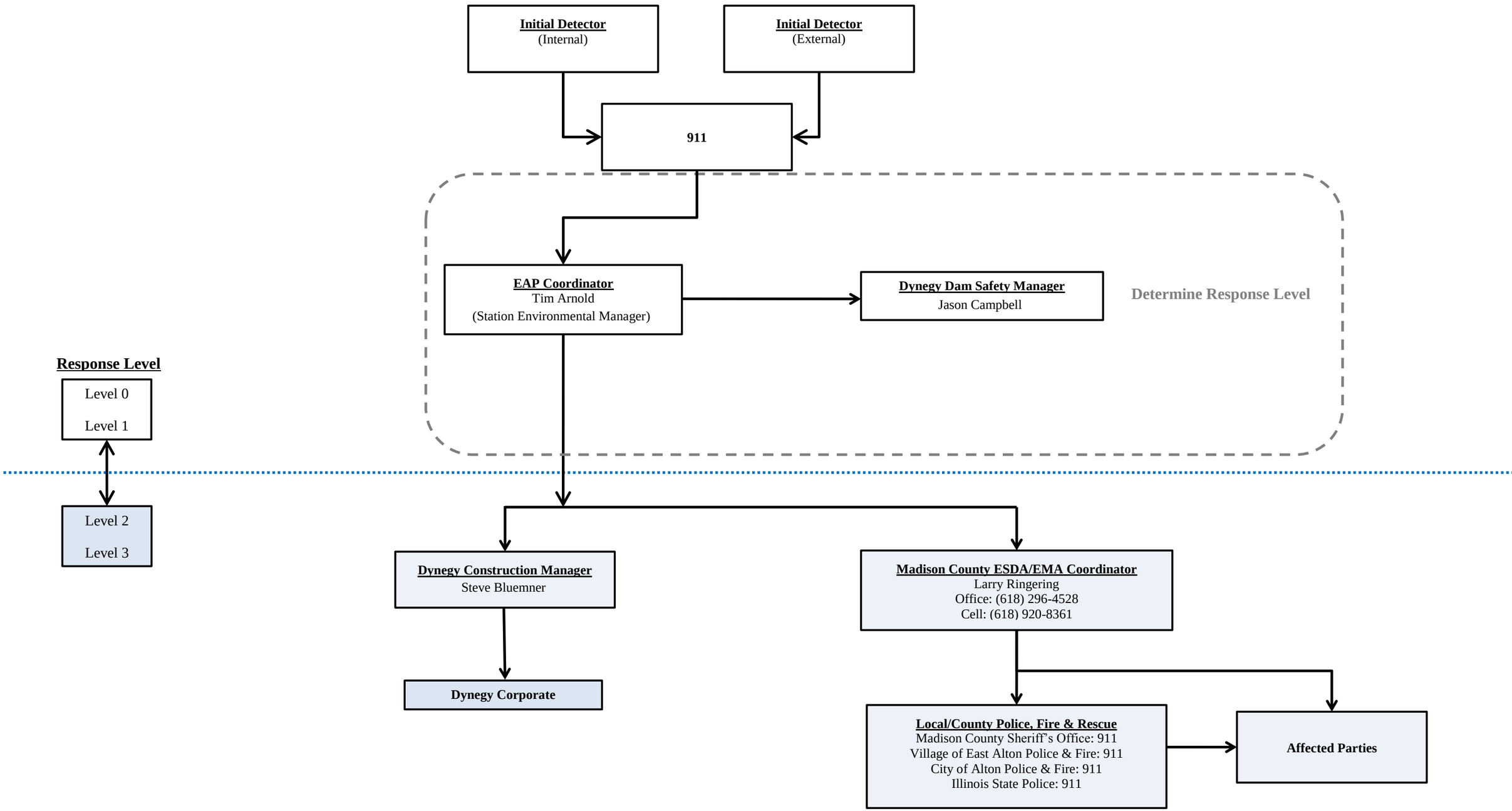


Figure 2-3. EAP Response Process Decision Tree

Note: At any given below, if failure is imminent or actively occurring **CALL 911 IMMEDIATELY** to notify emergency responders and then continue with process afterwards.

