Indianapolis Power & Light Company
Eagle Valley Generating Station

Ash Pond System
Emergency Action Plan
for CCR Rule Compliance

Prepared by

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INDIANAPOLIS POWER & LIGHT COMPANY
EAGLE VALLEY GENERATING STATION
ASH POND SYSTEM EMERGENCY ACTION PLAN

ISSUE SUMMARY & CERTIFICATION

This is to confirm that this report has been prepared, reviewed, and approved in accordance with Sargent & Lundy's Standard Operating Procedure SOP-0405, which is based on ANSI/ISO/ASSQC Q9001 Quality Management Systems.

Rev.	Issue Purpose	Issue Date	Prepared By	Reviewed By	Approved By	Pages Affected
0	Use	03/31/2017	T. Dehlin	D. Nielson	P. Miner	All

I certify that this emergency action plan meets the requirements of 40 CFR 257.73(a)(3).

I certify that this report was prepared by me or under my direct supervision and that I am a registered professional engineer under the laws of the State of Indiana.

Certified By: _____ Date: 3-31-17

Seal:

3-31-17
Exp 7-31-18

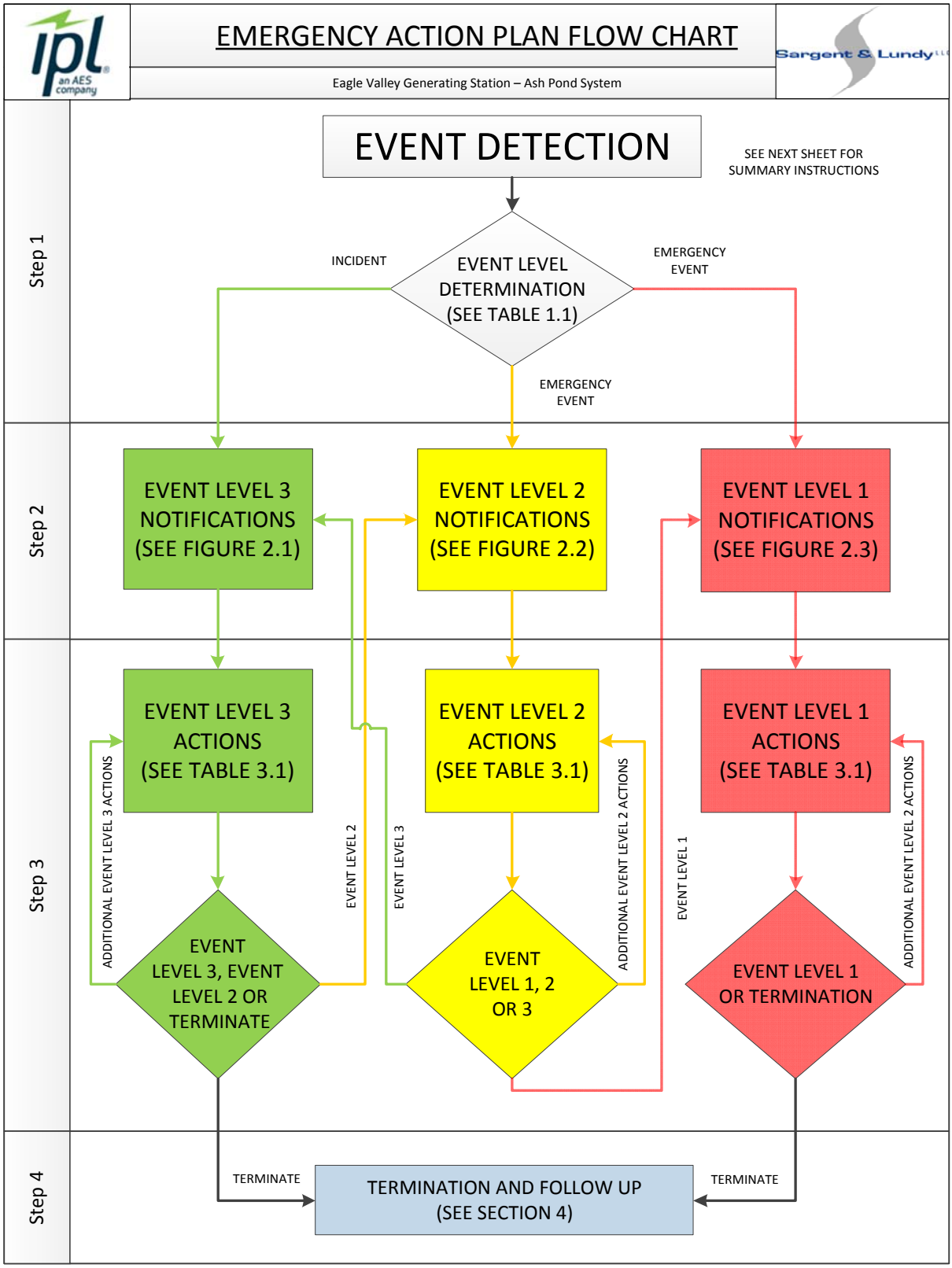
EMERGENCY ACTION PLAN FLOW CHART
Eagle Valley Generating Station – Ash Pond System
Step 1
Step 2
Step 3
Step 4
EVENT DETECTION
SEE NEXT SHEET FOR SUMMARY INSTRUCTIONS
INCIDENT
EVENT LEVEL DETERMINATION (SEE TABLE 1.1)
EMERGENCY EVENT
EMERGENCY EVENT
EVENT LEVEL 3 NOTIFICATIONS (SEE FIGURE 2.1)
EVENT LEVEL 2 NOTIFICATIONS (SEE FIGURE 2.2)
EVENT LEVEL 1 NOTIFICATIONS (SEE FIGURE 2.3)
EVENT LEVEL 3 ACTIONS (SEE TABLE 3.1)
EVENT LEVEL 2 ACTIONS (SEE TABLE 3.1)
EVENT LEVEL 1 ACTIONS (SEE TABLE 3.1)
ADDITIONAL EVENT LEVEL 3 ACTIONS
EVENT LEVEL 2
EVENT LEVEL 3
ADDITIONAL EVENT LEVEL 2 ACTIONS
EVENT LEVEL 1
ADDITIONAL EVENT LEVEL 2 ACTIONS
EVENT LEVEL 3, EVENT LEVEL 2 OR TERMINATE
EVENT LEVEL 1, 2 OR 3
EVENT LEVEL 1 OR TERMINATION
TERMINATE
TERMINATION AND FOLLOW UP (SEE SECTION 4)
TERMINATE

FIGURE i

SUMMARY OF EMERGENCY ACTION PLAN PROCESS

There are four steps that must be followed anytime an incident or emergency event is detected at the Eagle Valley Generating Station – Ash Pond System. The steps are:

Step 1: Event Detection and Level Determination
Step 2: Notification and Communication
Step 3: Expected Actions
Step 4: Termination and Follow-up

Incidents and emergency events are defined in Section 1.2.1 of this Emergency Action Plan (EAP). Specific actions required for each step will depend on the severity of the situation as defined during Step 1. The actions required for each step of the EAP are summarized graphically on the EAP Flow Chart (Figure i) and are described in the corresponding EAP Section. A summary of each step is provided below.

Step 1 - Event Detection and Level Determination

During the initial step, an incident or emergency event is detected within the Ash Pond System and classified by the EAP Coordinator (or designee) into one of the following event levels:

Event Level 3: Incident, slowly developing
Event Level 2: Emergency Event, rapidly developing
Event Level 1: Emergency Event, imminent dike failure or flash flooding

Information to help the EAP Coordinator (or designee) determine which of the above event levels is applicable is provided in Section 1 of this EAP.

Step 2 - Notification and Communication

After the event level has been determined, notifications are made in accordance with the appropriate notification flow chart provided in Section 2 of this EAP.

Step 3 - Expected Actions

After the initial notifications are made, the EAP Coordinator (or designee) should refer to Table 3.1 and confer with the Engineering Director (or designee) to develop and execute appropriate preventative actions. During this step of the EAP, there is a continuous process of taking actions, assessing the status of the situation, and keeping others informed through communication channels established during the initial notifications. The EAP may go through multiple event levels during Steps 2 and 3 as the situation either improves or worsens.

Step 4 - Termination and Follow-Up

Once the event has ended or has been resolved, termination and follow-up procedures should be followed as outlined in Section 4 of this EAP. EAP operations can only be terminated after completing operations under Event Level 3 or 1. If Event Level 2 is declared, the operations must be designated Event Level 3 or 1 before terminating the EAP operations.

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TABLE OF CONTENTS (CONT.)

PURPOSE

The purpose of the EAP is to reduce the risk of human loss of life and injury during an incident or emergency event at the Eagle Valley Generating Station – Ash Pond System.

A secondary purpose of the EAP is to minimize the potential for property damage during an incident or emergency event at the Eagle Valley Generating Station – Ash Pond System. The intent of the EAP is to identify problems early and repair them before they result in failure of any of the dikes at the Eagle Valley Generating Station.

ASH POND SYSTEM

The location and layout of the ash ponds and associated dikes at the Ash Pond System of the Eagle Valley Generating Station is shown on Figure 5.2. There are three active ash ponds within the Ash Pond System. The ponds are identified as Pond A, Pond B, and Pond C. Construction details of the perimeter dikes for these ponds are available on file in the EAP office at the station. Former Ponds D and E were regraded prior to October 19, 2015, such that these former ponds can no longer impound water.

Because the station ceased power-generating operations in April 2016, only miscellaneous low volume wastewater flows are conveyed to the Ash Pond System for sedimentation. Pond A serves as the station's initial settling pond and directs wastewater to Pond B through two 24-inch-diameter corrugated metal pipes. After undergoing secondary sedimentation in Pond B, the wastewater subsequently flows through two more 24-inch-diameter corrugated metal pipes. Following the final sedimentation of the finer waste constituents in Pond C, the treated water discharges through a concrete outlet structure (National Pollutant Discharge Elimination System-permitted Outfall 103) into the Discharge Canal.

EAP ANNUAL REVIEW AND PERIODIC TEST

This EAP document will require an annual review and update to stay current. A periodic test of the EAP procedures is also required every five years to ensure continued effectiveness. For annual review and revision procedures, see Appendix D.

REVISIONS

For revision procedures, see Appendix D.

Revision No.	Date	Revisions Made
0	03/31/2017	EAP published in IDNR 2012 format

Revised pages inserted in this EAP by:

_____
(Signature)

_____
(Printed Name)

_____
(Date)

SECTION 1.
EVENT DETECTION AND LEVEL DETERMINATION

This section of the EAP describes the first step that must be followed whenever an incident or emergency event is detected at the Eagle Valley Generating Station – Ash Pond System. The layout and location of ash ponds and associated dikes for the Ash Pond System at the Eagle Valley Generating Station is shown on Figure 5.2. This section also describes event detection and information to assist the EAP Coordinator (or designee) in determining the appropriate level for the event.

1.1 EVENT DETECTION

Incidents or emergency events may be detected by various means including but not limited to the following:

1. Results of inspections.
2. Instrument readings on the dikes or in the plant.
3. Notification by local emergency services personnel, especially during a severe weather or other natural event such as an earthquake.
4. Notification by on-site employees.
5. Notification by off-site personnel or neighbors.

After any incident or emergency event is detected and reported to the EAP Coordinator, the EAP Coordinator (or Acting EAP Coordinator) is responsible for determining the level of the event. If the Local Emergency Services Agency receives a 911 call regarding observations of an incident or emergency event at the Ash Pond System, the dispatcher shall first contact the EAP Coordinator. The EAP Coordinator shall determine the appropriate event level (as defined in Section 1.2.2) and advise the dispatcher of the event level.

1.2 EVENT LEVEL DETERMINATION

1.2.1 Incidents and Emergency Events

An incident is defined as an event, which takes place, or a condition, which is slowly developing, that is not normally encountered in the routine operation of the Ash Pond System, or necessitates a variation from Standard Operating Procedures. Such events are more common than emergency conditions and often offer time to conduct preplanned responses to the slowly developing situation. If addressed in a timely manner, such events can often be prevented from progressing into a much worse event. An incident requires operations in accordance with Event Level 3 of this EAP.

An emergency event is defined as an event, which takes place, or a condition, which develops, that is of a serious nature that may endanger the dikes of the Ash Pond System, or endanger persons or property, and demands immediate attention. An emergency event requires immediate operations in accordance with Event Level 2 or 1 of this EAP.

1.2.2 Level Determination

The EAP Coordinator shall be responsible for defining incidents or emergency events as one of the three following event levels:

Event Level 3 - This is an incident that is defined as a slowly developing situation that may endanger the structural integrity of the Ash Pond System dikes. This event level also involves a determination that it will be possible to retain the structural integrity of the Ash Pond System dikes and avoid release of fluids and ash.

Event Level 2 - This is an emergency event that is defined as rapidly developing and could quickly lead to dike failure and flash flooding downstream of the Ash Pond System. This event level also involves a determination that it may be possible to retain the structural integrity of the Ash Pond System dike and avoid release of fluids and ash beyond the perimeter of the existing dike involved. All decisions to prevent this occurrence must fully consider the safety of those involved in any repairs to be undertaken. If fluid levels within the ash pond in question cannot be reduced significantly to prevent release, the possibility of repair should not be considered.

