



REPORT

**EMERGENCY ACTION PLAN, R.M. SCHAHFER
GENERATING STATION per CCR Rule 257.73(a)(3)(i)**
*Waste Disposal Area (WDA), Material Storage Runoff Basin (MSRB), Metal
Cleaning Waste Basin (MCWB), and Drying Area (DA)*

Submitted to:

Northern Indiana Public Service Company (NIPSCO)

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October 2021

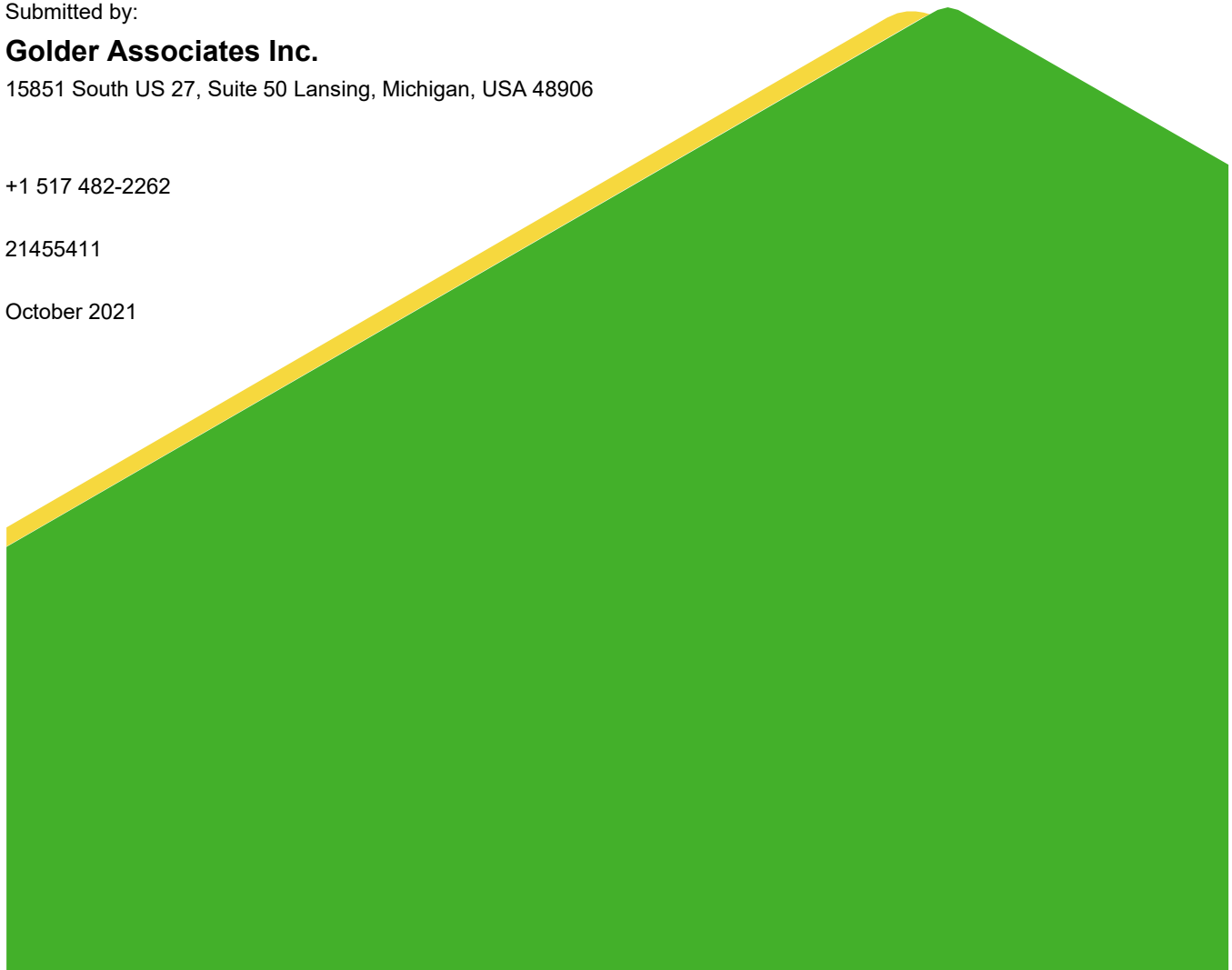


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2.0 BASIC EMERGENCY ACTION PLAN DATA

2.1 Applicability

On April 17, 2015, the U. S. Environmental Protection Agency (EPA) issued its final rule (the “CCR Rule”) on the management of Coal Combustion Residuals (CCR) in 40 Code of Federal Regulations (CFR) Part 257 under Subtitle D of the Resource Conservation and Recovery Act (RCRA), specifically 40 CFR 257.73(a)(3)(i). A provision of the CCR Rule requires that power generating facilities with high or significant risk CCR surface impoundments create an Emergency Action Plan (EAP). This document is relevant to facilities that, after performing their structural integrity assessments are rated as high or significant risk, and thus must comply with the EAP requirements.

This guidance document addresses only the development of an Emergency Action Plan (EAP), which satisfies just one component of compliance with the CCR Rule 40 CFR 257.73.

2.2 Purpose

The purpose of this EAP is to describe procedures that are to be followed to reduce the risk of human injury and loss of life and minimize damage to property during an unusual or emergency event at the following basins located at the NIPSCO RMSGS:

- Waste Disposal Area (WDA)
- Metal Cleaning Waste Basin (MCWB)
- Material Storage Runoff Basin (MSRB)
- Drying Area (DA)

2.3 Potential Impacted Area

See Appendix A, Figure A.1 for Site Location Map and Figure A.2 Overall Site Plan.

See Appendix B for the Warning and Evacuation Areas.

See Appendix C, Inundation Map, for locations that may be flooded and estimated time for the flood wave to travel from the basin to downstream locations if one of the basins above should fail.

2.4 Basin Description

Table 1: Basin Description Summary Information

Basin Name	Approx. Area (acres)	Date Placed In Service	Minimum Crest Elevation ³ (ft)	High Water Level ¹ (ft)	Exterior Dike Height ² (ft)	Inflow ⁴ (cfs)	Max. Spillway Capacity (cfs)	Hazard Classification
WDA	75.5	1982	681.0	678.9	17.0	17	335 ⁵	High
MCWB	13.4	1982	667.0	666.0	4.0	n/a	n/a	Low
MSRB	13.4	1982	667.0	666.0	4.0	n/a	n/a	Low
DA	5.9	1982	671.5	668.8	3.0	n/a	n/a	Low

Notes:

1. From Sargent & Lundy (S&L) construction drawings unless noted otherwise.
2. Estimated from S&L drawings.
3. From December 2011 Survey completed by Marbach, Brady & Weaver, Inc. Elevation data was obtained at 50-foot intervals along the embankment centerlines.
4. Estimated typical daily maximum. cfs = cubic feet per second. Includes FGD WWTP flows.
5. WDA outflow from updated (2021) hydrology and hydraulics analysis, for a Probable Maximum Flood (PMF) event using an improved spillway constructed in November 2017.