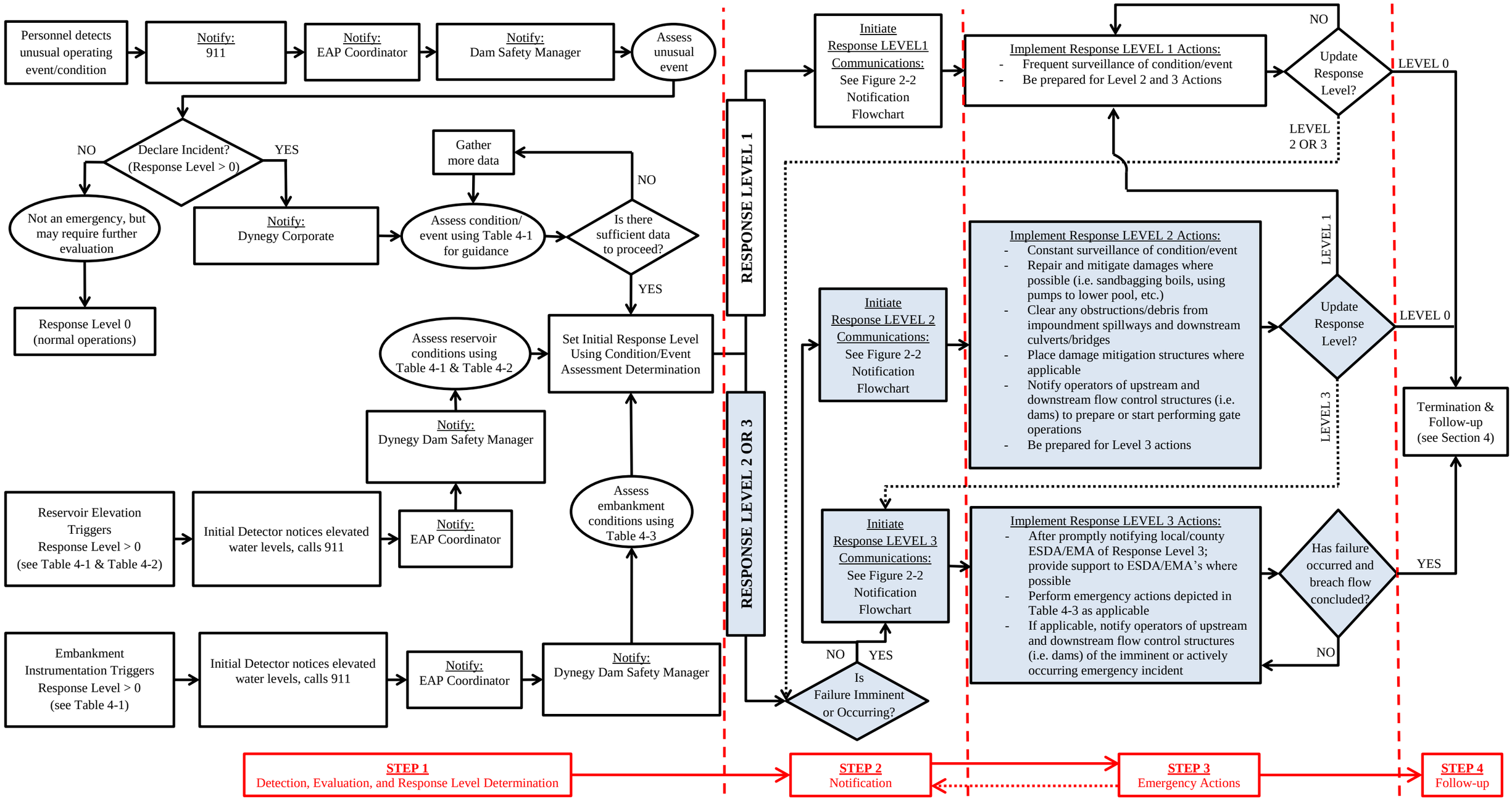


Table 2-1. EAP Emergency Responders

Position	Name	Phone #
Internal Contacts		
Wood River Power Station		
EAP Coordinator	Tim Arnold	(618) 225-9043
Dynegy Corporate Operations		
Dam Safety Manager	Jason Campbell	(618) 792-8488
Construction Manager	Steve Bluemner	
External Contacts		
Local / County ESDA/EMA, Police, & Fire		
Madison County ESDA/EMA	Larry Ringering	(618) 296-4528, (618) 920-8361
Madison County Sheriff's Office	John D. Lakin	(618) 692-4433
Village of East Alton Police Department	Darren Carlton	(618) 259-6212
Village of East Alton Fire Department	Rodney Palmer	(618) 259-2984
City of Alton Police Department	Jason A. Simmons	(618) 463-3505
City of Alton Fire Department	Bernie Sebold	(618) 463-3565
State Emergency Management Agencies & Organizations		
IDNR-OWR Dam Safety Section Manager	Paul Mauer	(217) 782-4427

3 EAP ROLES AND RESPONSIBILITIES

Table 3-1 provides a summary of the EAP roles during an emergency event.