Event Level 1 - This is an emergency event that is defined as imminent dike failure and the possibility of flash flooding downstream of the dike. This event may include the determination that it will not be possible to retain the structural integrity of the Ash Pond System dikes to avoid release of fluids and ash.

1.2.3 Level Determination Guidance

Table 1.1 shall be used as a guide for determining the appropriate event level. This table attempts to be all inclusive; however, an event or condition may arise that is not covered in this table. In the circumstance of multiple events occurring within the Ash Pond System with conflicting event levels, always designate the higher event level as the governing event level.

1.2.4 Roles, Responsibilities, and Authority

The EAP personnel for the Eagle Valley Generating Station Ash Pond System include the following:

- EAP Coordinator – Designated Station Employee familiar with the Ash Pond System.
- Engineering Director – Designated Station Engineer familiar with the Ash Pond System.
- Warning/Evacuation Director – Local Fire or Police Department Employee familiar with Eagle Valley Generating Station and the Ash Pond System.
- Public Relations Director – Designated IPL Employee trained to understand principal elements of this EAP.
- On-Call Engineer – Registered Indiana Professional Engineer with special expertise and experience in geotechnical engineering and the design and operation of ash pond dikes.

The EAP Coordinator shall function as the EAP operations coordinator and/or Incident Manager during any of the three event levels of operation described in this EAP. The EAP Coordinator has the authority to take the necessary actions described in this EAP. As the situation requires and as time permits, the

EAP Coordinator should consult with the Engineering Director before initiating notifications described in this EAP. In the case of Event Levels 2 and 1, the EAP Coordinator and Engineering Director should consult with the On-Call Engineer throughout the decision process regarding actions to be undertaken.

The EAP Coordinator is responsible for providing initial, timely, and accurate notifications to the Warning/Evacuation Director and the Public Relations Director after an Event Level 2 or 1 has been determined. The EAP Coordinator is also responsible for providing subsequent updates of the situation to the Warning/Evacuation Director to assist in making timely and accurate decisions regarding warning and evacuation responsibilities.

Once an Event Level 3 or 1 is terminated, the EAP Coordinator is responsible to submit to the Engineering Director, as soon as possible, an accurate summary document of the field observation and activities of the event.

The Warning/Evacuation Director is primarily responsible for coordinating the preparation to evacuate people downstream of the Eagle Valley Generating Station, as well as the implementation of the evacuation itself. Should an incident or emergency situation be detected by someone outside of the station, the Warning/Evacuation Director should notify the EAP Coordinator so that the EAP Coordinator can then notify other interested parties.

The Engineering Director is responsible for assisting in technical aspects of the Ash Pond System dikes, event level determination and evaluation, and anything that pertains to the condition of the dikes within the Ash Pond System, including any necessary follow-up activities. The Engineering Director will also assist in performing annual reviews and issuing updates to this EAP.

TABLE 1.1 - EVENT LEVEL DETERMINATION GUIDANCE

Event	Observation	Event Level
Flooding and Overtopping	In the event of potential flooding, the water surface elevation of each pond would be observed using the installed staff gauges and compared to each Event Level's specified threshold, which was developed from the elevations provided in Table 1.2. For an Event Level 3 to be declared as a result of flooding, the pond water surface elevation, h, would be as follows: Pond A: $624.5 \text{ ft} < h \leq 625 \text{ ft}$ Pond B: $616.5 \text{ ft} < h \leq 617 \text{ ft}$ Pond C: $613.5 \text{ ft} < h \leq 614 \text{ ft}$	3
	For an Event Level 2 to be declared as a result of flooding, no water would be overtopping the perimeter dikes, and the pond water surface elevation would be as follows: Pond A: $625 \text{ ft} < h \leq 625.5 \text{ ft}$ Pond B: $617 \text{ ft} < h \leq 617.5 \text{ ft}$ Pond C: $614 \text{ ft} < h \leq 616.5 \text{ ft}$	2

TABLE 1.1 - EVENT LEVEL DETERMINATION GUIDANCE

Event	Observation	Event Level
Flooding and Overtopping	For an Event Level 1 to be declared as a result of flooding, some waves may be observed to be flowing over the tops of the perimeter dikes, and the pond water surface elevation would be as follows: Pond A: $h > 625.5$ ft Pond B: $h > 617.5$ ft Pond C: $h > 616.5$ ft	1
Earthquake and Aftershocks	This minimum event level will be declared any time an earthquake occurs within 50 miles of the station regardless of the earthquake magnitude. A field inspection of the Ash Pond System dikes shall immediately commence to determine if an Event Level 2 or 1 is warranted.	3
	This is the minimum event level to be declared in the event that the post-earthquake inspections of the Ash Pond System indicate damage has occurred to the ash pond perimeter dikes, but there is no indication of fluids escaping from the ponds. Observed damage may include, but not be limited to, sloughing, vertical or horizontal cracks, and/or bulging.	2
	This event level will be declared in the event that the post-earthquake inspections indicate that there are some fluids escaping from the pond through the Ash Pond System perimeter dikes.	1
Seepage and Erosion	This event level should be declared upon discovery of seepage; or, in other words, a slow escape of liquid through the earthen material of any ash pond dike. The discovery of seepage may also coincide with the discovery of surface scouring and erosion. For an Event Level 3, the seepage should be clear and clean of suspended solids and of a relatively low flow rate. This event level may also be declared upon observation of spongy feeling, soft, wet soils located near the downstream toe of a dike.	3
	This event level should be declared when a significant increase in the seepage flow rate is observed or a discoloration of the flow is observed. This event level should also be declared if minor erosion is observed on the surface of the dike. Erosion can be defined as the scouring of the surface of the dike such that soil material has visibly been removed from the dike surface.	2
	This event level should be declared upon discovery of seepage flow that contains visible evidence of solids or any other indication that significant internal or external erosion is occurring. Such external erosion may be evident by the presence of a significant flow path or erosion channel on the surface of the dike.	1
Cracking and other Movements	This event level should be declared upon discovery of a new crack greater than ½" but less than 1" in width or observation of movement of the dike which may include sloughing or bulging.	3
	This event level should be declared upon observation of significantly increased cracking (cracks greater than 1" in width) or increased movement areas, but there is no evidence of seepage flow from the pond.	2

TABLE 1.1 - EVENT LEVEL DETERMINATION GUIDANCE

Event	Observation	Event Level
Cracking and other Movements	This event level should be declared upon observation of significantly increased cracking (cracks greater than 1" in width) or increased movement areas **and** there is evidence of seepage flow from the pond, such as the sloughed area is moist or water is visibly flowing out of the dike.	1
Discharge Piping Valve Failure or Blocked Discharge Pipes	This event level should be declared upon discovery of a blocked discharge pipe or a malfunctioning discharge valve. This event level should be declared even if the valve cannot be closed.	3
	This event level should be declared upon discovery of a blocked discharge pipe or a malfunctioning discharge valve and the pond water surface elevation, h, is as follows: Pond A: $625 \text{ ft} < h \leq 625.5 \text{ ft}$ Pond B: $617 \text{ ft} < h \leq 617.5 \text{ ft}$ Pond C: $614 \text{ ft} < h \leq 616.5 \text{ ft}$	2
	This event level should be declared upon discovery of a blocked discharge pipe or a malfunctioning discharge valve and the pond water surface elevation, h, is as follows: Pond A: $h > 625.5 \text{ ft}$ Pond B: $h > 617.5 \text{ ft}$ Pond C: $h > 616.5 \text{ ft}$	1
Sabotage	This event level should be declared if Sabotage is ever suspected to have occurred at any location within the Eagle Valley Generating Station and there is no visible evidence of leakage from the Ash Pond System dikes.	3
	This event level should be declared if Sabotage is ever determined to have occurred at any location within the Eagle Valley Generating Station and there is no visible evidence of leakage from the Ash Pond System dikes.	2
	This event level should be declared if Sabotage is ever determined to have occurred at any location within the Eagle Valley Generating Station and there is visible evidence of leakage from the Ash Pond System dikes.	1

TABLE 1.2 – POND DIKE ELEVATIONS AND MAXIMUM SURFACE WATER ELEVATIONS

Pond Name	Existing Minimum Dike Crest Elevation[1] (feet)	Maximum Design Water Surface Elevation[1] (feet)
Pond A	626	624.5
Pond B	618	616.5
Pond C	617	613.5

[1] Elevations are with respect to the North American Vertical Datum of 1988 (NAVD88).

SECTION 2.
NOTIFICATION AND COMMUNICATION

This section of the EAP describes the appropriate notifications that should be made after the EAP Coordinator has determined the event level as an Event Level 3, 2, or 1. This section also outlines the communication systems that are available for making notifications as well as a Public Affairs Plan with a sample media release and a list of media contacts. Notifications should be made in accordance with the appropriate Notification Flow Chart provided in this Section (Figures 2.1, 2.2, and 2.3).

2.1 COMMUNICATION SYSTEMS

Every effort will be made to communicate the occurrence of an incident or event to the EAP Coordinator as soon as possible. Communication regarding the event details will be made by plant personnel observing the situation using systems most available at the time that the event is observed. Methods of communication available include, in order of preference; cell phones, radios, GAI-Tronics, pagers, or e-mails. The EAP Coordinator should then contact all other interested parties in accordance with the appropriate Notification Flow Chart by telephone.

2.2 SUGGESTED PRESCRIPTED MESSAGES FOR EAP COORDINATOR

The following prescripted messages may be used as a guide to communicate the status of an event. Keep in mind that clarity and brevity are the most important qualities of these messages.

Event Level 3

- This is the Emergency Action Plan Coordinator. I am making this call in accordance with the Eagle Valley Ash Pond System EAP.
- An incident has been detected at the Ash Pond System.
- The EAP has been activated, currently at an incident level (Level 3).
- If a problem occurs, flooding along the White River and around the Eagle Valley Generating Station is possible.
- The situation is being monitored to determine if any evacuation warnings are necessary.
- We will keep you apprised of the situation. The best telephone number to reach me during this event is ... (state the best number to reach you).

Event Level 2

- This is the Emergency Action Plan Coordinator. I am making this call in accordance with the Eagle Valley Ash Pond System EAP.
- Problems have occurred with the Ash Pond System.
- The EAP has been activated, currently at the emergency level (Level 2).
- Flooding along the White River and around the Eagle Valley Generating Station is possible.
- Prepare to limit access to (1) the White River and low-lying areas along the banks of the White River between the Blue Bluff Road Bridge and the State Road 39 Bridge, and (2) to station areas near the ash pond dikes and the discharge canal.
- We will keep you apprised of the situation. The best telephone number to reach me during this event is ... (state the best number to reach you).

Event Level 1

- This is the Emergency Action Plan Coordinator. I am making this call in accordance with the Eagle Valley Ash Pond System EAP.
- Problems have occurred with the Ash Pond System.
- The EAP has been activated, currently at the highest emergency level (Level 1).
- Flooding on station property and along the White River will occur.
- Immediately establish restricted access areas on the White River and in low-lying areas along the banks of the White River between the Blue Bluff Road Bridge upstream of the station and the State Road 39 Bridge downstream of the station.
- Immediately instruct plant personnel to move to higher ground away from the Ash Pond System and the Discharge Canal.
- We will keep you apprised of the situation. The best telephone number to reach me during this event is ... (state the best number to reach you).

2.3 PUBLIC AFFAIRS PLAN

In the event of an incident or an emergency condition, the Public Relations Director will be alerted and briefed on the situation. The Public Relations Director will prepare and deliver a message for public release based on the existing conditions and information from the Engineering Director or designee, or other sources.

Preparation of warning messages should begin as soon as their potential need is apparent so that they can be issued promptly upon determination of a Level 2 or Level 1 event. Where time is available for its preparation, the initial message should contain all pertinent information. However, in some cases, an emergency condition may be declared with little or no advance notice. The following example messages provide a model for the first announcements in such cases for Event Levels 2 and 1. Subsequent announcements should provide additional details.

Announcement for Possible Dike Failure Problem (Event Level 2)

The Indianapolis Power & Light Company announced at (time) today that an emergency condition existed around the Eagle Valley Generating Station Ash Pond System dikes due to (general description of problem). The Ash Pond System is located approximately four miles upstream from the state Road 39 Bridge over the White River, north of Martinsville, Indiana in Morgan County.

The IPL spokesperson said that actions were underway to prevent failure of the Ash Pond System dikes and there is no immediate danger of the dikes failing. However, as a precautionary measure, those located on the White River or in low-lying areas along the banks of the White River downstream of the Blue Bluff Road Bridge and upstream of the State Road 39 Bridge should prepare to evacuate.

Additional Information will be released as promptly as possible.

Announcement for Possible Dike Failure Imminent or in Progress (Event Level 1)

URGENT, URGENT: The Indianapolis Power & Light Company announced at (time) today that an emergency condition existed around the Eagle Valley Generating Station Ash Pond System due to (general description of problem). The Ash Pond System is located approximately four miles upstream from the State Road 39 Bridge over the White River, north of Martinsville, Indiana.