3.0 SUMMARY OF EAP PROCESS AND OVERVIEW

The following four steps must be followed anytime an unusual or emergency event (see Section 5.1.2.1) is detected at the following CCR surface impoundments at the NIPSCO RMSGS:

- Waste Disposal Area (WDA)
- Metal Cleaning Waste Basin (MCWB)
- Material Storage Runoff Basin (MSRB)
- Drying Area (DA)

Step 1 – Event Detection and Level Determination

During this step, an unusual or emergency event is detected at one of the four subject basins and classified by the Operations Supervisor (OS) into one of the following event levels:

- Event Level 3: Unusual Event, slowly developing
- Event Level 2: Emergency Event, rapidly developing
- Event Level 1: Emergency Event, imminent dam failure or flash flooding

Step 2 – Notification and Communication

After the event level has been determined, notifications are made in accordance with the appropriate notification flow charts provided in Appendix D.

Step 3 – Expected Actions

After the initial notifications are made, the OS is to refer to Table 2 and confer with the Acting Emergency Engineer or designee to develop and execute appropriate preventative actions. During this step, there is a continuous process of taking actions, assessing the status of the situations, 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 been resolved, termination and follow-up procedures are to be followed. 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. Following an Event Level 1 determination, an inspection of the CCR surface impoundment structure is to be conducted prior to terminating the EAP operations.

Unusual and emergency events are defined in Section 5. Specific actions required for each step will depend on the severity of the situation as defined during Step 1. This four-step process is depicted graphically on the EAP Flow Chart, Figure 1 below.

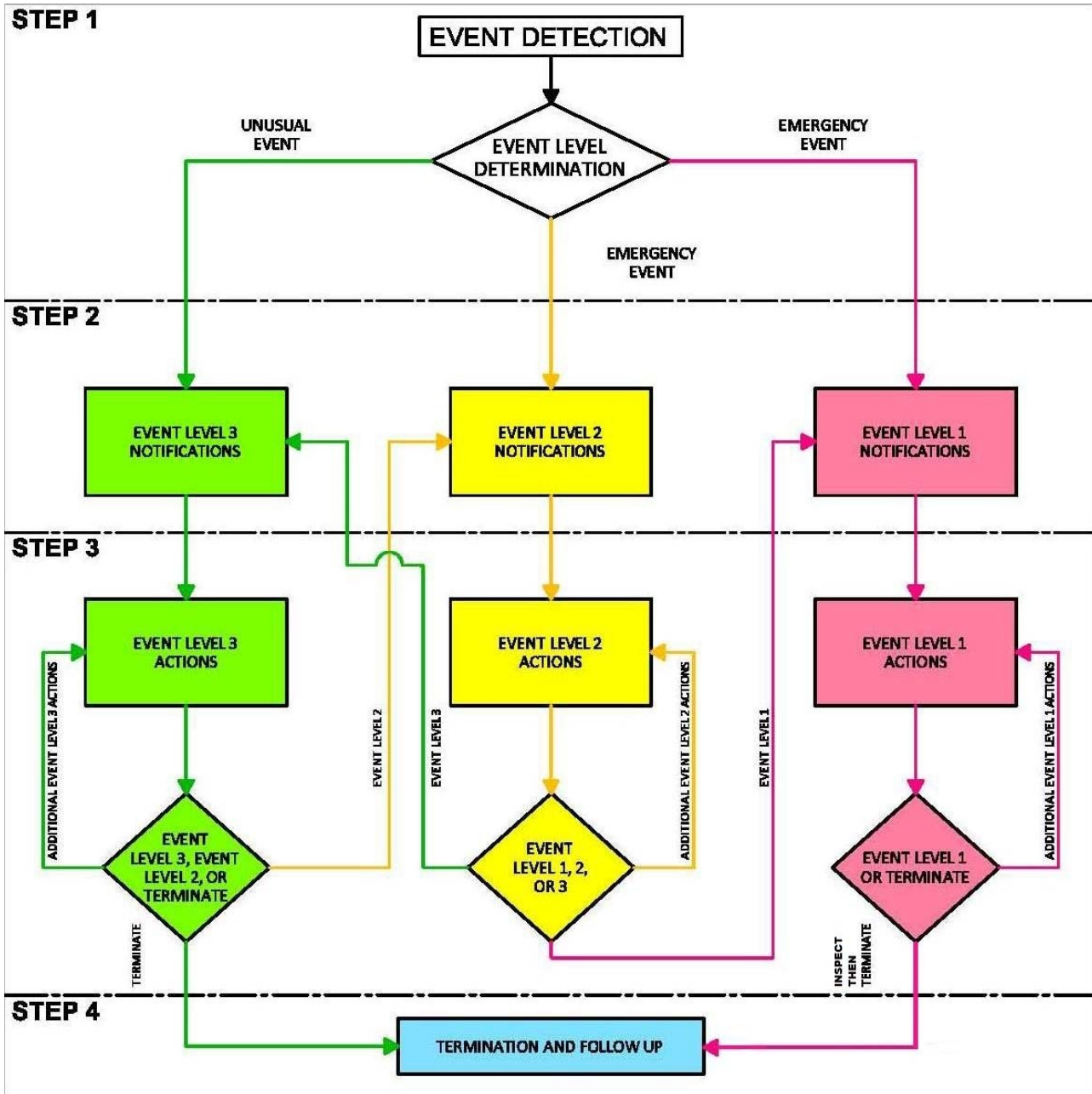


Figure 1: EAP Overview

4.0 ROLES AND RESPONSIBILITIES

4.1 Incident Commander

The Incident Commander (IC):

- Establishes and transfers command, as needed.
- Manages by objectives.
- Determines if a unified command structure is needed.
- Assigns additional staff as needed.

When the event begins, the Unit 17/18 Operations Supervisor (OS) will be designated the Incident Commander (I.C.). Once the event action is determined, the OS may hand off the IC duties to the Acting Emergency Engineer, another NIPSCO employee, or responding emergency response agency.

4.2 EAP Coordinator (OS or Designee)

- The EAP Coordinator is the *Operations Supervisor (OS) or Designee*. As soon as an unusual event or emergency event is detected, immediately classify it by one of the following emergency event levels:
 - Event Level 3: Unusual Event, slowly developing
 - Event Level 2: Emergency Event, rapidly developing
 - Event Level 1: Emergency Event, imminent dam failure or flash flooding
- Immediately notify the personnel in the order presented on the notification chart (Appendix D) for the appropriate level and if time permits, confer with the *Acting Emergency Engineer or Designee*.
- Provide updates of the situation to the police dispatcher to assist them in making timely decisions regarding warnings and evacuations.
- Ensure the EAP process is followed and the process is completed.
- The OS from Unit 14/15 can assist in operations of the generating station while the OS from Unit 17/18 is the Incident Commander.