Table 3-1. Summary of EAP Roles

Entity	Role Description
Dynegy Emergency Response Team (ERT)	**ERT:** Dynegy personnel responsible for EAP implementation, distribution, updates/maintenance, and training activities. The *ERT* is comprised of the following roles; 1. **Dynegy Corporate:** Dynegy corporate entity, committee, team, or position with relevant responsibility for a given generating station. 2. **Station Management:** Since the Station is retired, all day-to-day operation issues related to this EAP should be referred to the EAP Coordinator, Dam Safety Manager, and Dynegy Corporate. 3. **Dam Safety Manager:** Personnel that is most knowledgeable about the design and technical operation of facilities at a given Station. 4. **EAP Coordinator:** Personnel responsible for implementing the EAP and associated activities. **Emergency Event – EAP Responsibilities** 1. Respond to emergencies at the Station. 2. Verify and assess emergency conditions. 3. Notify and coordinate as appropriate with participating emergency services disaster agencies or emergency management agencies (ESDA/EMA's), emergency responders, regulatory agencies, and all other entities involved or affected by this EAP. 4. Take corrective action at the Station. 5. Declare termination of emergencies at the Station.
Madison County ESDA/EMA	1. Receive Response Level reports from *Dynegy Corporate* through *EAP Coordinator*. 2. Coordinate emergency response activities with local authorities: police, fire and rescue, etc. 3. Coordinate notification of public as necessary through established channels, which may include door-to-door contact. 4. Coordinate notification activities to affected parties within inundation areas. 5. Evaluate risk to areas beyond the inundation areas, communicate needs to the *Dynegy Corporate* and/or *EAP Coordinator*, and coordinate aid as appropriate. 6. Responsible for declaring termination of an emergency condition off-site upon receiving notification of an emergency status termination from the *Dynegy Corporate*. 7. If necessary, coordinate with *State ESDA/EMA*.
City of Alton Police, Fire, and Rescue	1. Receive alert status reports from the *ERT* or the *Madison County ESDA/EMA*. 2. If necessary, notify Affected Parties and general public within inundation areas (see Section 7). 3. Render assistance to Madison County ESDA/EMA, as necessary. 4. Render assistance to *Dynegy Corporate*, as necessary.
Madison County Police, Fire and Rescue, and Emergency Services	1. Receive alert status reports from the *ERT* or the *Madison County ESDA/EMA*. 2. If necessary, notify affected parties within the inundation area. 3. Provide mutual aid to other affected areas, if requested and able.

4 EAP RESPONSE

The 4-Step Incident Response Process is shown in Figure 2-1. The Decision Tree shown in Figure 2-3 provides a flowchart for the various elements of the response process. Upon reaching Step 4 of the response process (termination and follow-up), the EAP Coordinator is responsible for notifying the ESDA/EMA's that the condition of the dam/impoundment has been stabilized. The purpose of this section is to provide specific information that can be used during a response. This information is provided in the following tables:

- Table 4-1 provides guidance for determining the response level.
- Table 4-2 provides impoundment pool level trigger elevations.
- Table 4-3 lists emergency actions to be taken depending on the situation.

Table 4-1. Guidance for Determining the Response Level

Event	Situation	Response Level
Spillway flow (see Table 4-2 for relevant elevations)	Primary spillway flow is not causing active erosion and impoundment water surface elevation is below auxiliary spillway crest elevation (if equipped).	Level 0
	Impoundment water surface elevation is at or above auxiliary spillway crest elevation (if equipped). No active erosion caused by spillway flow.	Level 1
	Spillway flow actively causing minor erosion that is not threatening the control section or dam/impoundment stability.	Level 2
	Spillway flow that could result in flooding of people downstream if the reservoir level continues to rise.	Level 2
	Abnormal operation of the spillway system due to blockage or damage that could lead to flooding.	Level 2
	Spillway flow actively eroding the soil around the spillway that is threatening the control section (e.g. undermining) or dam/impoundment stability.	Level 3
	Spillway flow that is flooding people downstream.	Level 3
Embankment overtopping (see Table 4-2 for relevant elevations)	Impoundment water surface elevation at or below typical normal pool fluctuation elevation.	Level 0
	Impoundment water surface elevation above typical normal pool fluctuation elevation.	Level 1
	Impoundment water surface elevation above high normal pool fluctuation elevation.	Level 2
	Impoundment water surface elevation at or above embankment crest elevation.	Level 3
Seepage	New seepage areas in or near the dam/impoundment with clear flow.	Level 1
	New seepage areas with cloudy discharge or increasing flow rate.	Level 2
	Heavy seepage with active erosion, muddy flow, and/or sand boils.	Level 3
Sinkholes	Observation of new sinkhole in impoundment area or on embankment.	Level 2
	Rapidly enlarging sinkhole and/or whirlpool in the impoundment.	Level 3