Attempts to save the dikes are underway but their success cannot be determined as of yet. Anyone located on the White River or in low-lying areas along the banks of the White River downstream of the Blue Bluff Road Bridge and upstream of the State Road 39 Bridge should evacuate to higher ground **IMMEDIATELY!**
If the dike fails, it will take less than 30 minutes for the flood wave to travel from the dike breach to the State Road 39 Bridge. Areas closer to the station will be flooded sooner.

Additional information will be released as promptly as possible.

Media Contacts

The National Weather Service shall be the primary source through which emergency announcements are released to the news media. Several other radio and television stations that are likely to provide coverage to the area in danger are also included below in the case that the primary source cannot be reached.

Primary Source
NATIONAL WEATHER SERVICE (24-hour telephone number):.....(317)-856-0367

Secondary Sources (Shall be contacted only if the primary source cannot be reached.)
Television Stations
WTHR (ATSC CHANNEL 13.1) (24-hour telephone number):.....(317)-636-1313
WISH (ATSC CHANNEL 8.1) (24-hour telephone number): .....(317)-923-8888
WRTV (ATSC CHANNEL 6.1) (24-hour telephone number):.....(317)-248-6379
WXIN-WTTV (ATSC CHANNEL 59.1-4.1/29.1) (24-hour telephone number): .....(317)-632-5900

Radio Stations
WCBK 102.3 FM (24-hour telephone number):.....(317)-831-3394
WTTS 92.3 FM (24-hour telephone number):.....(800)-923-9887
WFBQ 94.7 FM (24-hour telephone number): .....(317)-257-7565
WFMS 95.5 FM (24-hour telephone number):.....(317)-842-9550

Newspapers
REPORTER-TIMES (24-hour telephone number):.....(765)-342-3311
MOORESVILLE/DECATUR TIMES (24-hour telephone number): .....(317)-831-0280

EVENT LEVEL 3 NOTIFICATION[2]

INCIDENT, SLOWLY DEVELOPING

NOTES:
1) [1] DENOTES SUGGESTED SEQUENCE
2) CONTACT INFORMATION FOR EMERGENCY ACTION PERSONNEL ARE ON FILE WITH THE APPROPRIATE STATION PERSONNEL

Person Observing or Learning of Incident

EAP Coordinator/ Control Room Supervisor

PRIMARY CONTACT
John Terrell

ALTERNATE CONTACT
Kevin Cook

[1]

IPL Eagle Valley Generating Station Plant Manager - PM

PRIMARY CONTACT
Kevin Cook

ALTERNATE CONTACT
John Terrell

(As Warranted)

Station Personnel

Gai-Tronics Emergency Broadcast and/or Alarm

Suggested EAP Coordinator Message

- This is the Emergency Action Plan Coordinator. I am making this call in accordance with the Eagle Valley Ash Pond System EAP.
- An incident has been detected at the Ash Pond System.
- The EAP has been activated, currently at an incident level (Level 3).
- If a problem occurs, flooding along the White River and around the Eagle Valley Generating Station is possible.
- The situation is being monitored to determine in any evacuation warnings are necessary.
- We will keep you apprised of the situation. The best telephone number to reach me during this event is … *(state the best number to reach you).*

[2]

[3]

(As Warranted)

Engineering Director

(This branch is responsible for assisting in event determination and evaluation, technical aspects of the dikes, and other tasks concerning the condition of the Ash Pond System. Members of this branch are also responsible for coordinating emergency efforts at the Ash Pond System to limit downstream damage and maintaining contact with various groups until the event is terminated.)

PRIMARY CONTACT
Jason Deadmond

ALTERNATE CONTACT
Brandon Daugherty

(As Warranted)

On-Call Engineer

PRIMARY CONTACT
Dave Hendron

ALTERNATE CONTACT
Rick Jacobs

Public Relations

(The chief responsibility of this branch is to inform the media of the emergency event through official press releases.)

PRIMARY CONTACT
Claire Dalton

ALTERNATE CONTACT
Brandi Davis-Handy

Warning/Evacuation Director

(This branch in comprised of organizations that are responsible for the notification of potential evacuees and the preparation to evacuate downstream of the Eagle Valley Ash Pond System.)

PRIMARY CONTACT
Donnie Warren, EMA Director

ALTERNATE CONTACT
Mark Tumey, Deputy EMA Director

LOCAL LAW ENFORCEMENT
24/7 Phone Line: 9-1-1

EAGLE VALLEY GENERATING STATION
ASH POND SYSTEM
EMERGENCY ACTION PLAN

NOTIFICATION FLOW CHART FOR EVENT LEVEL 3

MARCH 2017 | FIGURE 2.1

EVENT LEVEL 2 NOTIFICATION[2]

EMERGENCY EVENT, RAPIDLY DEVELOPING

NOTES:
1) [1] DENOTES SUGGESTED SEQUENCE
2) CONTACT INFORMATION FOR EMERGENCY ACTION PERSONNEL ARE ON FILE WITH THE APPROPRIATE STATION PERSONNEL

Person Observing or Learning of Incident

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(As Warranted)

Station Personnel

Gai-Tronics Emergency Broadcast and/or Alarm

Suggested EAP Coordinator Message

- This is the Emergency Action Plan Coordinator. I am making this call in accordance with the Eagle Valley Ash Pond System EAP.
- Problems have occurred with the Ash Pond System.
- The EAP has been activated, currently at the emergency level (Level 2).
- Flooding along the White River and around the Eagle Valley Generating Station is possible.
- Prepare to limit access to areas (1) the White River and in low-lying areas along the White River between the Blue Bluff Bridge and the State Road 39 Bridge, and (2) to Station areas near the ash pond dikes.
- We will keep you apprised of the situation. The best telephone number to reach me during this event is … *(state the best number to reach you).*

[2]
[3]
[4]

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Rick Jacobs

Warning/Evacuation Director

(This branch in comprised of organizations that are responsible for the notification of potential evacuees and the preparation to evacuate downstream of the Eagle Valley Ash Pond System.)

PRIMARY CONTACT
Donnie Warren, EMA Director

ALTERNATE CONTACT
Mark Tumey, Deputy EMA Director

LOCAL LAW ENFORCEMENT
24/7 Phone Line: 9-1-1

(As Warranted)

Endangered Residences

DISPATCH TO CONTACT ENDANGERED RESIDENTS. (MESSAGE: **PREPARE TO EVACUATE**).

Public Relations

(The chief responsibility of this branch is to inform the media of the emergency event through official press releases.)

PRIMARY CONTACT
Claire Dalton

ALTERNATE CONTACT
Brandi Davis-Handy

(As Warranted)

National Weather Service

24-Hour No.: (317)-856-0367
Alternative No.: (317)-856-0359

EAGLE VALLEY GENERATING STATION
ASH POND SYSTEM
EMERGENCY ACTION PLAN

NOTIFICATION FLOW CHART FOR EVENT LEVEL 2

MARCH 2017 | FIGURE 2.2

EVENT LEVEL 1 NOTIFICATION[2]

EMERGENCY EVENT, IMMINENT DIKE FAILURE OF FLASH FLOOD

NOTES:
1) [1] DENOTES SUGGESTED SEQUENCE
2) CONTACT INFORMATION FOR EMERGENCY ACTION PERSONNEL ARE ON FILE WITH THE APPROPRIATE STATION PERSONNEL

Person Observing or Learning of Incident

EAP Coordinator/ Control Room Supervisor

PRIMARY CONTACT
John Terrell

ALTERNATE CONTACT
Kevin Cook

[1]

Station Personnel

Gai-Tronics Emergency Broadcast and/or Alarm

Suggested EAP Coordinator Message

- This is the Emergency Action Plan Coordinator. I am making this call in accordance with the Eagle Valley Ash Pond System EAP.
- Problems have occurred with the Ash Pond System.
- The EAP has been activated, currently at the highest emergency level (Level 1).
- Flooding on Station property and along the White River will occur.
- **Immediately** establish restricted access areas on the White River and in low-lying areas along the White River between the Blue Bluff Road Bridge upstream of the Station and the State Road 39 Bridge downstream of the Station.
- **Immediately** instruct plant personnel to move to higher ground away from the Ash Pond System and the Discharge Canal.
- We will keep you apprised of the situation. The best telephone number to reach me during this event is … *(state the best number to reach you).*

[2]

Warning/Evacuation Director

(This branch in comprised of organizations that are responsible for the notification of potential evacuees and the preparation to evacuate downstream of the Eagle Valley Ash Pond System.)

PRIMARY CONTACT
Donnie Warren, EMA Director

ALTERNATE CONTACT
Mark Tumey, Deputy EMA Director

LOCAL LAW ENFORCEMENT
24/7 Phone Line: 9-1-1

Endangered Residences

DISPATCH TO CONTACT ENDANGERED RESIDENTS. (MESSAGE: **EVACUATE IMMEDIATELY**!)

[3]

IPL Eagle Valley Generating Station Plant Manager - PM

PRIMARY CONTACT
Kevin Cook

ALTERNATE CONTACT
John Terrell

[4]

Public Relations

(The chief responsibility of this branch is to inform the media of the emergency event through official press releases.)

PRIMARY CONTACT
Claire Dalton

ALTERNATE CONTACT
Brandi Davis-Handy

National Weather Service

24-Hour No.:	(317)-856-0367
Alternative No.:	(317)-856-0359

[5]

Engineering Director

(This branch is responsible for assisting in event determination and evaluation, technical aspects of the dikes, and other tasks concerning the condition of the Ash Pond System. Members of this branch are also responsible for coordinating emergency efforts at the Ash Pond System to limit downstream damage and maintaining contact with various groups until the event is terminated.)

PRIMARY CONTACT
Jason Deadmond

ALTERNATE CONTACT
Brandon Daugherty

On-Call Engineer

PRIMARY CONTACT
Dave Hendron

ALTERNATE CONTACT
Rick Jacobs

EAGLE VALLEY GENERATING STATION
ASH POND SYSTEM
EMERGENCY ACTION PLAN

NOTIFICATION FLOW CHART FOR EVENT LEVEL 1

MARCH 2017 | FIGURE 2.3

SECTION 3.
EXPECTED ACTIONS

3.1 ACTION DATA SHEETS

After the EAP Coordinator (or Acting EAP Coordinator) has determined the event level and has made the appropriate notifications, the EAP Coordinator shall take action, using the general procedure outlined in the Action Data Sheets that follow as a guide. Table 3.1 is an index of the Action Data Sheets.

The Action Data Sheets should be reviewed by the Engineering Director (or designee) and/or the On-Call Engineer when possible and time permits. If an event is not adequately covered by one of the general procedures outlined in the following procedures, adapt an Action Data Sheet of a similar event and event level specific to the event that requires additional or varied actions.

TABLE 3.1 – ACTION DATA SHEET INDEX

Event	Event Level	Action Data Sheet
Flooding and Overtopping	3	A3
	2	A2
	1	A1
Earthquake	3	B3
	2	B2
	1	B1
Seepage and Erosion	3	C3
	2	C2
	1	C1
Cracking and other Movements	3	D3
	2	D2
	1	D1
Discharge Piping Valve Failure or Blocked Discharge Pipes	3	E3
	2	E2
	1	E1
Sabotage	3	F3
	2	F2
	1	F1

EVENT: Flooding and Overtopping **LEVEL: 3**	**Action Data Sheet: A3**

RECOMMENDED ACTIONS

	Time/Date Completed

EAP Coordinator:

A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2.
B. Monitor the installed staff gauges to determine if the surface water level within the pond is rising or falling and at what rate. Additionally, a careful inspection of the perimeter dike and inlet/outlet piping for the pond which is at risk of overtopping shall be performed to determine if there are any other signs of degradation, erosion, or structural instability. This should be done without compromising the safety of anyone performing the inspection.
C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken.
D. Record all information, observations, and actions on an Event Log Form (Form 3.1).
E. Contact the Engineering Director or designee at least daily to report the latest observations and conditions. If conditions change significantly, contact the Engineering Director immediately.

Engineering Director or designee:

A. Review all pertinent information in order to recommend appropriate actions to the EAP Coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation.

On-Call Engineer:

A. Provide decision support and technical support to the Engineering Director or designee as appropriate.

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event can be terminated. The event may be terminated when the pond water surface elevation drops below the maximum surface water elevation for that particular pond.
B. The event remains at the current Event Level. The event level shall remain at Event Level 3 while the pond water surface elevation, h, is as follows:
   - Pond A: 624.5 ft $< h \leq$ 625 ft
   - Pond B: 616.5 ft $< h \leq$ 617 ft
   - Pond C: 613.5 ft $< h \leq$ 614 ft
C. The event warrants escalation to Event Level 2. The Event Level shall be raised to Event Level 2 if the pond water surface elevation, h, is as follows:.
   - Pond A: $h >$ 625 ft
   - Pond B: $h >$ 617 ft
   - Pond C: $h >$ 614 ft

Based on this information, follow the appropriate actions below.