4.3 Warning/Evacuation Director (Jasper and Porter County Emergency Management Agency)

- Serves as a primary contact for coordination of additional emergency services.
- Coordinate the preparation to evacuate downstream from the dam, as well as the implementation of the evacuation itself. The OS will contact the Warning/Evacuation Director.
- Under a Level 2 or Level 1 Event, the Warning/Evacuation Director notifies residents of an evacuation.
- Inundation maps and lists of associated, at-risk property owners are included in Appendix C.

4.4 Acting Emergency Engineer (or designee)

- The Acting Emergency Engineer's responsibilities involve assistance in technical aspects of the basins, event level determination and evaluation, and anything that pertains to the condition of the basins, including any necessary follow-up activities, including issuing updates to the EAP. The Acting Emergency Engineer will also inspect the other on-site ponds during the emergency to determine if they are failing or not.

4.5 Public Affairs Manager

- The Public Affairs Manager prepares a public statement and will be solely responsible for notifying the media about the event.

4.6 On-Call Engineer

- Provide decision and technical support to the Acting Emergency Engineer or Designee as appropriate.

5.0 THE FOUR-STEP EAP PROCESS

5.1 Step1 – Event Detection and Level Determination

This section of the EAP describes the first step that must be followed whenever an unusual or emergency event is detected with respect to one of the four subject CCR impoundments at RMSGS. This section also describes event detection and information to assist the OS in determining the appropriate level for the event.

5.1.1 Event Detection

Unusual or emergency events may be detected by:

- Daily visual observations of the structures and spillways;
- Daily water level measurement;
- Weekly measurement of calibrated rain gauge; and
- Routine inspection of the embankments, spillways, and associated structures by trained personnel and completion of inspection form.

After any unusual or emergency event is detected, it is reported using the facility emergency communication 5311 number and reported to the OS. The OS (or Acting Emergency Engineer) is responsible for determining the level of the event. If the Jasper and/or Porter County Emergency Management Agency receives a 911 call regarding observations of an unusual or emergency event at one of the structures, the 911 dispatcher is to first contact the OS. The OS is to determine the appropriate event level (as defined in Section 5.1.2.2) and advise the dispatcher of the event level.

5.1.2 Event Level Determination

5.1.2.1 Definition of Unusual and Emergency Events

- **Unusual Event** - is defined as an event, which takes place, or a condition, which develops, that is not normally encountered in the routine operation of the basins and reservoir or necessitates a variation from Standard Operating Procedures. An unusual event requires operations in accordance with Event Level 3 of this EAP.
- **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 basins, 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.

5.1.2.2 Level Determination

The OS is responsible for defining unusual or emergency events as one of the three following event levels:

- **Event Level 3** - This is an unusual event that is defined as a slowly developing situation that may endanger the structural integrity of the basins. The OS is responsible for monitoring the progression of the event. This event does not require emergency action, but appropriate maintenance and monitoring shall be performed immediately.
- **Event Level 2** - This is an emergency event that is defined as rapidly developing and could quickly lead to dam failure and flash flooding downstream of the basins. The OS will notify the Jasper and Porter County Emergency Management Agency to prepare the downstream areas for evacuation. If the OS is unable to make an event level determination, the Acting Emergency Engineer will make the determination.
- **Event Level 1** - This is an emergency event that is defined as imminent dam failure or flash flooding downstream of the basins. The OS or Acting Emergency Engineer will first notify the Jasper County E-911 and Sheriff and will then notify the Jasper and Porter County Emergency Management Agencies for the immediate evacuation of potentially inundated areas downstream of RMSGS.

5.1.2.3 Level Determination Guidance

Use Table 2, below, as a guide for determining the appropriate event level. This table is intended to be all inclusive; however, an event or condition may arise that is not included in this table. In the circumstance of multiple events occurring at the basins with conflicting event levels, always designate the more severe applicable event level as the governing event level. Also, each basin should be inspected during the emergency event, to ensure that the basins that are not in event levels are continuing to operate normally.

Table 2: Event Level Determination Guidance and Action Data Sheet Inbox

Event	Observation	Event Level	Action Data Sheet
Flooding (A)	Flooding is unlikely because the structures are ring dikes and only receive inflows from pumps and rainfall directly on the basin. Although flooding is unlikely, it could lead to overtopping, refer to Overtopping Action Data Sheet.	1	A1
Earthquake (B)	Measurable earthquake felt or reported on or within 50 miles of the basins.	3	B3
	Earthquake that causes visible damage to the embankments or appurtenances.	2	B2
	Earthquake resulting uncontrolled release of water	1	B1
Seepage (C)	Discovery of new seepage areas on or near the basins.	3	C3
	New seepage areas or existing seepages with now cloudy discharge or increased flow rate	2	C2
	Seepage with cloudy water, transporting embankment material, and increasing in flow.	1	C1
Cracking (D)	New cracks in embankment greater than several inches deep, several feet long.	3	D3

Event	Observation	Event Level	Action Data Sheet
	New cracks in embankment with seepage (see seepage above)	2	D2
Movement (E)	Visible gradual movement of the embankment slope	3	E3
	Visible and accelerating movement of the embankment slope affecting embankment crest height.	2	E2
Overtopping (F)	Water level within 6 inches to 1 foot of the basin crest	3	F1
	Water flowing over the top of the basin crest	1	F1
Gate or Trash Rack Failure (G)	Inability to clean trash racks.	3	G3
	Inability to clean trash racks, rising water, <1 ft below crest.	2	G2
	Inability to clean trash racks, water flowing over basin crest.	1	G1
Blocked Trash Racks (G)	Inability to clean trash racks.	3	G3
Instruments (H)	Instrumentation malfunctioning	3	H3
Sabotage (I)	Damage to embankments or appurtenances with no impacts to normal functions	3	I3
	Damage to embankment or appurtenances with cloudy seepage flow	2	I2
	Damage to embankment or appurtenance resulting in uncontrolled release of water	1	I1

- Event Level 3 - This is an unusual event that is defined as a slowly developing situation that may endanger the structural integrity of the basin.
- Event Level 2 - This is an emergency event that is defined as rapidly developing and could quickly lead to basin failure and flash flooding downstream of the basin.
- Event Level 1 - This is an emergency event that is defined as imminent basin failure or flash flooding downstream of the basin.

5.2 Step 2 – Notification and Communication

This section of the EAP describes the appropriate notifications that are to be made after the OS 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 sample media release and a list of media contacts. Notifications are to be made in accordance with the appropriate Notification Flow Chart provided in Appendix D.

5.2.1 Base of Operations

Establish a base of operations during the event, for example, the RMSGS Executive Conference Room has multiple phones and internet access.