Table 4-1. Guidance for Determining the Response Level

Event	Situation	Response Level
Embankment cracking	New cracks in the embankment greater than ¼ inch wide without seepage.	Level 1
	Any crack in the embankment with seepage.	Level 2
	Enlarging cracks with muddy seepage.	Level 3
Embankment movement	Visual signs of movement/slippage of the embankment slope.	Level 1
	Detectable active movement/slippage of the embankment slope or other related effects (tension cracking, bulges/heaves, etc.) that could threaten the integrity of the embankment.	Level 2
	Sudden or rapidly proceeding slides of the embankment slopes.	Level 3
Embankment Monitoring Equipment (piezometers, inclinometers, surface displacement mounts, etc.)	Instrumentation readings beyond historic normal.	Level 1
	Instrumentation readings indicate the embankment is susceptible to failure.	Level 2
	Instrumentation readings indicate embankment is at threshold of failure or is currently failing.	Level 3
Earthquake or other event	Measurable earthquake felt or reported on or within 100 miles of the impoundment.	Level 1
	Earthquake or other event resulting in visible damage to the impoundment or appurtenances.	Level 2
	Earthquake or other event resulting in uncontrolled release of water or materials from the impoundment.	Level 3
Security threat	Verified bomb threat or other physical threat that, if carried out, could result in damage to the impoundment.	Level 2
	Detonated bomb or other physical damage that has resulted in damage to the impoundment or appurtenances.	Level 3
Sabotage/ vandalism	Damage to impoundment or appurtenance with no impact to the functioning of the impoundment.	Level 1
	Modification to the impoundment or appurtenances that could adversely impact the functioning of the impoundment. This would include unauthorized operation of spillway facilities.	Level 2
	Damage to impoundment or appurtenances that has resulted in seepage flow.	Level 2
	Damage to impoundment or appurtenances that has resulted in uncontrolled water release.	Level 3

Table 4-2. Impoundment Trigger Elevations

Impoundment	Embankment Crest Elevation	Auxiliary Spillway Crest Elevation	Normal Pool Fluctuation	
			Typical	High
Primary East Ash Pond	453 ft. (4)	Not Applicable	450.75 ft. (4)	451.5 ft. (4)
West Ash Pond System				
West Ash Pond No. 1	~ 445 ft. (2)	Not Applicable	Dry	Dry
West Ash Pond No. 2W	427.0 ft. (3)	Not Applicable	412.0 ft.	420.0 ft.
West Ash Pond No. 2E	432.0 ft. (1)	Not Applicable	430.0 ft.	431.0 ft.

Notes:
1) Drawings E-WDR1-C141 to -C155 (Proposed Pond #2 is West Ash Pond No. 2E). Specifically drawing E-WDR1-C147.
2) 2015 Topographic Survey, Weaver Consultants Group.
3) Drawings E-WDR1-C1 to -C10 are the record drawings for West Ash Pond No. 2W. Specifically drawing E-WDR1-C2.
4) EAP Primary East Ash Pond, March 2015.

Table 4-3. Step 3: Emergency Actions

Condition	Description of Condition	Action to be Taken
High Water Level/ Large Spillway Release	See Table 4-1 and Table 4-2 for elevations and triggering water levels associated with the impoundments and spillways covered by this EAP.	1. Assess cause of increased reservoir stage, especially during fair weather conditions. 2. Determine Response Level. 3. Make proper notifications as outlined in the Figure 2-2 Notification Flowchart. 4. Perform additional tasks as determined through consultation with the ERT. 5. Make notifications if condition worsens such that downstream flooding is imminent. **Response Level 0**: require enhanced surveillance 3 times per day **Response Level 1**: contact internal chain of command and external response partners as necessary; inspect impoundment minimum 1 time per hour **Response Level 2**: contact internal chain of command; notify ESDA/EMA's and notify external response partners. ESDA/EMA's notify affected parties. **Response Level 3**: contact internal chain of command; notify ESDA/EMA's and notify external response partners. ESDA/EMA's notify affected parties of emergency incident.
Seepage	Localized new seepage or boil(s) observed along downstream face / toe of earthen embankment with muddy discharge and increasing but controllable discharge of water.	1. Measure and record feature dimensions, approximate flow rate, and relative location to existing surface features. Take photos. Document location on a site plan and in inspection notes. 2. Determine Response Level. 3. Make proper notifications as outlined in the Figure 2-2 Notification Flowchart. 4. ERT (with Dam Safety Manager as lead) to determine mitigation actions. The following actions may apply: a) Place a ring of sand bags with a weir at the top towards the natural drainage path to monitor flow rate. If boil becomes too large to sand bag, place a blanket filter over the area using non-woven filter fabric