A) TERMINATION	B) EVENT LEVEL 3	C) EVENT LEVEL 2
Go to **Termination and Follow-up** (Section 4)	Continue recommended actions on this sheet	Go to **Event Level 2** or **Event Level 1 Notification Chart**

EVENT: Flooding and Overtopping **LEVEL: 2**	**Action Data Sheet: A2**

RECOMMENDED ACTIONS

	Time/Date Completed

EAP Coordinator:

A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2.
B. Monitor the installed staff gauges to determine if the water surface level within the pond is rising or falling and at what rate. Continue to perform careful inspections of the perimeter dike and inlet/outlet piping for the subject pond at risk of overtopping on a frequent basis to determine if there are any other signs of degradation, erosion, or structural instability. This should be done without compromising the safety of anyone performing the inspection.
C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken.
D. Record all information, observations, and actions on an Event Log Form (Form 3.1).
E. Contact the Engineering Director or designee at least daily to report the latest observations and conditions. If conditions change significantly, contact the Engineering Director immediately.

Engineering Director or designee:

A. Review all pertinent information in order to recommend appropriate actions to the EAP Coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation.

On-Call Engineer:

A. Provide decision support and technical support to the Engineering Director or designee as appropriate.

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event warrants downgrade to Event Level 3. All contacts on Event Level 2 Notification Flow Chart shall be notified of downgrade from Event Level 2 to Event Level 3. The event level may be downgraded if the pond water surface elevation, h, is as follows:
   - Pond A: $h \leq 625$ ft
   - Pond B: $h \leq 617$ ft
   - Pond C: $h \leq 614$ ft
B. The event remains at the current Event Level. The event level shall remain at Event Level 2 while the pond water surface elevation, h, is as follows:
   - Pond A: $625 \text{ ft} < h \leq 625.5$ ft
   - Pond B: $617 \text{ ft} < h \leq 617.5$ ft
   - Pond C: $614 \text{ ft} < h \leq 616.5$ ft
C. The event warrants escalation to Event Level 1. The Event Level shall be raised to Event Level 1 when the pond water surface elevation, h, is as follows:
   - Pond A: $h > 625.5$ ft
   - Pond B: $h > 617.5$ ft
   - Pond C: $h > 616.5$ ft

Based on this information, follow the appropriate actions below.

A) EVENT LEVEL 3	B) EVENT LEVEL 2	C) EVENT LEVEL 1
Go to **Event Level 3 Notification Chart**	Continue recommended actions on this sheet	Go to **Event Level 1 Notification Chart**

EVENT: Flooding and Overtopping **LEVEL: 1**	**Action Data Sheet: A1**

RECOMMENDED ACTIONS

	Time/Date Completed
EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Continue to monitor the installed staff gauges to determine if the water surface level within the pond is rising or falling and at what rate. C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. D. Take all necessary actions to minimize the potential for human loss of life, injury, or property damage should the dikes overtop, erode, and fail. E. Record all information, observations, and actions on an Event Log Form (Form 3.1). F. Establish a means to keep in frequent contact with the Engineering Director or designee until Event Level 1 is terminated. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP Coordinator. Contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** A. Provide decision support and technical support to the Engineering Director or designee as appropriate. Send a qualified individual to the site as soon as possible.	

EVALUATION / DECISION

Evaluate conditions at least twice daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event warrants downgrade to Event Level 2. All contacts on Event Level 1 Notification Flow Chart shall be notified of downgrade from Event Level 1 to Event Level 2. The event level may be downgraded if the pond water surface elevation, h, is as follows:
   - Pond A: $h \leq 625.5$ ft
   - Pond B: $h \leq 617.5$ ft
   - Pond C: $h \leq 616.5$ ft

B. The event remains at the current Event Level. The event level shall remain at Event Level 1 as long as the pond water surface elevation is as follows:
   - Pond A: $h > 625.5$ ft
   - Pond B: $h > 617.5$ ft
   - Pond C: $h > 616.5$ ft

C. The event can be terminated after a failure event occurs and the pond completely drains to a point where there is no further threat to human loss of life, injury, or property damage.

Based on this information, follow the appropriate actions below.

A) EVENT LEVEL 2	**B) EVENT LEVEL 1**	**C) TERMINATED**
Go to **Event Level 2 Notification Chart**	Continue recommended actions on this sheet	Go to **Termination and Follow-Up** (Section 4)

EVENT: Earthquake and Aftershocks **LEVEL: 3**	**Action Data Sheet: B3**

RECOMMENDED ACTIONS

	Time/Date Completed
EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Immediately commence a careful inspection of all perimeter and interior dikes and inlet/outlet piping for the entire Ash Pond System to determine if there are any signs of damage, degradation, or structural instability. This should be done without compromising the safety of anyone performing the inspection. C. Record all information, observations, and actions on an Event Log Form (Form 3.1). D. Repeat the inspection at least once per day for three days or until the Event Level has been raised to a Level 2. E. At the completion of the initial field inspection, contact the Engineering Director or designee and report the latest observations and conditions. **Engineering Director or designee:** A. Be prepared to receive and respond to the field inspection report. **On-Call Engineer:** A. N/A.	

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event can be terminated. The event may be terminated if there is no observable damage, degradation, or structural instability and more than three days have passed since the earthquake or once all observed damage, degradation, or structural instability has been addressed and/or repaired.
B. The event remains at the current Event Level. The event level shall remain at Event Level 3 if there is no observable damage, degradation, or structural instability and less than three days have passed since the earthquake.
C. The event warrants escalation to Event Level 2. The Event Level shall be raised to Event Level 2 if a field inspection following the earthquake indicates that damage has occurred to the Ash Pond perimeter dikes, but there is no indication of fluids escaping from the ponds. Observed damage may include, but not be limited to, sloughing, vertical or horizontal cracks, and/or bulging.

Based on this information, follow the appropriate actions below.

A) TERMINATION	**B) EVENT LEVEL 3**	**C) EVENT LEVEL 2**
Go to **Termination and Follow-up** (Section 4)	Continue recommended actions on this sheet	Go to **Event Level 2** or **Event Level 1 Notification Chart**

EVENT: Earthquake and Aftershocks **LEVEL: 2**	**Action Data Sheet: B2**

RECOMMENDED ACTIONS

	Time/Date Completed
EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Continue to monitor the damaged dike of the Ash Pond System and notify the Engineering Director or designee if any significant changes are observed. This should be done without compromising the safety of anyone performing the inspection. C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. D. Record all information, observations, and actions on an Event Log Form (Form 3.1). E. Contact the Engineering Director or designee at least daily to report the latest observations and conditions. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP Coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** B. Provide decision support and technical support to the Engineering Director or designee as appropriate.	

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event warrants downgrade to Event Level 3. The event level may be downgraded once the observed damage, degradation, or structural instability has been addressed and/or repaired. All contacts on Event Level 2 Notification Flow Chart shall be notified of downgrade from Event Level 2 to Event Level 3.
B. The event remains at the current Event Level. The event level shall remain at Event Level 2 until the observed damage, degradation or structural instability has been addressed and/or repaired.
C. The event warrants escalation to Event Level 1. The Event Level shall be raised to Event Level 1 when it is observed that there are some fluids escaping from the ponds through the Ash Pond System perimeter dikes.

Based on this information, follow the appropriate actions below.

A) EVENT LEVEL 3	B) EVENT LEVEL 2	C) EVENT LEVEL 1
Go to **Event Level 3 Notification Chart**	Continue recommended actions on this sheet	Go to **Event Level 1 Notification Chart**

EVENT: Earthquake and Aftershocks **LEVEL: 1**	**Action Data Sheet: B1**

RECOMMENDED ACTIONS

EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Continue to monitor the damaged dike of the Ash Pond System and notify the Engineering Director or designee if any significant changes are observed. This should be done without compromising the safety of anyone performing the inspection. C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. D. Take all necessary actions to minimize the potential for human loss of life, injury, or property damage should the dikes fail. E. Record all information, observations, and actions on an Event Log Form (Form 3.1). F. Establish a means to keep in frequent contact with the Engineering Director or designee until Event Level 1 is terminated. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** A. Provide decision support and technical support to the Engineering Director or designee as appropriate. Send a qualified individual to the site as soon as possible.	Time/Date Completed

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event warrants downgrade to Event Level 2. The event level may be downgraded once the flow of fluids escaping from the ponds through the Ash Pond System perimeter dikes ceases. All contacts on Event Level 1 Notification Flow Chart shall be notified of downgrade from Event Level 1 to Event Level 2.
B. The event remains at the current Event Level. The event level shall remain at Event Level 1 as long as fluids are escaping from the ponds through the Ash Pond System perimeter dikes.
C. The event can be terminated after a failure event occurs and the pond completely drains to a point where there is no further threat to human loss of life, injury, or property damage.

Based on this information, follow the appropriate actions below.

A) EVENT LEVEL 2	B) EVENT LEVEL 1	C) TERMINATED
Go to **Event Level 2 Notification Chart**	Continue recommended actions on this sheet	Go to **Termination and Follow-Up** (Section 4)

EVENT: Seepage and Erosion **LEVEL: 3**	**Action Data Sheet: C3**

RECOMMENDED ACTIONS

	Time/Date Completed
EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. A careful inspection of the perimeter dike and inlet/outlet piping for the dike which has observed seepage and erosion shall be performed to determine if there are any other signs of degradation, erosion, or structural instability. This should be done without compromising the safety of anyone performing the inspection. If necessary, confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. C. Record all information, observations, and actions on an Event Log Form (Form 3.1). D. Contact the Engineering Director or designee at least daily to report the latest observations and conditions. If conditions change significantly, contact the Engineering Director immediately. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP Coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** A. Provide decision support and technical support to the Engineering Director or designee as appropriate.	

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event can be terminated. The event may be terminated once the perimeter dike has been repaired and the observed seepage of fluids has ceased.
B. The event remains at the current Event Level. The event level shall remain at Event Level 3 as long as seepage continues and the fluids are clear, clean of suspended solids and of a relatively low flow rate.
C. The event warrants escalation to Event Level 2. The Event Level shall be raised to Event Level 2 if a significant increase in the seepage flow rate is observed or a discoloration of the flow is observed. The Event Level shall also be raised if minor erosion of the dike surface is observed.

Based on this information, follow the appropriate actions below.

A) TERMINATION	**B) EVENT LEVEL 3**	**C) EVENT LEVEL 2**
Go to **Termination and Follow-up** (Section 4)	Continue recommended actions on this sheet	Go to **Event Level 2** or **Event Level 1 Notification Chart**

EVENT: Seepage and Erosion **LEVEL: 2**	**Action Data Sheet: C2**

RECOMMENDED ACTIONS

	Time/Date Completed
EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Continue to monitor the perimeter dike where the seepage and/or erosion have been observed on a daily basis and notify the Engineering Director or designee if any significant changes are observed. This should be done without compromising the safety of anyone performing the inspection. C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. D. Record all information, observations, and actions on an Event Log Form (Form 3.1). E. Contact the Engineering Director or designee at least daily to report the latest observations and conditions. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP Coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** A. Provide decision support and technical support to the Engineering Director or designee as appropriate.	

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event warrants downgrade to Event Level 3. The event level may be downgraded when the observed rate of seepage decreases to a relatively low rate and the color of the seepage becomes clear, indicative of significantly less suspended solids. All contacts on Event Level 2 Notification Flow Chart shall be notified of downgrade from Event Level 2 to Event Level 3.
B. The event remains at the current Event Level. The event level shall remain at Event Level 2 until the rate of seepage decreases to a relatively low rate and the color of the seepage becomes clear, indicative of significantly less suspended solids.
C. The event warrants escalation to Event Level 1. The Event Level shall be raised to Event Level 1 upon discovery of seepage flow that contains visible evidence of solids or any other indication that significant internal or external erosion is occurring. Such external erosion may be evident by the presence of a significant flow path or erosion channel on the surface of the dike.

Based on this information, follow the appropriate actions below.

A) EVENT LEVEL 3	**B) EVENT LEVEL 2**	**C) EVENT LEVEL 1**
Go to **Event Level 3 Notification Chart**	Continue recommended actions on this sheet	Go to **Event Level 1 Notification Chart**

EVENT: Seepage and Erosion **LEVEL: 1**	**Action Data Sheet: C1**

RECOMMENDED ACTIONS

EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. C. Take all necessary actions to minimize the potential for human loss of life, injury, or property damage should the dike fail. D. Record all information, observations, and actions on an Event Log Form (Form 3.1). E. Establish a means to keep in frequent contact with the Engineering Director or designee until Event Level 1 is terminated. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** A. Provide decision support and technical support to the Engineering Director or Designee as appropriate. Send a qualified individual to the site as soon as possible.	Time/Date Completed

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event warrants downgrade to Event Level 2. The event level may be downgraded once fluids cease escaping from the ponds through the Ash Pond System perimeter dikes. All contacts on Event Level 1 Notification Flow Chart shall be notified of downgrade from Event Level 1 to Event Level 2.
B. The event remains at the current Event Level. The event level shall remain at Event Level 1 as long as fluids are escaping from the ponds through the Ash Pond System perimeter dikes.
C. The event can be terminated after a failure event occurs and the pond completely drains to a point where there is no further threat to human loss of life, injury, or property damage.