5.2.2 Communication Systems

Communication equipment available to the OS and other NIPSCO personnel includes radios and cellular phones. Radios shall be the primary means of communication on Site. Cellular phones can be used as secondary means of communication, in the event radios are non-functioning or not available. Personnel is to check in with each other using the radios every ten minutes during the emergency event.

5.2.3 Scripted Messages

The following scripted message **is to be used** as a guide to communicate the status of an event **using event level notifications listed in Appendix D, Figure D.1 through D.3 - Notification Flow Chart for applicable event level.**

OS Event Level 3 Scripted Message

- This is the Operations Supervisor; I am making this call-in accordance with the NIPSCO RMSGS EAP.
- An unusual event has been detected at the RMSGS.
- The EAP has been activated, currently at Level 3.
- If a problem occurs, flooding along the Davis Ditch, Stahlbaum Ditch and the Kankakee River 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*).
- Refer to Appendix D, Figure D.1 - Notification Flow Chart for Event Level 3.

OS Event Level 2 Scripted Message

- This is the Operations Supervisor. I am making this call-in accordance with the NIPSCO RMSGS EAP.
- An emergency event has been detected at the RMSGS.
- The EAP has been activated, currently at Level 2.
- Flooding along the Davis Ditch, Stahlbaum Ditch and the Kankakee River is possible.
- Prepare to evacuate homes/structures around the RMSGS.
- The muster area in Wheatfield is the Baptist Church, alternate is Kankakee Valley Schools.
- 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*).
- Refer to Appendix D, Figure D.2 - Notification Flow Chart for Event Level 2.

OS Event Level 1 Scripted Message

- This is the Operations Supervisor; I am making this call-in accordance with the RMSGS EAP.
- An emergency event has been detected at the RMSGS. Failure of a basin is imminent.
- The EAP has been activated, currently at Level 1.
- Flooding along the Davis Ditch, Stahlbaum Ditch and the Kankakee River will occur or is already occurring.
- Immediately evacuate homes/structures around the RMSGS.
- The muster area in Wheatfield is the Baptist Church, alternate is Kankakee Valley Schools.
- 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).
- Refer to Appendix D, Figure D.3 - Notification Flow Chart for Event Level 1.

5.2.4 Public Affairs Plan

In the event of an unusual or an emergency condition, the Public Affairs Manager will be alerted and briefed on the situation. The Public Affairs Manager will prepare and be solely responsible for delivering a message for public release based on the existing conditions and information from the Acting Emergency Engineer or designee, or other sources.

Preparation of warning messages is to 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 is to 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 for Event Levels 2 and 1. Subsequent announcements are to provide additional details at the discretion of the Public Affairs Manager.

Public Affairs Manager - Event Level 2 Basin Failure Announcement (Example)

- THE NIPSCO RMSGS ANNOUNCED AT (*time*) TODAY THAT AN EMERGENCY CONDITION EXISTED AROUND ONE OF (*The RMSGS Basins*) DUE TO (*general description of problem*). THE BASIN IS LOCATED AT THE RMSGS NEAR WHEATFIELD, INDIANA.
- THE NIPSCO SPOKESPERSON SAID THAT THE WATER LEVEL OF THE (Identify Specific Basin) WAS BEING LOWERED (*reason*).
- THE SPOKESPERSON EMPHASIZED THAT THE DRAWDOWN OF THE STRUCTURE WAS BEING CARRIED OUT UNDER CONTROLLED CONDITIONS AND THERE IS NO IMMEDIATE DANGER OF THE BASIN FAILING. HOWEVER, AS A PRECAUTIONARY MEASURE, residents in the immediate area SHOULD PREPARE TO EVACUATE.
- ADDITIONAL INFORMATION WILL BE RELEASED AS PROMPTLY AS POSSIBLE.

Public Affairs Manager - Event Level 1 Dam Failure Announcement (Example)

- **URGENT, URGENT:** THE NIPSCO RMSGS ANNOUNCED AT (*time*) TODAY THAT AN EMERGENCY CONDITION EXISTED AROUND ONE OF (*The RMSGS Basins*) DUE TO (*general description of problem*). THE BASIN IS LOCATED AT THE RMSGS NEAR WHEATFIELD, INDIANA.

- ATTEMPTS TO SAVE THE BASIN ARE UNDERWAY BUT THEIR SUCCESS CANNOT BE DETERMINED AS YET. Residents in the immediate area SHOULD EVACUATE TO HIGH GROUND **IMMEDIATELY!**
- THE MUSTER AREA IN WHEATFIELD IS THE BAPTIST CHURCH, ALTERNATE IS KANKAKEE VALLEY SCHOOLS.
- IF THE BASIN FAILS, WATER WILL TAKE (describe time for flood wave to travel from dam breach to point of interest). AREAS CLOSER TO THE BASIN WILL BE FLOODED SOONER.
- ADDITIONAL INFORMATION WILL BE RELEASED AS PROMPTLY AS POSSIBLE.

Media Contacts

Emergency announcements will be released through the National Weather Service. The telephone number appears below:

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

5.3 Step 3 – Expected Action

5.3.1 Action Data Sheets

After the OS or acting OS has determined the event level and has made the appropriate notifications, the OS is to take action, using the Action Data Sheets provided in Appendix J as a guide. Table 2, see section 5.1.2.3, is an index of Appendix J Action Data Sheets.

The Action Data Sheets are to be reviewed by the Acting Emergency Engineer or designee. If an event is not covered, adapt an Action Data Sheet of a similar event and event level. If resources described in the Action Data Sheets are not available, adapt with the available resources.

5.3.2 Locally Available Equipment, Labor, and Materials

- On-Site Equipment- SEE APPENDIX L.
- Heavy Equipment Contractors – SEE APPENDIX L

5.3.3 Unusual or Emergency Event Log

Use the Unusual or Emergency Event Log (Appendix K) to record actions and events during an Unusual or Emergency Event and the time that the action or event occurred.

5.4 Step 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 1, 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.

5.4.1 Termination Responsibilities

The Acting Emergency Engineer will be responsible for terminating EAP operations. This decision will be relayed to the OS, Public Affairs Manager and the Warning/Evacuation Director (Jasper and Porter County Emergency Management Agency). Each Director will notify the persons within their branch of the termination.

Prior to termination of a Level 1 event that did not result in dam failure, the OS will coordinate inspection of the basin to determine if any damage has occurred that could potentially result in the loss of life, injury, or property damage. If it is determined that these conditions do not exist, the OS will be advised to terminate the EAP as described above.

5.4.2 Follow-up

Event Level 3 – Following termination of a Level 3 event, the Acting Emergency Engineer will conduct a review of the EAP. The review will include all parties that participated in the EAP activities and will document any EAP procedures that were followed effectively, as well as any ways to improve the EAP. A copy of the review document will be inserted into Appendix E of the EAP. Follow-up activities will be completed within 2 months of event termination.