Table 4-3. Step 3: Emergency Actions

Condition	Description of Condition	Action to be Taken
		and pea gravel. Attempt to contain flow in such a manner (without performing any excavations) that flow rates can be measured. Stockpile gravel and sand fill for later use, if necessary. b) Inspect the embankment and collect piezometer, water level and seepage flow data daily unless otherwise instructed by the Dam Safety Manager. Record any changes of conditions. Carefully observe embankment for signs of depressions, seepage, sinkholes, cracking or movement. c) Maintain continuous monitoring of feature. Record measured flow rate and any changes of condition, including presence or absence of muddy discharge. 5. Make notifications as outlined in the lower portion of the Notification Flowchart (Figure 2-2) if condition worsens such that failure is imminent.
Sabotage and Miscellaneous Other Issues	Criminal action with significant damage to embankment or structures where significant repairs are required and the integrity of the facility is compromised—condition appears stable with time.	1. Contact law enforcement authorities and restrict all access (except emergency responders) to impoundment. Restrict traffic on embankment crest to essential emergency operations only. 2. Determine Response Level. 3. Make internal notifications as outlined in the upper portion of the Notification Flowchart (Figure 2-2). 4. In conjunction with the Dam Safety Manager, assess extent of damage and visually inspect entire embankment and ancillary structures for additional less obvious damage. Based on inspection results, confirm if extent of damage to various components of the impoundment warrants a revised Response Level and additional notifications. 5. Perform additional tasks as directed by the ERT. 6. Make notifications if conditions worsen.
Embankment Deformation	**Cracks:** New longitudinal (along the embankment) or transverse (across the embankment) cracks more than 6 inches deep or more than 3 inches wide or increasing with time. New concave cracks on or near the embankment crest associated with slope movement.	1. Measure and record feature dimensions, approximate flow rate, and relative location to existing surface features. Take photos. Document location on a site plan and in inspection notes. 2. Restrict traffic on embankment crest to essential emergency operations only. 3. Determine Response Level. 4. Make notifications as outlined in the Figure 2-2 Notification Flowchart. 5. ERT (with Dam Safety Manager as lead) to determine mitigation actions. The following actions may apply: a) Place buttress fill against base of slope immediately below surface feature. Stock pile additional fill. b) Place sand bags as necessary around crack area to divert any storm water runoff from flowing into crack(s). 6. As directed by the Dam Safety Manager, additional inspection and monitoring of the dam may be required. Items may include; inspect the dam on a schedule determined by the Dam Safety Manager; collect piezometer and water level data; and record any changes of condition. Carefully observe dam for signs of depressions, seepage, sinkholes, cracking or movement. 7. Make notifications as outlined in the Figure 2-2 Notification Flowchart if conditions worsen such that failure is imminent.
Embankment Deformation (cont.)	**Slides / Erosion:** Deep slide / erosion (greater than 2 feet deep) on the	1. Measure and record feature dimensions, approximate flow rate, and relative location to existing surface features. Take photos. Document location on a site plan and in inspection report.

Table 4-3. Step 3: Emergency Actions

Condition	Description of Condition	Action to be Taken
	embankment that may also extend beyond the embankment toe but does not encroach onto the embankment crest and appears stable with time.	2. Restrict traffic on embankment crest to essential emergency operations only. 3. Determine the Response Level. 4. Make notifications as outlined in the Figure 2-2 Notification Flowchart. 5. ERT (with Dam Safety Manager as lead) to determine mitigation actions. Additional actions may include the following items. a) Place sand bags as necessary around slide area to divert any storm water runoff from flowing into slide(s). b) Increase inspections of the dam; collect piezometer and water level data; and record any changes of condition. During inspections, carefully observe dam for signs of depressions, seepage, sinkholes, cracking or movement. 6. Make notifications as outlined in the Figure 2-2 Notification Flowchart if conditions worsen such that failure is imminent.
	Sinkholes: Small depression observed on the embankment or within 50 feet of the embankment toe that is less than 5 feet deep and 30 feet wide or which is increasing with time.	1. Slowly open drain gates to lower pool elevation. 2. Measure and record feature dimensions, approximate flow rate, and relative location to existing surface features. Take photos. Document location on a site plan and in inspection notes. 3. Restrict traffic on embankment crest to essential emergency operations only. 4. Determine Response Level. 5. Make notifications as outlined in the Figure 2-2 Notification Flowchart. 6. ERT (with Dam Safety Manager as lead) to determine mitigation actions. Additional actions may include the following items: a) Backfill the depression with relatively clean earth fill (free of organic materials) generally even with surrounding grade and slightly mounded (6 to 12 inches higher) in the center in order to shed storm water away from the depression. Stock pile additional fill. b) Increase inspections of the dam; collect piezometer and water level data daily unless otherwise instructed by Dam Safety Manager; and record any changes of condition. Carefully observe dam for signs of depressions, seepage, sinkholes, cracking or movement. 7. Make notifications as outlined in the Figure 2-2 Notification Flowchart if conditions worsen such that failure is imminent.
Gate Malfunction or Failure	Sluice gate damaged structurally (sabotage, debris, etc.) with uncontrolled release of water at a constant volume. Condition appears stable.	1. Close any other gates, if open. 2. Determine Response Level. 3. Make notifications as outlined in the Figure 2-2 Notification Flowchart. 4. Obtain instructions from the Dam Safety Manager to determine if there are other methods to stop or slow down the flow of water. 5. If conditions worsen such that failure is imminent, make notifications as outlined in the lower portion of the Figure 2-2 Notification Flowchart