Based on this information, follow the appropriate actions below.

A) EVENT LEVEL 2	**B) EVENT LEVEL 1**	**C) TERMINATED**
Go to **Event Level 2 Notification Chart**	Continue recommended actions on this sheet	Go to **Termination and Follow-Up** (Section 4)

EVENT: Cracking and Other Movements **LEVEL: 3**	**Action Data Sheet: D3**

RECOMMENDED ACTIONS

	Time/Date Completed
EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. A careful and complete inspection of the entire pond shall be performed to determine if there are any other signs of degradation, erosion, or structural instability beyond those already observed. This should be done without compromising the safety of anyone performing the inspection. C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. D. Record all information, observations, and actions on an Event Log Form (Form 3.1). E. Contact the Engineering Director or designee at least daily to report the latest observations and conditions. If conditions change significantly, contact the Engineering Director immediately. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP Coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** A. Provide decision support and technical support to the Engineering Director or designee as appropriate.	

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event can be terminated. The event may be terminated once the observed cracks or dike movements have been repaired.
B. The event remains at the current Event Level. The event level shall remain at Event Level 3 until the observed cracks and/or dike movements are repaired.
C. The event warrants escalation to Event Level 2. The Event Level shall be raised to Event Level 2 if a significant increase in cracking (cracks greater than 1" in width) or increased movement areas are observed but there is no evidence of seepage flow through the pond perimeter dike.

Based on this information, follow the appropriate actions below.

A) TERMINATION	B) EVENT LEVEL 3	C) EVENT LEVEL 2
Go to **Termination and Follow-up** (Section 4)	Continue recommended actions on this sheet	Go to **Event Level 2** or **Event Level 1 Notification Chart**

EVENT: Cracking and Other Movements **LEVEL: 2**	**Action Data Sheet: D2**

RECOMMENDED ACTIONS

	Time/Date Completed
EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Continue to monitor the perimeter dike on a daily basis where the cracks or movements have been observed and notify the Engineering Director or designee if any significant changes are observed. This should be done without compromising the safety of anyone performing the inspection. C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. D. Record all information, observations, and actions on an Event Log Form (Form 3.1). E. Contact the Engineering Director or designee at least daily to report the latest observations and conditions. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP Coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** A. Provide decision support and technical support to the Engineering Director or designee as appropriate.	

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event warrants downgrade to Event Level 3. The event level may be downgraded when the observed cracks or dike movements are repaired. All contacts on Event Level 2 Notification Flow Chart shall be notified of downgrade from Event Level 2 to Event Level 3.
B. The event remains at the current Event Level. The event level shall remain at Event Level 2 until the observed cracks or dike movements are repaired.
C. The event warrants escalation to Event Level 1. The Event Level shall be raised to Event Level 1 upon discovery of seepage flow through the pond perimeter dike. This may include the observation of visually evident flowing water or that the sloughed area is moist.

Based on this information, follow the appropriate actions below.

A) EVENT LEVEL 3	B) EVENT LEVEL 2	C) EVENT LEVEL 1
Go to **Event Level 3 Notification Chart**	Continue recommended actions on this sheet	Go to **Event Level 1 Notification Chart**

EVENT: Cracking and Other Movements **LEVEL: 1**	**Action Data Sheet: D1**

RECOMMENDED ACTIONS

	Time/Date Completed
EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Continue to monitor the perimeter dike where the cracks, seepage and/or erosion have been observed and notify the Engineering Director or designee if any significant changes are observed. This should be done without compromising the safety of anyone performing the inspection. C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. D. Take all necessary actions to minimize the potential for human loss of life, injury, or property damage should the dike fail. E. Record all information, observations, and actions on an Event Log Form (Form 3.1). F. Establish a means to keep in frequent contact with the Engineering Director or designee until Event Level 1 is terminated. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** A. Provide decision support and technical support to the Engineering Director or designee as appropriate. Send a qualified individual to the site as soon as possible.	

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event warrants downgrade to Event Level 2. The event level may be downgraded once the flow of fluids escaping from the ponds through the Ash Pond System perimeter dikes ceases. All contacts on Event Level 1 Notification Flow Chart shall be notified of downgrade from Event Level 1 to Event Level 2.
B. The event remains at the current Event Level. The event level shall remain at Event Level 1 as long as fluids are escaping from the ponds through the Ash Pond System perimeter dikes.
C. The event can be terminated after a failure event occurs and the pond completely drains to a point where there is no further threat to human loss of life, injury, or property damage.

Based on this information, follow the appropriate actions below.

A) EVENT LEVEL 2	B) EVENT LEVEL 1	C) TERMINATED
Go to **Event Level 2 Notification Chart**	Continue recommended actions on this sheet	Go to **Termination and Follow-Up** (Section 4)

EVENT: Discharge Piping Valve Failure or Blocked Discharge Pipes **LEVEL: 3**	**Action Data Sheet: E3**

RECOMMENDED ACTIONS

	Time/Date Completed
EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Monitor the installed staff gauges to determine if the surface water level within the pond is rising or falling and at what rate. Additionally, a careful inspection of the perimeter dike and inlet/outlet piping for the pond which is at risk of overtopping shall be performed to determine if there are any other signs of degradation, erosion, or structural instability. This should be done without compromising the safety of anyone performing the inspection. C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. D. Record all information, observations, and actions on an Event Log Form (Form 3.1). E. Contact the Engineering Director or designee at least daily to report the latest observations and conditions. If conditions change significantly, contact the Engineering Director immediately. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP Coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** A. Provide decision support and technical support to the Engineering Director or designee as appropriate.	

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event can be terminated. The event may be terminated when the discharge piping valve is repaired or the blocked discharge pipes are cleared.
B. The event remains at the current Event Level. The event level shall remain at Event Level 3 while the discharge piping valve remains unrepaired or the blocked discharge pipes remain blocked.
C. The event warrants escalation to Event Level 2. The Event Level shall be raised to Event Level 2 if the pond water surface elevation, h, is as follows:
   - Pond A: $h > 625$ ft
   - Pond B: $h > 617$ ft
   - Pond C: $h > 614$ ft

Based on this information, follow the appropriate actions below.

A) TERMINATION	B) EVENT LEVEL 3	C) EVENT LEVEL 2
Go to **Termination and Follow-up** (Section 4)	Continue recommended actions on this sheet	Go to **Event Level 2** or **Event Level 1 Notification Chart**

EVENT: Discharge Piping Valve Failure or Blocked Discharge Pipes **LEVEL: 2**	**Action Data Sheet: E2**

RECOMMENDED ACTIONS

	Time/Date Completed
EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Monitor the installed staff gauges to determine if the water surface level within the pond is rising or falling and at what rate. Perform regular inspections of all perimeter dikes and inlet/outlet piping for the subject pond at risk of overtopping to determine if there are any other signs of degradation, erosion, or structural instability. This should be done without compromising the safety of anyone performing the inspection. C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. D. Record all information, observations, and actions on an Event Log Form (Form 3.1). E. Contact the Engineering Director or designee at least daily to report the latest observations and conditions. If conditions change significantly, contact the Engineering Director immediately. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP Coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** A. Provide decision support and technical support to the Engineering Director or designee as appropriate.	

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event warrants downgrade to Event Level 3. All contacts on Event level 2 Notification Flow Chart shall be notified of downgrade from Event Level 2 to Event Level 3. The event level may be downgraded if the pond water surface elevation, h, is as follows:
   - Pond A: $h \leq 625$ ft
   - Pond B: $h \leq 617$ ft
   - Pond C: $h \leq 614$ ft

B. The event remains at the current Event Level. The event level shall remain at Event Level 2 while the pond water surface elevation is as follows:
   - Pond A: $625 \text{ ft} < h \leq 625.5$ ft
   - Pond B: $617 \text{ ft} < h \leq 617.5$ ft
   - Pond C: $614 \text{ ft} < h \leq 616.5$ ft

C. The event warrants escalation to Event Level 1. The Event Level shall be raised to Event Level 1 when the pond water surface elevation is as follows:
   - Pond A: $h > 625.5$ ft
   - Pond B: $h > 617.5$ ft
   - Pond C: $h > 616.5$ ft

Based on this information, follow the appropriate actions below.

A) EVENT LEVEL 3	B) EVENT LEVEL 2	C) EVENT LEVEL 1
Go to **Event Level 3 Notification Chart**	Continue recommended actions on this sheet	Go to **Event Level 1 Notification Chart**

EVENT: Discharge Piping Valve Failure or Blocked Discharge Pipes **LEVEL: 1**	**Action Data Sheet: E1**

RECOMMENDED ACTIONS

EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Continue to monitor the installed staff gauges to determine if the water surface level within the pond is rising or falling and at what rate. C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. D. Take all necessary actions to minimize the potential for human loss of life, injury, or property damage should the dikes overtop, erode, and fail. E. Record all information, observations, and actions on an Event Log Form (Form 3.1). F. Establish a means to keep in frequent contact with the Engineering Director or designee until Event Level 1 is terminated. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP Coordinator. Contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** A. Provide decision support and technical support to the Engineering Director or designee as appropriate. Send a qualified individual to the site as soon as possible.	Time/Date Completed

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event warrants downgrade to Event Level 2. All contacts on Event Level 1 Notification Flow Chart shall be notified of downgrade from Event Level 1 to Event Level 2. The event level may be downgraded if the pond water surface elevation, h, is as follows:
   - Pond A: $h \leq 625.5$ ft
   - Pond B: $h \leq 617.5$ ft
   - Pond C: $h \leq 616.5$ ft

B. The event remains at the current Event Level. The event level shall remain at Event Level 1 as long as the pond water surface elevation, h, is as follows:
   - Pond A: $h > 625.5$ ft
   - Pond B: $h > 617.5$ ft
   - Pond C: $h > 616.5$ ft

C. The event can be terminated after a failure event occurs and the pond completely drains to a point where there is no further threat to human loss of life, injury, or property damage.

Based on this information, follow the appropriate actions below.

A) EVENT LEVEL 2	**B) EVENT LEVEL 1**	**C) TERMINATED**
Go to **Event Level 2 Notification Chart**	Continue recommended actions on this sheet	Go to **Termination and Follow-Up** (Section 4)

EVENT: Sabotage **LEVEL: 3**	**Action Data Sheet: F3**

RECOMMENDED ACTIONS

EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Immediately commence a careful inspection of all perimeter and interior dikes and inlet/outlet piping for the entire Ash Pond System to determine if there are any signs of damage, degradation, or structural instability. This should be done without compromising the safety of anyone performing the inspection. C. Record all information, observations, and actions on an Event Log Form (Form 3.1). D. At the completion of the field inspection, contact the Engineering Director or designee by telephone and report the latest observations and dike conditions. **Engineering Director or designee:** A. Be prepared to receive and respond to the field inspection report. **On-Call Engineer:** A. N/A.	Time/Date Completed

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event can be terminated. The event may be terminated if there is no observable damage, degradation, or structural instability, or once all observed damage, degradation, or structural instability is repaired.
B. The event remains at the current Event Level. The event level shall remain at Event Level 3 until any damage, degradation, or structural instability observed during the field investigation is appropriately repaired.
C. The event warrants escalation to Event Level 1. The Event Level shall be raised to Event Level 1 if the field inspection following the suspected Sabotage indicates that damage has occurred to the Ash Pond perimeter dikes and that there is visible evidence of fluid escaping through the pond perimeter dikes.

Based on this information, follow the appropriate actions below.

A) TERMINATION	**B) EVENT LEVEL 3**	**C) EVENT LEVEL 1**
Go to **Termination and Follow-up** (Section 4)	Continue recommended actions on this sheet	Go to **Event Level 1 Notification Chart**

EVENT: Sabotage **LEVEL: 2**	**Action Data Sheet: F2**

RECOMMENDED ACTIONS

EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Immediately commence a careful inspection of all perimeter and interior dikes and inlet/outlet piping for the entire Ash Pond System to determine if there are any signs of damage, degradation, or structural instability. This should be done without compromising the safety of anyone performing the inspection. C. Record all information, observations, and actions on an Event Log Form (Form 3.1). D. At the completion of the field inspection, contact the Engineering Director or designee by telephone and report the observations and dike conditions. **Engineering Director or designee:** E. Be prepared to receive and respond to the field inspection report. **On-Call Engineer:** F. N/A.	Time/Date Completed

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event warrants downgrade to Event Level 3. The event level may be downgraded if there is no observable damage, degradation, or structural instability, or once all observed damage, degradation, or structural instability is repaired. All contacts on Event Level 2 Notification Flow Chart shall be notified of downgrade from Event Level 2 to Event Level 3.
B. The event remains at the current Event Level. The event level shall remain at Event Level 2 until the observed damage, degradation or structural instability has been addressed and/or repaired.
C. The event warrants escalation to Event Level 1. The Event Level shall be raised to Event Level 1 if the field inspection following the confirmed Sabotage indicates that damage has occurred to the Ash Pond perimeter dikes and that there is visible evidence of fluid escaping through the pond perimeter dikes.