Event Level 2 or 1 – The Acting Emergency Engineer will use the follow-up procedures described above. In addition, any extra measures that must be taken due to the increased severity of the event will also be documented in the review. A copy of this review will also be inserted into Appendix E.

Event That Has Caused Loss of Life, Injury or Property Damage – In addition to the course of action outlined above for Event Level 2 or 1, note any special procedures that must be followed in the event of loss of life, injury or property damage. A closer look at the EAP operations will be taken. Follow-up review will be completed within 1 month and any conclusions will be inserted into Appendix E of the EAP.

6.0 PRIVACY STATEMENT

Information collected for the purposes of this document are to be used for emergency and unusual events at NIPSCO RMSGS. This information is to be distributed to all parties included in the EAP. All parties included in the EAP are to be made aware of the plan's existence and their level of involvement. An emergency roster has been created for the successful completion and implementation of this EAP during emergencies. Appendix G contains the current EAP distribution. This plan is subject to the provision of the applicable Federal and State privacy acts and regulations.

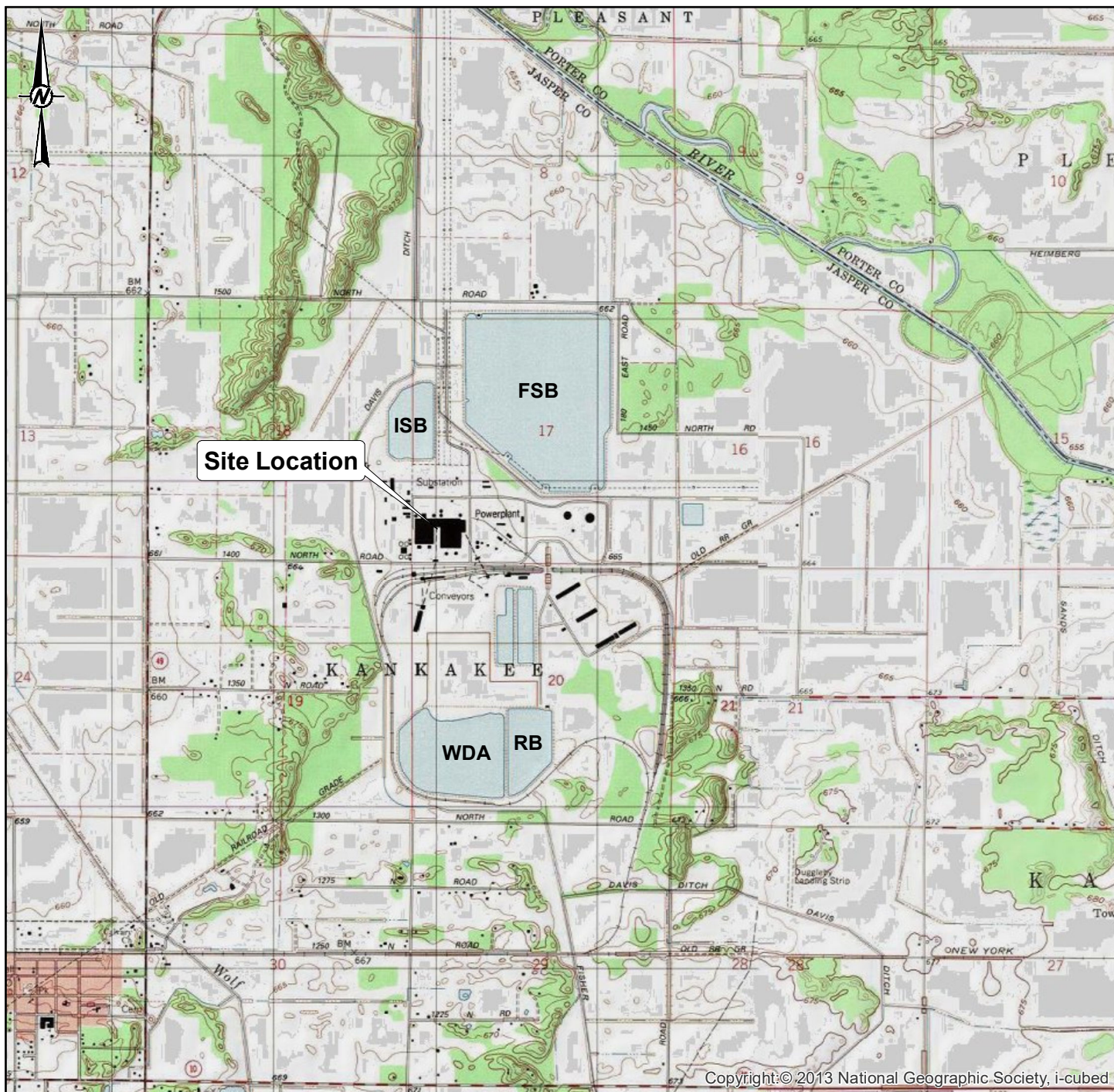
7.0 EAP ANNUAL REVIEW AND PERIODIC TEST

This EAP document will require an annual review and update to stay current. A periodic test of the EAP procedures is also required every 5 years to ensure continued effectiveness. For annual review documentation and periodic test procedures, reference Appendix E and F.

[https://golderassociates.sharepoint.com/sites/142116/project files/5 technical work/updated emergency action plan/2021 nipsco msgs - ccr unit eap final.docx](https://golderassociates.sharepoint.com/sites/142116/project%20files/5%20technical%20work/updated%20emergency%20action%20plan/2021%20nipsco%20msgs%20-%20ccr%20unit%20eap%20final.docx)