5 PREPAREDNESS

The intent of this section is to provide information that will be utilized during a response. Emergency supplies and equipment were maintained at the Station while it was in active operation; however, since its closure in 2016 much of these have been removed. Emergency responders are advised to contact the EAP Coordinator regarding the availability of supplies and equipment onsite.

Table 5-1 is a partial list of area suppliers for many of the items typically needed during an emergency response.

A coordination meeting shall be conducted annually between representatives of Dynegy Midwest Generation, LLC and local emergency responders. This meeting may be in the form of a face-to-face meeting, tabletop exercise, or additional training regarding the EAP.

Table 5-1. Supplier Addresses

Supply / Rental Item(s)	Supplier Contact Information	Distance from Site (miles)	Address
Sandbags	NYP Corp.	23	1416 North Broadway, St. Louis, MO. 63102 800-331-2445 800-524-1052 (emergency)
Gravel, Sand, & Riprap	Central Stone Co.	9	14200 Lewis and Clark Blvd., Florissant, MO. 63034 (314) 355-7272
	Kimaterials Inc.-Lohr Quarry	15	9434 Godfrey Rd., Godfrey, IL 62035 (618) 466-0352
Concrete, Cement, Sand, Grout	Kienstra Illinois LLC	5	201 W. Ferguson Ave., Wood River, IL 62095 (618) 251-6345
Portable Pumps, Rental Equipment	Sunbelt Rentals	11	1081 Geil Dr., Granite City, IL 62040 (618) 931-4284
	One Source Equipment Rentals, Inc.	13	10 Central Industrial Dr., Granite City, IL 62040 (618) 451-2139
	United Rentals	20	5076 Mid America Ct., Collinsville, IL 62234 (618) 345-6050
	Rain for Rent	19	3711 Horseshoe Lake Rd., Pontoon Beach, IL 62040 (618) 931-0901
	Water Movers Equipment Rental	25	1800 S. 3rd Street, St. Louis, MO 63104 (636) 717-2220
General Hardware & Supply	Home Depot	6	1710 Homer Adams Pkwy., Alton, IL 62002 (618) 465-5803
	Lowes	6	1619 Homer Adams Pkwy., Alton, IL 62002 (618) 474-9900
	Alton Equipment Rental – Supply	3	650 W. St. Louis Ave., East Alton, IL 62024 (618) 259-7881

6 FACILITY / IMPOUNDMENT DESCRIPTION

The impoundments included in this EAP are described as follows and illustrated in Figure 1-2. Table 6-1 contains additional geometric details for each impoundment.

The Wood River Power Station is located southeast of the City of Alton in Madison County, Illinois on the east bank of the Mississippi River at the confluence of the Wood River. The Primary East Ash Pond is located north of the power station and east of the Norfolk & Western Railroad and Chessen Lane.

Primary East Ash Pond: This impoundment is located northeast of the plant and occupies the largest area and volume of the impoundments included in this EAP. Nominally it has an embankment about 33 feet in height with a 20-foot crest width at elevation 453 feet and 3:1 side slopes. About 1/3 of the 58 acres occupied by the impoundment is open water with a variable operating elevation normally maintained at about 450.75 feet.