Based on this information, follow the appropriate actions below.

A) EVENT LEVEL 3	**B) EVENT LEVEL 2**	**C) EVENT LEVEL 1**
Go to **Event Level 3 Notification Chart**	Continue recommended actions on this sheet	Go to **Event Level 1 Notification Chart**

EVENT: Sabotage **LEVEL: 1**	**Action Data Sheet: F1**

RECOMMENDED ACTIONS

	Time/Date Completed
EAP Coordinator: A. Make sure notifications to all parties are completed in accordance with the outline included in Section 2.2. B. Continue to monitor the damaged dike of the Ash Pond System and notify the Engineering Director or designee if any significant changes are observed. This should be done without compromising the safety of anyone performing the inspection. C. Confer with the Engineering Director or designee and/or the On-Call Engineer to determine any corrective/preventative actions that must be taken. D. Take all necessary actions to minimize the potential for human loss of life, injury, or property damage should the dikes fail. E. Record all information, observations, and actions on an Event Log Form (Form 3.1). F. Establish a means to keep in frequent contact with the Engineering Director or designee until Event Level 1 is terminated. **Engineering Director or designee:** A. Review all pertinent information in order to recommend appropriate actions to the EAP coordinator. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring or repairing the situation. **On-Call Engineer:** A. Provide decision support and technical support to the Engineering Director or designee as appropriate. Send a qualified individual to the site as soon as possible.	

EVALUATION / DECISION

Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 1.1 and/or Table 3.1, determine whether:

A. The event warrants downgrade to Event Level 2. The event level may be downgraded once the flow of fluids escaping from the ponds through the perimeter dike ceases. All contacts on Event Level 1 Notification Flow Chart shall be notified of downgrade from Event Level 1 to Event Level 2.
B. The event remains at the current Event Level. The event level shall remain at Event Level 1 as long as fluids are escaping from the ponds through the perimeter dike.
C. The event can be terminated after a failure event occurs and the pond completely drains to a point where there is no further threat to human loss of life, injury, or property damage.

Based on this information, follow the appropriate actions below.

A) EVENT LEVEL 2	**B) EVENT LEVEL 1**	**C) TERMINATED**
Go to **Event Level 2 Notification Chart**	Continue recommended actions on this sheet	Go to **Termination and Follow-Up** (Section 4)

3.2 LOCALLY AVAILABLE EQUIPMENT, LABOR, AND MATERIALS

The following is a list of the addresses and phone number(s) of nearby companies (e.g.; pump and other heavy equipment rental, crane service, etc.) that may be needed and are available and willing to provide services in the case of an emergency event. Since Ash Pond System emergencies may not just occur during business hours, these companies have a 24-hour contact number and they are specifically notified that they may be contacted at any time when an emergency is noted. All companies have agreed in writing to this condition and have provided a 24-hour contact number that is included in this EAP.

The contractors listed below have been retained by Eagle Valley Generating Station to provide the equipment, labor and materials deemed necessary to respond to emergency situations that may develop at the Ash Pond System of the Eagle Valley Generating Station.

SET Environmental
Primary Contact: ..... Jennifer Holbrook
SET Environmental can provide the following services in the case of an emergency event:

- Initial response,
- Excavation,
- Remediation,
- Disposal, and
- Hazardous Waste Operations and Emergency Response (HAZWOPER).

Denney Excavating
Primary Contact: ..... Subcontractor for SET Environmental
Denney Excavating can provide the following services in the case of an emergency event:

- Excavation,
- Transportation, and
- HAZWOPER.

Sub Surface of Indiana
Primary Contact: ..... Todd Larson

3.3 INCIDENT OR EMERGENCY EVENT LOG

Use the Incident or Emergency Event Log (Form 3.1) on the next page to record actions and events during an Incident or Emergency Event and the time that the action or event occurred.

FORM 3.1
Incident or Emergency Event Log

Eagle Valley Generating Station – Ash Pond System

You are (Circle One): EAP Coordinator / Designated Staff / On-Call Engineer / Engineering Director / or Warning/Evacuation Director

Detection

What date and time did you detect/get notified of the event? _____ am/pm

How did you detect/get notified of the event? _____

Level of Determination

What initial level has the EAP Coordinator (or designee) assigned to the event? _____

Actions and Event Progression

Date	Time	Action/Event Progression	Taken By

SECTION 4.
TERMINATION AND FOLLOW-UP

Once EAP operations have begun under Event Level 3, 2, or 1, the EAP operations must eventually be terminated and follow-up procedures completed. As shown on Figure i, EAP operations can only be terminated after completing operations under Event Level 3 or 1. If an Event Level 2 is declared, the operations must be designated Event Level 3 or 1 before terminating the EAP operations.

4.1 TERMINATION RESPONSIBILITIES

EAP operations will be terminated by the Engineering Director (or designee) after it is agreed that either the operations have been completed (Event Level 1 or 3) or that it is necessary to change the Event Level (Event Level 2). Termination of an Event Level 3 must include written approval of the On-Call Engineer. Additionally, a report must be prepared to document the evaluation of the problem causing the need for the implementation of the EAP and the details of all actions taken to remediate the situation that resulted in the implementation of the EAP.

In the case of Event Level 1, termination can be accomplished by the Engineering Director and must include the specific actions taken to ensure the safety of people and property downstream. Do not terminate the EAP unless it is certain that there is no further threat.

4 .2 FOLLOW-UP

Follow-up activities will be implemented to achieve the following general objectives:

Event Level 3 (Review to be completed within 90 days of termination)

- Review the existing EAP with all parties that participated in the EAP activities,
- Document any EAP procedures that were followed effectively,
- Document any ways that the EAP could be improved, and
- Insert this EAP Follow-up Report into Appendix B of the EAP.

Event Level 2

Should Event Level 2 be reached, but then changed to and terminated as an Event Level 3, the follow-up activities shall comply with those required for an Event Level 1 termination.

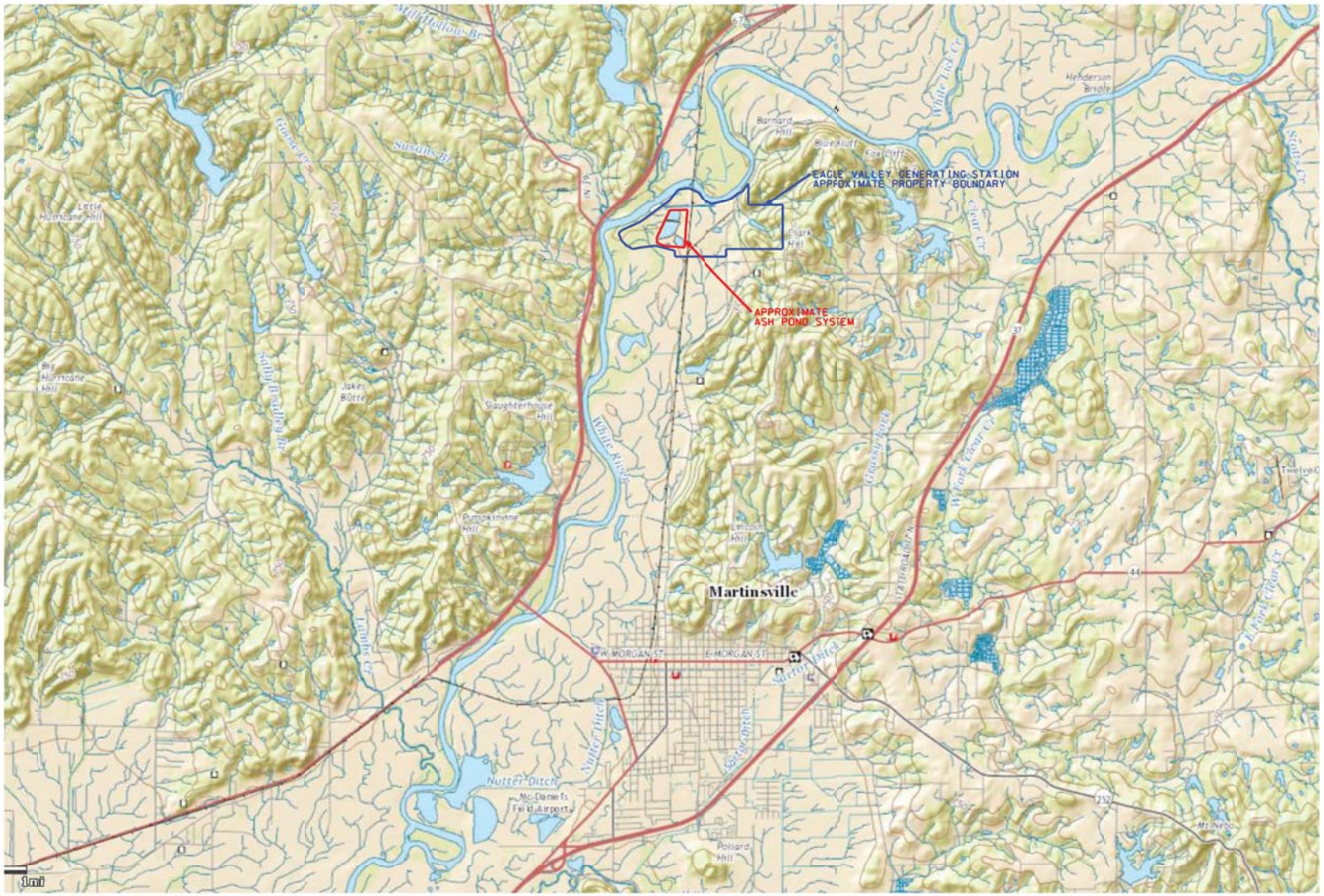
Event Level 1 (Review to be completed within 180 days of termination)

- Review the existing EAP with all parties that participated in the EAP activities,
- Document any EAP procedures that were followed effectively,
- Document any ways that the EAP could be improved,
- Brainstorm, document, and implement actions to prevent recurrence of the problem that caused the implementation of the EAP, and
- Insert this EAP Follow-up Report into Appendix B of the EAP.

SECTION 5.
MAPS, FIGURES, AND SUPPORTING DATA

Copies of the following maps and figures are provided in this EAP for use in training personnel and during EAP operations.

- Figure 5.1 - Location and Vicinity Map
- Figure 5.2 - Ash Pond System Layout Annotated Aerial Photograph
- Figure 5.3 - Emergency Site Access Route Map
- Figure 5.4 - Estimated Dike Breach Inundation Map
- Figure 5.5 - Ash Pond System Area and Capacity Curves



NORTH

NOTES

1. BACKGROUND IMAGE SHOWN ON THIS DRAWING WAS OBTAINED FROM THE USGS NATIONAL MAP VIEWER ON 03-08-2016.

HOLD INFORMATION

NO.	DESCRIPTION

RELEASE INFORMATION

REV.	DATE	DESCRIPTION
0	03-23-2017	FOR USE

ISSUE PURPOSE: USE
SPECIFICATION: ---
PROJECT NO.: 10572-088

CAD FILE NAME: EV EAP - FIGURE 5.1.DGN
PREPARED BY: JF
REVIEWED BY: DK
APPROVED BY: DN

Sargent & Lundy LLC
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PROJECT

EAGLE VALLEY
GENERATING STATION
EMERGENCY ACTION PLAN

DRAWING TITLE

LOCATION AND VICINITY MAP

DRAWING NUMBER	REVISION
FIGURE 5.1	0
SHEET	OF

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Form CDG-0401-01-08.ANSI (Imperial) MicroStation Border - Size E - 34 x 44
Revision --, Revision Date: XX-XX-XXXX
3/22/2017 2:22:23 PM
...\EV EAP - Figure 5.1.dgn

NOT TO SCALE

NORTH

NOTES

1. AERIAL IMAGE, DATED 10-17-2015, SHOWN ON THIS DRAWING WAS OBTAINED USING GOOGLE EARTH PRO v6.2.

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ISSUE PURPOSE: USE

SPECIFICATION:

PROJECT NO.: 10572-088

CAD FILE NAME: EV EAP - FIGURE 5.2.DGN

PREPARED BY: JF

REVIEWED BY: DK

APPROVED BY: DN

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PROJECT

EAGLE VALLEY
GENERATING STATION
EMERGENCY ACTION PLAN

DRAWING TITLE

ASH POND SYSTEM LAYOUT
ANNOTATED AERIAL PHOTOGRAPH

DRAWING NUMBER	REVISION
FIGURE 5.2	0
SHEET	OF

NOT TO SCALE

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NOTES

1. AERIAL IMAGE, DATED 10-17-2015, SHOWN ON THIS DRAWING WAS OBTAINED USING GOOGLE EARTH PRO v6.2.

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0	03-23-2017	FOR USE

ISSUE PURPOSE: USE
SPECIFICATION: ---
PROJECT NO.: 10572-088

CAD FILE NAME: EV EAP - FIGURE 5.3.DGN
PREPARED BY: JF
REVIEWED BY: DK
APPROVED BY: DN

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PROJECT

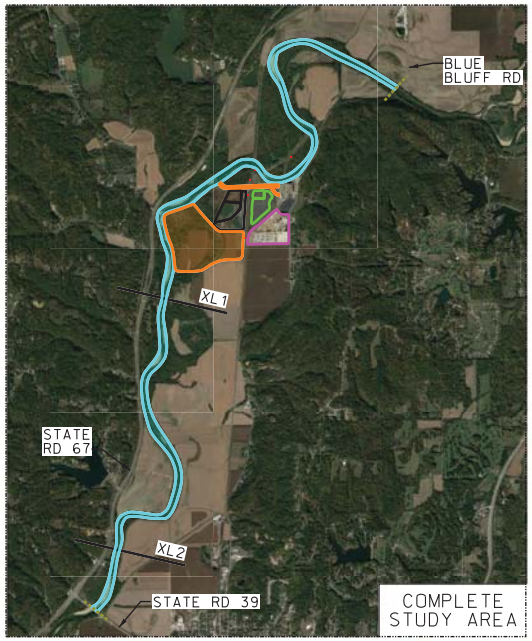
EAGLE VALLEY GENERATING STATION EMERGENCY ACTION PLAN