APPENDIX A

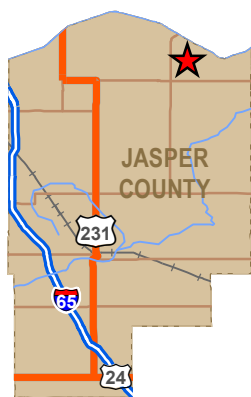
Site Location Maps



Copyright: © 2013 National Geographic Society, i-cubed



KEY MAP



CLIENT
NIPSCO

PROJECT
**EMERGENCY ACTION PLAN
R.M. SCHAHFER GENERATING STATION
WHEATFIELD, INDIANA**

TITLE
SITE LOCATION MAP

CONSULTANT



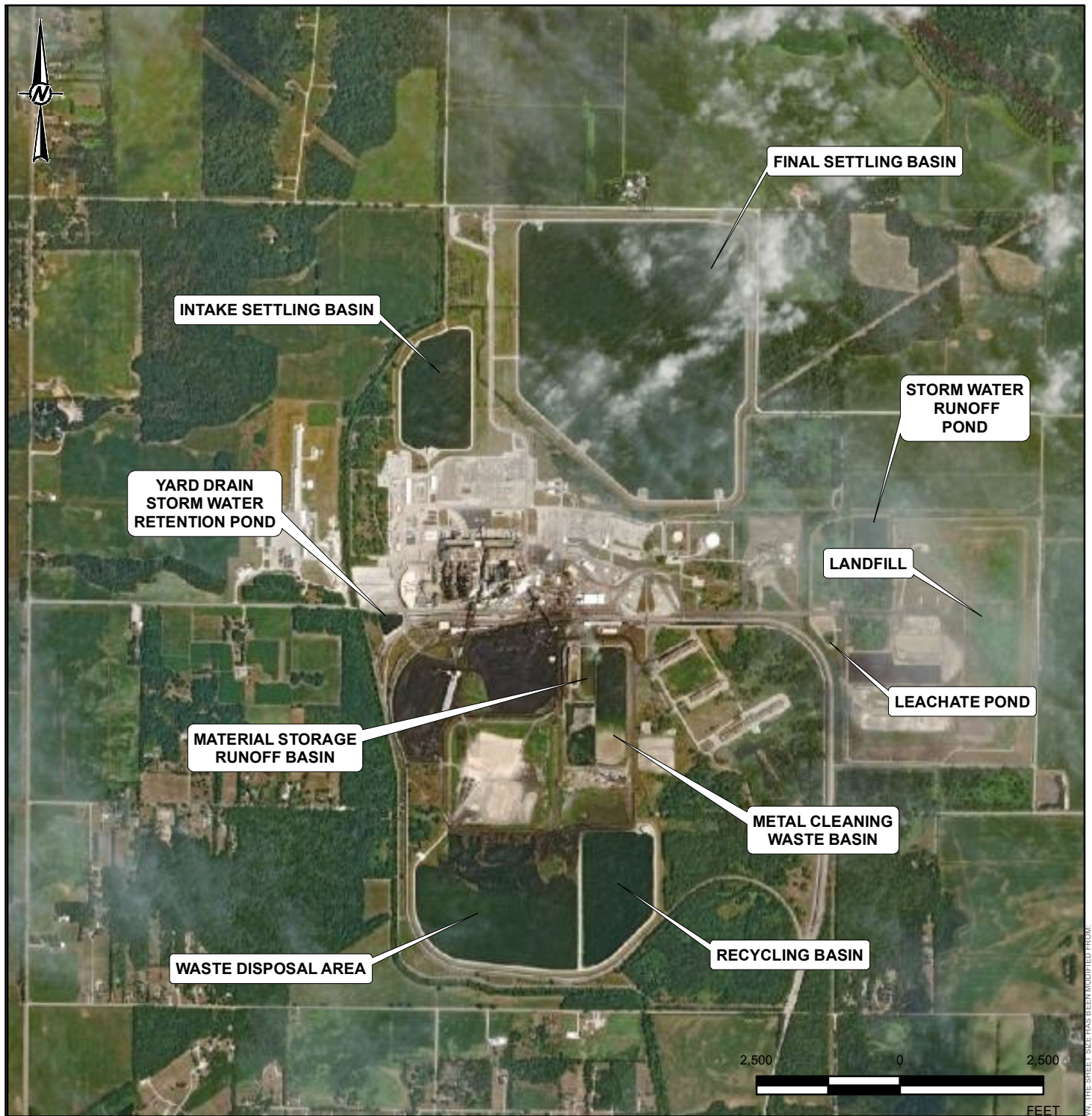
YYYY-MM-DD	2021-08-04
PREPARED	DJC
DESIGN	TDJ
REVIEW	
APPROVED	

PROJECT
21455411

CONTROL
21455411D001-GIS.mxd

Rev.
0

FIGURE
A.1



CLIENT
NIPSCO

PROJECT
EMERGENCY ACTION PLAN
R.M. SCHAHFER GENERATING STATION
WHEATFIELD, INDIANA

TITLE
SITE PLAN

CONSULTANT



YYYY-MM-DD 2021-08-04

PREPARED DJC

DESIGN TDJ

REVIEW

APPROVED

PROJECT
21455411

CONTROL
21455411D002-GIS

Rev.
0

FIGURE
A.2

REFERENCE

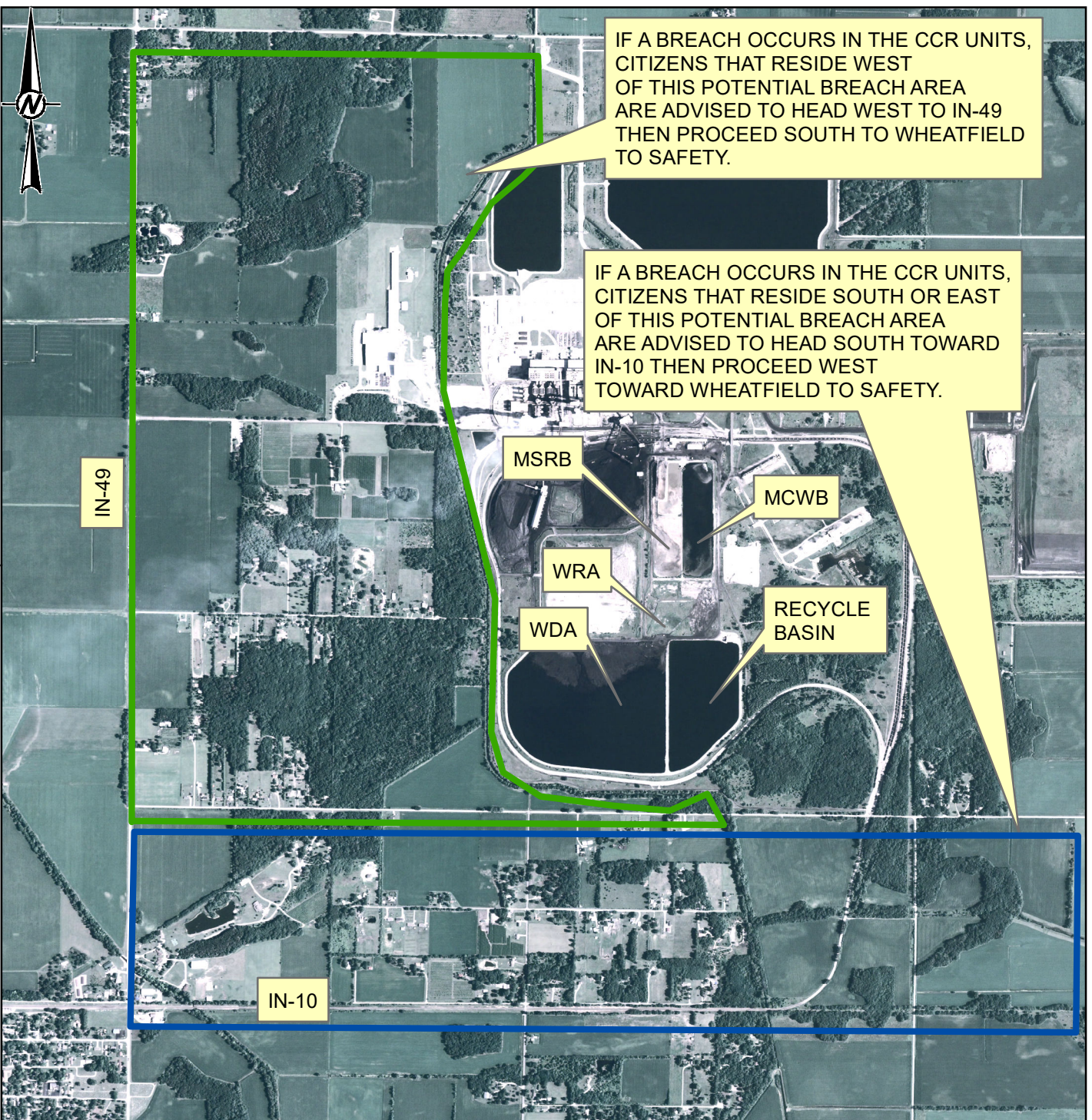
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SCALE HAS BEEN MODIFIED FROM:

APPENDIX B

Warning and Evacuation Areas



IF A BREACH OCCURS IN THE CCR UNITS, CITIZENS THAT RESIDE WEST OF THIS POTENTIAL BREACH AREA ARE ADVISED TO HEAD WEST TO IN-49 THEN PROCEED SOUTH TO WHEATFIELD TO SAFETY.

IF A BREACH OCCURS IN THE CCR UNITS, CITIZENS THAT RESIDE SOUTH OR EAST OF THIS POTENTIAL BREACH AREA ARE ADVISED TO HEAD SOUTH TOWARD IN-10 THEN PROCEED WEST TOWARD WHEATFIELD TO SAFETY.

MSRB

MCWB

WRA

RECYCLE BASIN

WDA

IN-49

IN-10

LEGEND

- POTENTIAL FLOOD AREA SOUTH OF CCR UNITS
- POTENTIAL FLOOD AREA WEST & NORTH OF CCR UNITS

CLIENT
NIPSCO

PROJECT
EMERGENCY ACTION PLAN
R.M. SCHAHFER GENERATING STATION
WHEATFIELD, INDIANA

TITLE
**EVACUATION ROUTE
WDA, MSRB, MCWB, OR WRA - CCR UNITS**

CONSULTANT	YYYY-MM-DD	2021-08-04
	PREPARED	DJC
	DESIGN	TDJ
	REVIEW	
	APPROVED	



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1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIA

APPENDIX C

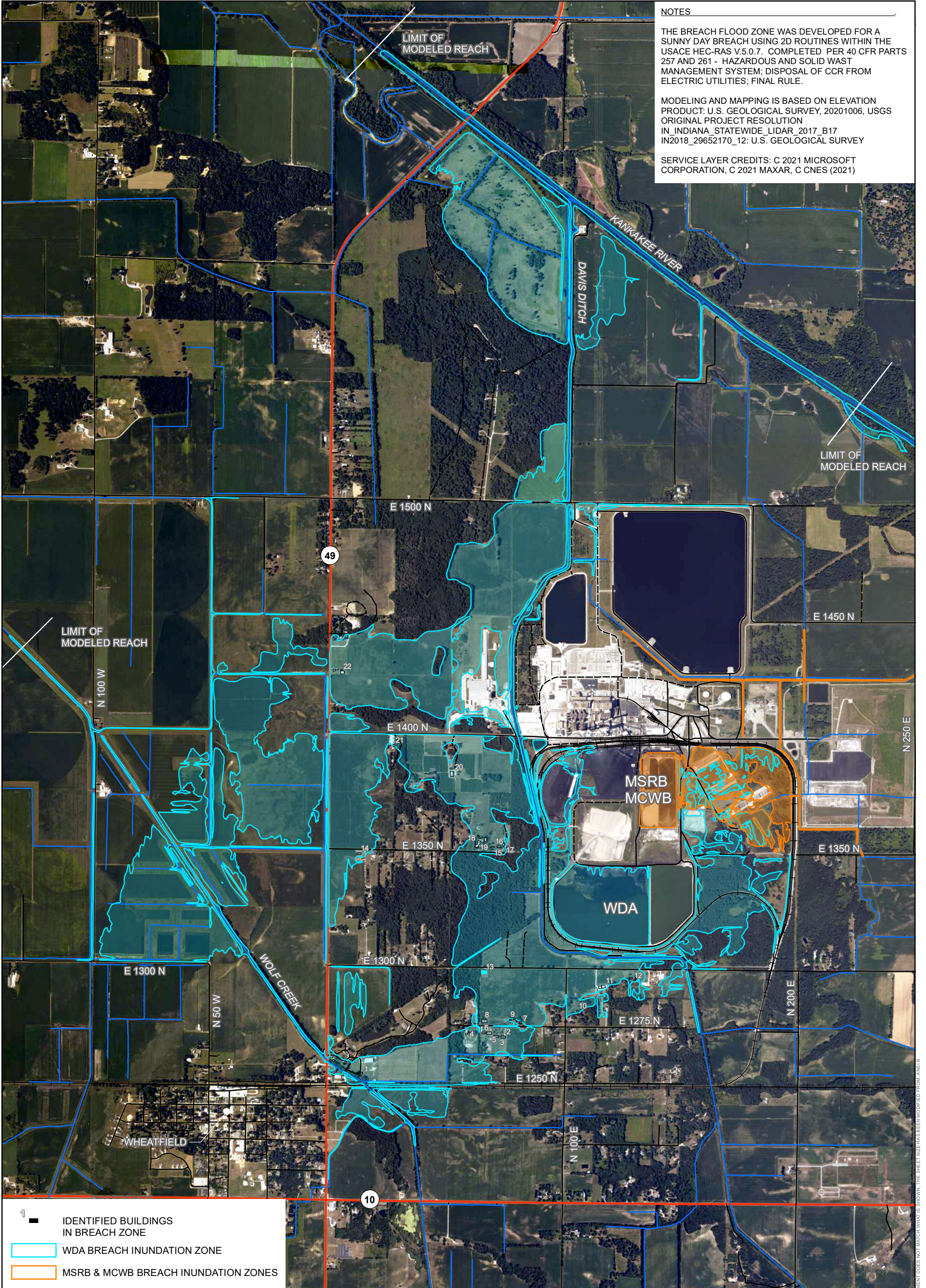
**Inundation Maps and
Documentation**

NOTES

THE BREACH FLOOD ZONE WAS DEVELOPED FOR A SUNNY DAY BREACH USING 2D ROUTINES WITHIN THE USACE HEC-RAS V.5.0.7. COMPLETED PER 40 CFR PARTS 257 AND 261 - HAZARDOUS AND SOLID WAST MANAGEMENT SYSTEM; DISPOSAL OF CCR FROM ELECTRIC UTILITIES; FINAL RULE.