West Ash Pond No. 1 (WAP-1): This cell is one of 4 ringed by a common embankment that form the West Ash Pond System impoundment. WAP-1 is the largest of the cells at about 21.8 acres measured at its crest. The embankment is about 25- to 30-feet in height with a crest width of 20- to 30-feet at an approximate elevation of 445-feet. WAP-1 is dry, though 5- to 10-feet of ponding could occur between the top of stacked ash and crest of the embankment. WAP-1 has an embankment about 15-feet higher than the adjacent cells; it also has the largest amount of in-place waste in the West Ash Pond System.

West Ash Pond No. 2E (WAP-2E): This cell is about 11.2 acres in size. The crest elevation is about 431-feet. The embankment height is in the range of 15-20 feet and the crest width is about 20-feet. WAP-2E has about 3-5 feet of additional capacity. WAP-2E is about 10-feet higher than WAP-1 and WAP-2W and would spill over to those cells in the event of overtopping.

West Ash Pond No. 2W (WAP-2W): This cell is about 21.1 acres in size. The embankment elevation is about 427-feet. It averages about 20-feet in height with a crest width of about 20- to 25-feet. WAP-2W currently has a sizeable operating pool and can hold approximately 12-15 feet of additional ponding. This cell is included in the EAP due to the potential for a progressive failure of West Ash Pond 1 and 2E leading to a failure of 2W.

Table 6-1. Station Impoundment Characteristics

Feature/Parameter	Primary East Ash Pond	West Ash Pond System		
		West Ash Pond No. 1	West Ash Pond No. 2W	West Ash Pond No. 2E
Maximum Embankment Height	33 ft. (4)	~ 25 ft. (3)	~ 20 ft. (3)	~ 20 ft. (3)
Length of Dam	~2100 ft. (3)	~1500 ft. (3)	~1700 ft. (3)	~1100 ft. (3)
Crest Width	20 ft. (4)	~ 15 ft. (3)	15.0 ft. (2)	16.0 ft. (1)
Crest Elevation	453 ft. (4)	~ 445 ft. (3)	427.0 ft. (2)	432.0 ft. (1)
Reservoir Area at Top of Dam	~ 58 acres (3)	~ 33.5 acres (3)	~ 33.7 acres (3)	~ 19 acres (5)
Storage Capacity at Top of Dam	435 acre-ft. (5)	435 acre-ft.		120 acre-ft. (5)
Primary Spillway Type	Concrete outfall structure w/ 3 inlet pipes and open top (4)	None	None	24-Inch Ductile Iron Riser, 24-Inch HDPE Barrel
Primary Spillway Crest Elevation	450 ft. (4)	Not Applicable	Not Applicable	428.0 ft. (1)
Storage Capacity at Primary Spillway Elevation	422.5 acre-ft. (4)	Not Applicable	Not Applicable	108 acre-ft.
Reservoir Area at Normal Water Surface Elevation	14 acres	Not Applicable	Not Applicable	6 acres
Auxiliary Spillway Type	None (4)	None	None	None
Auxiliary Spillway Crest Elevation	Not Applicable (4)	Not Applicable	Not Applicable	Not Applicable

Notes:

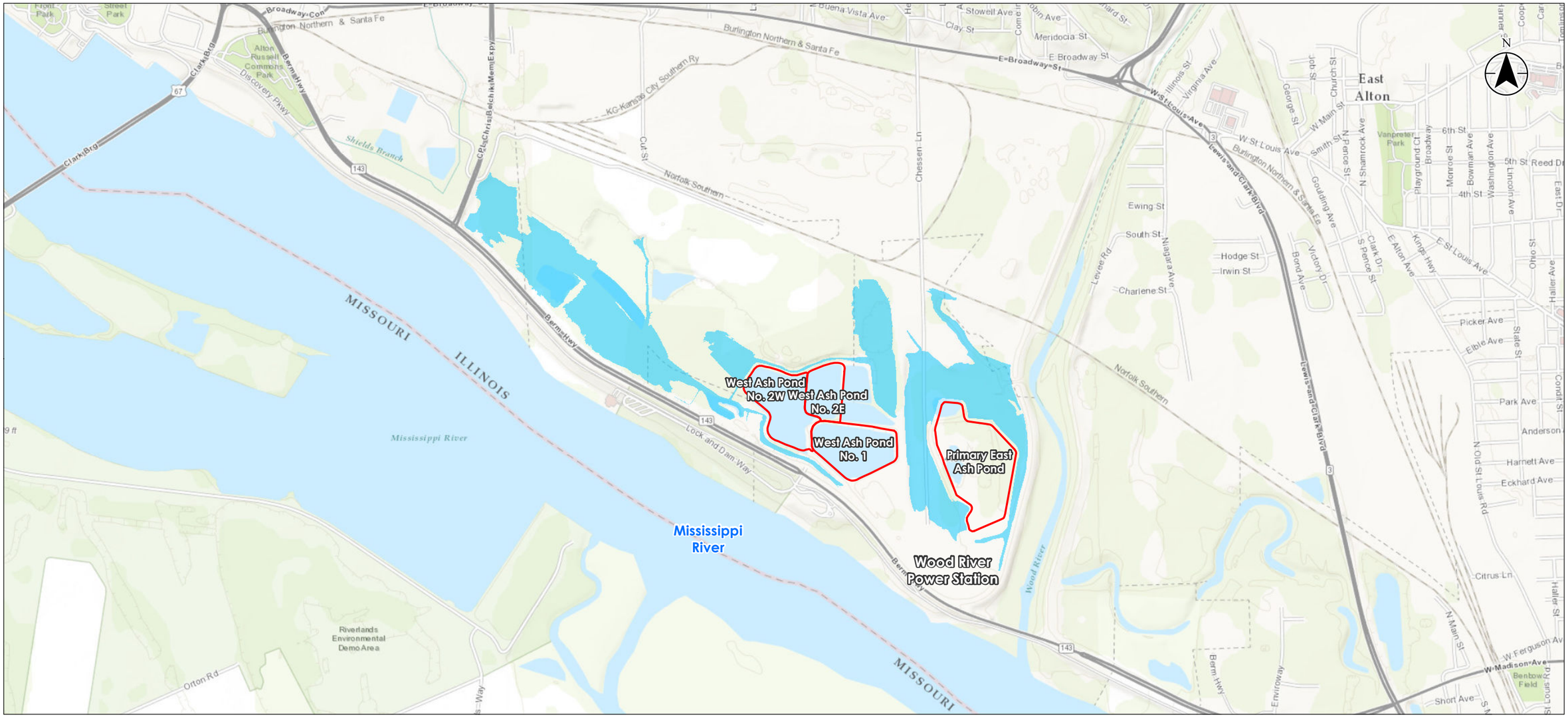
1) Drawings E-WDR1-C141 to -C155 (Proposed Pond #2 is West Ash Pond No. 2E). Specifically drawing E-WDR1-C147.
2) Drawings E-WDR1-C1 to -C10 are the record drawings for West Ash Pond No. 2W. Specifically drawing E-WDR1-C2.
3) 2015 Topographic Survey, Weaver Consultants Group.
4) "Wood River Power Station, Alton, Illinois, East Ash Impoundment Dam, IDNR Dam Safety Program, Emergency Action Plan, IDNR Permit No. DS2011079, Dam ID No. IL50536" Dynegy Midwest Generation , L.L.C. Revised March, 2015
5) "Coal Combustion Waste Impoundment Dam Assessment Report, Site 19 Wood River Power Station, Dynegy Midwest Generation, Inc. Alton, Illinois", Dewberry & Davis L.L.C., June 2009.

7 BREACH INUNDATION MAP AND POTENTIAL IMPACTS

An inundation map for the Primary East Ash Pond and the West Ash Pond System potential breach scenarios is provided in Figure 7-1. It is the Madison County ESDA/EMA's responsibility to keep a current list of affected parties/properties to contact in the case of emergencies that result in Response Level 2 or 3. This list should encompass all properties within and adjacent to the probable inundation extents shown in the provided maps.

The methodology used to identify probable inundation extents for potential breach scenarios varied as a function of the impoundment size, location, surrounding topography, and surrounding structures/facilities/waterbodies. Inundation limits for the Primary East Ash Pond were based on the elevations published in the prior EAP for that impoundment. To develop those elevations URS (now AECOM) performed a volumetric analysis of the pond volume and potential breach inundation limit. Stantec developed breach inundation limits for the West Ash Pond System using a similar approach. All inundation limits were plotted using LiDAR topographic mapping data obtained from the Illinois Height Modernization Program.

The approximate inundation area is illustrated in Figure 7-1.



Legend

- CCR Surface Impoundment Boundary
- Expected Breach Inundation Area

0 2,000 4,000 Feet

1:24,000 (1" = 2000' at original document size of 11x17)

Notes

1. Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
2. Basemap Source: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
3. Impoundment Boundaries Provided by Client (Dated 9/9/2015)

Stantec DYNEGY

Project Location
Latitude: 38.863714
Longitude: -90.134158
Madison County, Illinois

175666013
Prepared by EC on 2017-03-08
Technical Review by TS on 2017-03-29
Independent Review by MM on 2017-03-23

Client/Project
Wood River Power Station
Emergency Action Plan

Figure No.
7-1

Title
Inundation Map
Primary East Ash Pond, West Ash Pond No. 1, West Ash Pond No. 2W, West Ash Pond No. 2E