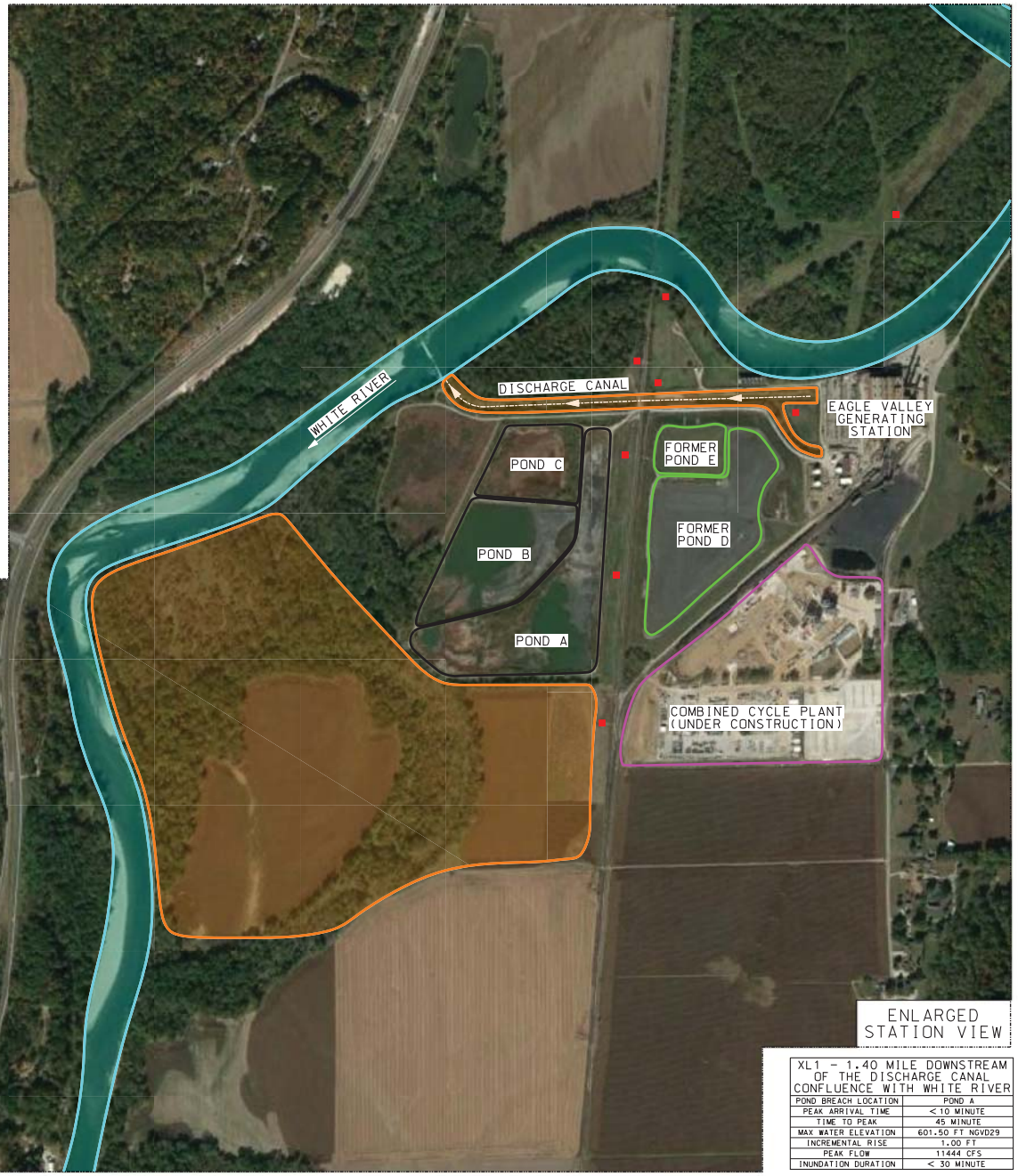
DRAWING TITLE

EMERGENCY SITE ACCESS ROUTE MAP

DRAWING NUMBER	REVISION
FIGURE 5.3	0

SHEET OF





XL1 – 1.40 MILE DOWNSTREAM OF THE DISCHARGE CANAL CONFLUENCE WITH WHITE RIVER	
POND BREACH LOCATION	POND A
PEAK ARRIVAL TIME	< 10 MINUTE
TIME TO PEAK	45 MINUTE
MAX WATER ELEVATION	601.50 FT NGVD29
INCREMENTAL RISE	1.00 FT
PEAK FLOW	11444 CFS
INUNDATION DURATION	< 30 MINUTE

XL2 – 3.90 MILE DOWNSTREAM OF THE DISCHARGE CANAL CONFLUENCE WITH WHITE RIVER	
POND BREACH LOCATION	POND A
PEAK ARRIVAL TIME	< 30 MINUTE
TIME TO PEAK	45 MINUTE
MAX WATER ELEVATION	597 FT NGVD29
INCREMENTAL RISE	1.00 FT
PEAK FLOW	11444 CFS
INUNDATION DURATION	< 30 MINUTE

LEGEND

- EXISTING ELECTRICAL TRANSMISSION TOWERS
- DIKE BREACH INUNDATION AREA
- IMMEDIATE IMPACT AREA
- STUDY AREA BOUNDARY
- XL# SECTION LINE

NOTES

1. AERIAL IMAGE SHOWN ON THIS DRAWING WAS OBTAINED BY GOOGLE EARTH PRO v6.2.
2. FOR DIKE BREACH SCENARIOS, SEE EXHIBIT EAP-1.
3. VERTICAL DATUM IS NAVD 88.
4. THE DIKE BREACH INUNDATION AREA STAYS WITHIN THE LIMITS OF 100 YEAR INUNDATION DEVELOPED BY USGS. USGS FLOOD INUNDATION BOUNDARY CAN BE ACCESSED FROM USGS SCIENTIFIC INVESTIGATION REPORT 2015-5051.

NORTH

300 0 300 600
GRAPHIC SCALE
1" = 300'-0"

HOLD INFORMATION

NO.	DESCRIPTION

RELEASE INFORMATION

REV.	DATE	DESCRIPTION
0	03-23-2017	FOR USE

ISSUE PURPOSE: USE
SPECIFICATION: ---
PROJECT NO.: 10572-088

CAD FILE NAME: FIGURE 5.4.DGN
PREPARED BY: AP
REVIEWED BY: CL
APPROVED BY: DN

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PROJECT

EAGLE VALLEY GENERATING STATION EMERGENCY ACTION PLAN

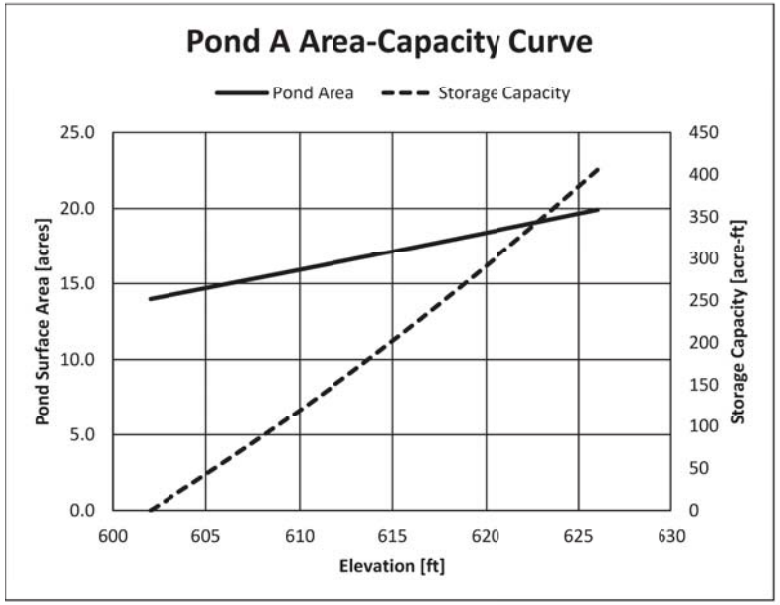
DRAWING TITLE

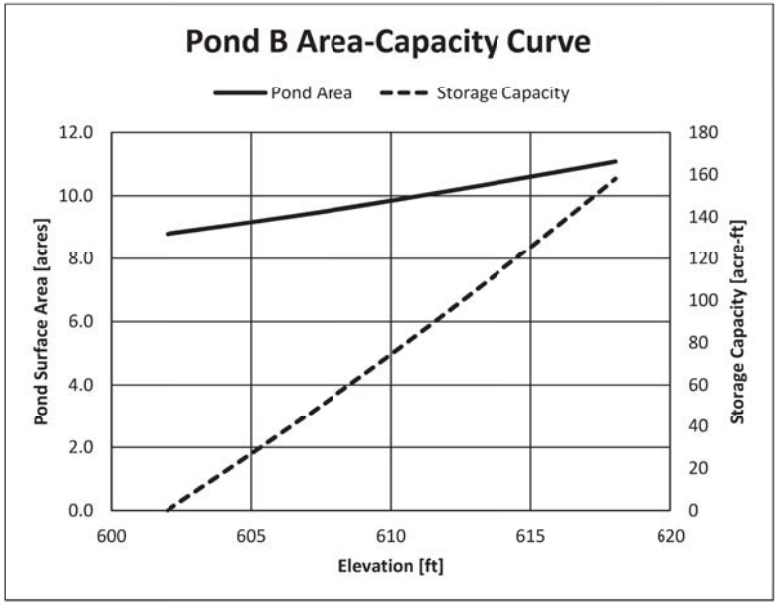
ESTIMATED DIKE BREACH INUNDATION MAP

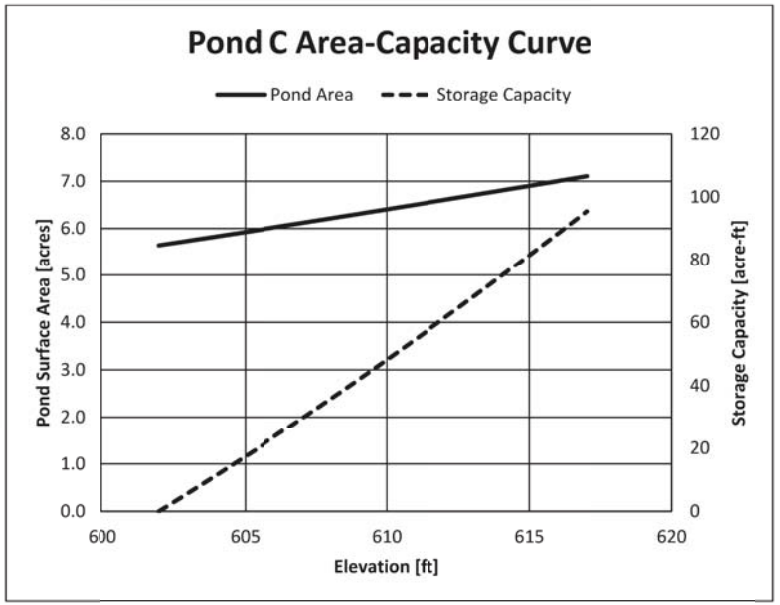
DRAWING NUMBER	REVISION
FIGURE 5.4	0

SHEET 1 OF 1

ZD11104/D11144/Sites#IPL#Topo Exhibits#Eagle Valley#Figure 5.4.dgn
Form GDG-0401-01-08, ANSI (Imperial) Microstation Border - Size E - 34 x 44
Revision 11A. Revision Date: 04-30-2010
3/22/2017 1:55:45 PM
...#Eagle Valley#Figure 5.4.dgn







NOTES

1. ALL ELEVATIONS ARE WITH RESPECT TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

HOLD INFORMATION

NO.	DESCRIPTION

RELEASE INFORMATION

REV.	DATE	DESCRIPTION
0	03-23-2017	FOR USE

ISSUE PURPOSE: USE

SPECIFICATION:

PROJECT NO.: 10572-088

CAD FILE NAME: EV EAP - FIGURE 5.5.DGN

PREPARED BY: JF

REVIEWED BY: DK

APPROVED BY: DN

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ipl an AES company

PROJECT

EAGLE VALLEY
GENERATING STATION
EMERGENCY ACTION PLAN

DRAWING TITLE

ASH POND SYSTEM
AREA AND CAPACITY CURVES

DRAWING NUMBER	REVISION
FIGURE 5.5	0

SHEET OF

APPENDIX A

Warning and Evacuation

This appendix is available for inserting local warning and evacuation plans developed by the Warning/Evacuation branch.

APPENDIX B

Inundation Map Documentation

APPENDIX B

Inundation Map Documentation

The estimated flood inundation extent that could occur as a result of a dike breach at the Eagle Valley Generating Station Ash Pond System is presented on Figure 5.4 – Estimate Dike Breach Inundation Map. The Inundation Map includes flood wave traveling information including peak arrival time, maximum water elevation, incremental rise, peak dam breach flow, time to peak, and inundation duration for various locations on the map. The transparent orange and blue colored areas shown on Figure 5.4 represent the estimated maximum flood inundation extent. The areas of the map highlighted in transparent orange color represent an Immediate Impact Area and includes the Discharge Canal and other low-lying areas of the station adjacent to the ponds. The Immediate Impact Area has a very short flood wave arrival time (< 5 minutes) and the peak incremental water level rise can be significant; therefore, it is imperative that this area receive, if at all possible, preemptive warning of a potential dike breach should an incident or emergency event ever occur. The Dike Breach Inundation Areas represented by the transparent blue color are located further downstream from the Ash Pond System and are principally contained within natural water channels. Although, the water level is expected to temporarily rise as a result of a dike failure at the Ash Pond System, the peak incremental rise and flood wave arrival time are less critical. The flood wave arrival time is expected to be less than 30 minutes at the State Road 39 Bridge over the White River, which is approximately 4 miles downstream of the Ash Pond System.

As a result of this inundation study, the maximum flood extent that could occur as a result of a dike breach at the Ash Pond System was determined to be within the 2014 FEMA Flood Insurance Rate Map boundary for Morgan County (Panels 144, 254, 255, 256, 257, 258, and 262). In other words, flooding that may be caused by a dike breach is expected to remain within the river's flood plain and will not inundate areas beyond the 100-year flood plain. This study has identified some residential and commercial areas located within the anticipated inundation area – along the banks of the White River – which are also located within the 100-year flood plain. This study has concluded that a theoretical breach of the Ash Pond System dikes will not impose any greater risk to loss of life or economic damages to these residential and commercial areas than risks already associated with a 100-year flood.

Detailed back-up calculations that were used to develop the inundation map, including all assumptions, references, and supporting documents, can be reviewed upon request at the Eagle Valley Generating Station EAP office.

Basis and Assumptions

1) A two-dimensional hydrodynamic model (ADCIRC) was used to compute the maximum dike breach flood extent.
2) Dike breach scenarios were developed using pond geometry information, dike slope stability analysis, and soil boring data.
3) Since Former Ponds D and E were regraded in the fall of 2015 such that they no longer impound water, they are not included in the dike breach scenarios.
4) Cascading failure scenarios were developed based on engineering judgment, considering a combination of physically possible and realistic dike failure modes (i.e., hydrologic and non-

hydrologic) of each active pond. Conservatively, a scenario considering simultaneous failure of all active ponds was also evaluated.

5) Wet ash inside the pond is conservatively considered as an equivalent volume of water.
6) Final inundation map was developed enveloping the flooding extents from the hydraulic analyses for the dike breach scenarios.

APPENDIX C

Past EAP Activity

This appendix is the placeholder for copies of past EAP activity reports, Annual Review Verification Statements that must be completed after the annual review is performed, and Periodic Test Memos to be included after periodic tests have been performed.

APPENDIX D

EAP Review and Revision

APPENDIX D

EAP Review and Revision

EAP Annual Review Meetings

The annual review of the EAP for evaluation of consistency with plant operations and available resources will be conducted by the EAP Coordinator and reviewed by the Engineering Director. All changes noted will be made to the EAP as required and any needed training will be provided. Note that an EAP Annual Review Verification Statement shall be completed upon conclusion of the review.

An annual meeting will be held for all EAP personnel included on the EAP distribution list in Appendix E to refresh themselves on the content of the EAP and to review the conduct of all EAP events that may have occurred. In the event that an Event Level 1 occurs, EAP personnel will meet immediately after the termination of the event to assess important aspects of this event and make all changes necessary to decrease the risk of future occurrences.

Revision

The EAP Coordinator will be responsible for ensuring that the EAP documents are revised. After changes are made, a new EAP with updated information will be sent to all holders with clear and prominent instructions to destroy the outdated copy in their files. The new EAP will be certified by a professional engineer registered in the State of Indiana in accordance with 40 CFR 257.73(a)(3)(iv). At least once annually, the EAP Coordinator will perform an audit of the EAP copies to ensure that all principal members of the organization have the correct copies in their possession.

FORM D.1

Ash Pond System – EAP Annual Review Verification Statement

Name of Dike: Eagle Valley Generating Station - Ash Pond System

Date of Drill: _____

A. The current EAP is on hand and all revisions have been inserted.
B. The readiness evaluated in the drill was acceptable.
C. The communications network is correct and was verified.
D. The training of personnel is sufficient and acceptable.
E. The EAP Annual Review procedures were followed.

Additional Comments: _____

_____ _____
(individual responsible for conducting EAP Annual Review) Date

_____
(printed name)

_____ _____
(EAP Coordinator) Date

_____
(printed name)

APPENDIX E

EAP Distribution

APPENDIX E
EAP Distribution

Name	Title	Contact Information		EAP Copy No.
John Terrell	EAP Coordinator	*Contact information for emergency action personnel are on file with the appropriate station personnel.*		1
Jason Deadmond	EAP Engineering Director			2
Brandon Daugherty	Alternate EAP Engineering Director			3
Claire Dalton	EAP Public Relations			4
Brandi Davis-Handy	Alternate EAP Public Relations			5
Donnie Warren	EAP Warning/Evacuation Director			6
Mark Tumey	Alternate EAP Warning/Evacuation Director			7
Dave Hendron	EAP On-Call Engineer			8
Rick Jacobs	Alternate EAP On-Call Engineer			9
Kevin Cook	IPL Eagle Valley Generating Station Plant Manager			10
				11
				12
				13
				14

APPENDIX F

Location of Supplementary Information

This appendix contains background information and pertinent data, and is also the place holder for any other key supplementary information such as emergency materials, service contracts, and any other relevant material for the Eagle Valley Generating Station Ash Pond System and other similar information that may be placed in this appendix by individual plan holders for quick reference during an event.

APPENDIX G

Glossary

APPENDIX G
Glossary

Abutment: The undisturbed natural material of the valley side against which a dike is constructed. The left and right abutments are defined as being on the right and left side of an observer looking downstream.

Appurtenant structure: A structure necessary for the operation of a dike, such as outlets, trash racks, valves, spillways, power plants, tunnels, etc.

Breach: An eroded opening through a dike that drains the reservoir. A controlled breach is a constructed opening. An uncontrolled breach is an unintentional opening that allows uncontrolled discharge from the reservoir.

Channel: A general term for any natural or artificial watercourse.

Conduit: A closed channel to convey water through, around, or under a dike.

Crest of Dike: Top of dike.

Cross section: A sectional view of a dike formed by passing a plane through the dike perpendicular to its axis.

Dike: A structure constructed of earth or coal combustion residual (CCR) materials intended to retain fluid and solid materials as part of CCR processing operations for the Eagle Valley Generating Station.

Dike failure: The uncontrolled release of reservoir contents.

Drain, toe: A system of pipes and/or pervious material along the downstream toe of a dike used to collect seepage from the foundation and embankment and convey it to a free outlet.

Drainage area: The area that drains to a particular point of a river or stream.

Drawdown: The difference between a water level and a lower water level in a reservoir within a particular time. Used as a verb, it is the lowering of the water surface due to release of water from the reservoir.

EAP Operations: All actions taken by Eagle Valley Generating Station and other involved parties to address an incident or emergency event.

Earthquake: A sudden motion or trembling in the earth caused by the abrupt release of accumulated stress along a fault.

Emergency Action Plan (EAP): A comprehensive, single-source document providing accurate and current instructions intended to help Eagle Valley Generating Station and IPL save lives, minimize property damage, and minimize environmental impacts caused by large releases from a dike failure at the Eagle Valley Generating Station Ash Pond System, or other events that present hazardous conditions.

Emergency Event: An event which takes place or a condition which develops that is of a serious nature that may endanger the dike, or endanger persons or property, and demands immediate attention.

Flood: A temporary rise in water levels resulting in inundation of areas not normally covered by water; may be expressed in terms of probability of exceedance per year such as one percent chance flood or expressed as a fraction of the probable maximum flood or other reference flood.
Some related terms are:

a. Flood, Inflow Design (IDF): That flood used in the design of a safe dike and its appurtenant works particularly for sizing the spillway and outlet works, and for determining maximum temporary storage and height of dike requirements.

b. Flood, Probable Maximum (PMF): The maximum run-off condition resulting from the most severe combination of hydrologic and meteorological conditions that are considered reasonably possible for the drainage basin under study.

Freeboard: Vertical distance between a stated water level and the top of dike.

Height, maximum hydraulic: The vertical distance between the maximum design water level and the lowest point in the original streambed.

Height, structural: The vertical distance between the lowest point on the dike crest and the lowest point of the excavated foundation.

Hydrograph, breach or dike failure: A flood hydrograph resulting from a dike breach.

Hydrograph, flood: A graphical representation of the flood discharge with respect to time for a particular point on a stream or river.

Hydrograph, unit: A hydrograph with a volume of one inch of run-off resulting from a storm of a specified duration and aerial distribution. Hydrographs from other storms of the same duration and distribution are assumed to have the same time base but with ordinates of flow in proportion to the run-off volumes.

Incident: An unusual event which takes place, or a condition which is slowly developing, that is not normally encountered in the routine operation of the Ash Pond System, or necessitates a variation from the operating procedures. Such events are more common than emergency conditions and often offer time to conduct preplanned responses to the slowly developing situation. If addressed in a timely manner, such events can often be prevented from progressing into a much worse event.

Incident Command System (ICS): A management system designed to control personnel, equipment, supplies, and communications at the scene of an unusual or emergency event. An Incident Command System is typically deployed at the beginning of an event until the management of the on-scene

operations are no longer needed. The structure of the Incident Command System can be expanded or contracted depending on the changing needs of the event. The Incident Command System allows all involved parties to effectively communicate using common terminology.

Instrumentation: An arrangement of devices installed into or near dikes (piezometer and staff gauge at the Eagle Valley Generating Station Ash Pond System) that provide measurements that can be used to evaluate performance parameters of a structure.

Inundation map: A map delineating the area that would be submerged by a particular flood event.

Length of dike: The length along the top of the dike between contact abutments. This also includes the spillway, power plants, navigation lock, fish pass, etc., where these form part of the length of the dike. If detached from the dike, these structures should not be included.

Outlet: An opening through which water can be discharged.

Phreatic surface: The free surface of water seeping at atmospheric pressure through soil or rock.

Piezometer: An instrument for measuring water or pressure head.

Piping: The progressive development of internal erosion by seepage appearing downstream as a hole or seam discharging water containing soil particles.

Probability: The likelihood of an event occurring within a given period of time.

Probable Maximum Precipitation (PMP): Theoretically, the greatest depth of precipitation for a given duration that is physically possible over a given size storm area at a particular geographical location.

Reservoir: A body of water impounded by a dike in which water can be stored.

Reservoir surface area: The area covered by a reservoir when filled to a specified level.

Riprap: A layer of stone, precast blocks, bags of cement or other suitable material, generally placed on the upstream slopes of an embankment or along a watercourse as protection against wave action, erosion, or scour. It consists of pieces of relatively large size as distinguished from a gravel blanket.

Seepage: Flow or movement of water through a dike, its foundation, or its abutments.

Slope: Inclination from the horizontal, measured as the ratio of horizontal units to corresponding vertical units.

Spillway: A structure over or through which flow is discharged from a reservoir. If the rate of flow is controlled by mechanical means such as gates, it is considered a controlled spillway. If the elevation of the spillway crest is the only control, it is considered an uncontrolled spillway.

Spillway channel: An open channel or closed conduit conveying water from the spillway inlet downstream.

Spillway crest: The lowest level at which water can flow over or through the spillway.

Spillway, chute: An inclined channel, usually separate from the dike, to convey reservoir overflow into the natural channel below the dike or into an adjacent natural drainage channel.

Storage: The retention of water or delay of run-off either by planned operation, as in a reservoir, or by temporary filling of overflow areas, as in the progression of a flood wave through a natural stream channel. Definitions of specific types of storage in reservoirs are:

a. Dead Storage: The reservoir volume between the invert of the lowest discharge and the reservoir bottom.

b. Active Storage: The reservoir volume between the normal reservoir water surface elevation and the invert of the lowest discharge.

c. Flood Storage: The reservoir volume between the crest of the dike and the normal reservoir water surface elevation.