MODELING AND MAPPING IS BASED ON ELEVATION PRODUCT: U.S. GEOLOGICAL SURVEY, 20201006, USGS ORIGINAL PROJECT RESOLUTION IN INDIANA STATEWIDE LIDAR 2017_B17 IN2018_29652170_12: U.S. GEOLOGICAL SURVEY

SERVICE LAYER CREDITS: C 2021 MICROSOFT CORPORATION, C 2021 MAXAR, C CNES (2021)



- IDENTIFIED BUILDINGS IN BREACH ZONE
- WDA BREACH INUNDATION ZONE
- MSRB & MCWB BREACH INUNDATION ZONES

CLIENT
NORTHERN INDIANA PUBLIC SERVICE COMPANY (NIPSCO)

DATE 2021-04-01

PREPARED MTC

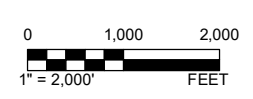
REVIEW XXX

APPROVED XXX

PROJECT
HAZARD CLASSIFICATION
WASTE DISPOSAL AREA (WDA)

TITLE
POTENTIAL BREACH INUNDATION ZONE

PROJECT No. 21455411



Appendix C: Potentially Flooding at Buildings Located within the WDA Breach Inundation Zone

ID	ADDRESS	PIN *	OWNER	DESCRIPTION	PEAK DEPTH (FEET)	PEAK VELOCITY (FT/SEC)	ARRIVAL TIME † (HH:MM)
1	12501 N ST RD 49	006-00051-00	LASTING CHANGE INC.	4 BUILDINGS POTENTIALLY RESIDENTIAL	1.2	0.4	0:40
2	731 E 1275 N	006-00642-00	KOPF, PATRICIA A	MANUFACTURED HOME	0.7	0.2	0:53
3	699 E 1275 N	006-00639-00	JPMORGAN CHASE BANK	MANUFACTURED HOME	0.8	0.2	0:52
4	517 E 1275 N	006-00419-00	VANDERVIELT, EVERTS	2 OUTBUILDINGS, NOT MAIN RESIDENCE	1.2	0.4	0:40
5	677 E 1275 N	006-00643-00	OLESON, RONALD C & VIOLA E	MANUFACTURED HOME AND OUTBUILDING	1.4	1.7	1:01
6	637 E 1275 N	006-00458-00	CHAPMAN, JAMES A	MANUFACTURED HOME	1.2	0.4	0:40
7	788 E 1275 N	006-00013-01	REIDY DEBORAH	MAIN RESIDENCE	0.8	1.6	3:29
8	638 E 1275 N	006-00611-00	NGUYEN, TIEN & MARTA	MAIN RESIDENCE & OUTBUILDING	1.2	0.4	0:40
9	744 E 1275 N	006-00527-00	FIGUEROA, ELIAS & AMALIA	MAIN RESIDENCE & GARAGE	0.1	0.1	2:01
10	12825 N 100 E	006-00200-00	IRVINE, ALLAN & FRANCES	SMALL AG BUILDING, NOT MAIN RESIDENCE	1.2	0.4	0:40
11	1127 E 1300 N	006-00001-00	HUNTER, MATTHEW R & MARIBETH TRSTE	2 AG SHEDS, NON-RESIDENTIAL LOT	1.2	0.4	0:40
12	1129 E 1300 N	006-00576-00	VUKADINOVIC, VERA & BRANKO VUKADINOVIC	MAIN RESIDENCE & 3 OUTBUILDINGS	1.2	0.4	0:40
13	659 E 1300 N	006-00672-00	VICKERY, JOSHUA & AMBER N	MAIN RESIDENCE	3.0	1.5	0:38
14	97-99 E 1350 N	006-00422-00	ALLEE, TERRY W	DUPLEX RESIDENCE	0.8	1.6	3:29
15	638 E 1350 N	006-00555-00	REMMERS, CLYDE W & MELISSA D	MANUFACTURED HOME	1.2	0.4	0:40
16	684 E 1350 N	006-00238-00	BRUMLEY, CHARLES D & GAYLE L	MANUFACTURED HOME	1.2	0.2	2:19
17	686 E 1350 N	006-00237-00	DAVIS, WILLIAMS	OUTBUILDING, NOT MAIN RESIDENCE	0.8	0.2	0:52
18	588 E 1350 N	006-00523-00	MILBOURN, ROBERT N & MARGARETA	MAIN RESIDENCE & 2 LARGE OUTBUILDINGS	1.2	0.4	0:40
19	636 E 1350 N	006-00464-00	RAJKOVIC, SANDRAK	AG BUILDING, NOT A RESIDENCE	1.2	0.4	0:40
20	725 E 1400 N	006-00271-00	LUEDTKE BLUEBERRY FARMS LLC	AG BUILDING, MAIN RESIDENCE SURROUNDED	3.4	0.9	2:21
21	513 E 1400 N	006-00333-00	HAYNES, ERIN I	GARAGE, NOT MAIN RESIDENCE	1.2	0.4	0:40
22	14273 N ST RD 49	006-00433-00	BATTAGLIA, DENISE M	MAIN RESIDENCE & 2 OUTBUILDINGS	1.2	0.4	0:40

* PIN and owner information as listed with the Jasper County, Indiana Tax Assesor Database
 <<https://www.jaspercountyin.gov/eGov/apps/services/index.egov?view=detail;id=7>>

† Arrival time is elapsed time from breach initiation to the time the flood depth reaches the lowest building corner.

APPENDIX D

Notification Flow Charts

EVENT LEVEL 3 NOTIFICATION

UNUSUAL EVENT, SLOWLY DEVELOPING

Person Observing or Learning of emergency

(OPERATIONS SUPERVISOR)
PRIMARY CONTACT _____
ALTERNATE CONTACT _____

Scripted Operations Supervisor Message

- This is the (Operation Supervisor). I am making this call in accordance with the NIPSCO RMSGS Hydraulic Structures EAP.
- An unusual event has been detected at the RMSGS.
- The EAP has been activated, currently at Level 3.
- If a problem occurs, flooding along the Davis Ditch, Stahlbaum Ditch and the Kankakee River 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(Insert number)

[1]

(PUBLIC AFFAIRS MANAGER)
PRIMARY CONTACT _____

[2]

(ACTING EMERGENCY ENGINEER)	
PRIMARY CONTACT _____	ALTERNATE CONTACT _____
ON-CALL ENGINEER _____	

[2a] NATIONAL WEATHER SERVICE
24-HOUR NO. (317) 856-0367
Alternative# (317) 856-0368

[2b]

(WARNING/EVACUATION DIRECTOR)
PRIMARY CONTACT _____

[2c]

INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF WATER
PRIMARY CONTACT _____

LEGEND

- CALLS BY OPERATION SHIFT SUPERVISOR
- SECOND LEVEL CALLS (as warranted)

NOTES

1.) [1b] DENOTES SUGGESTED SEQUENCE

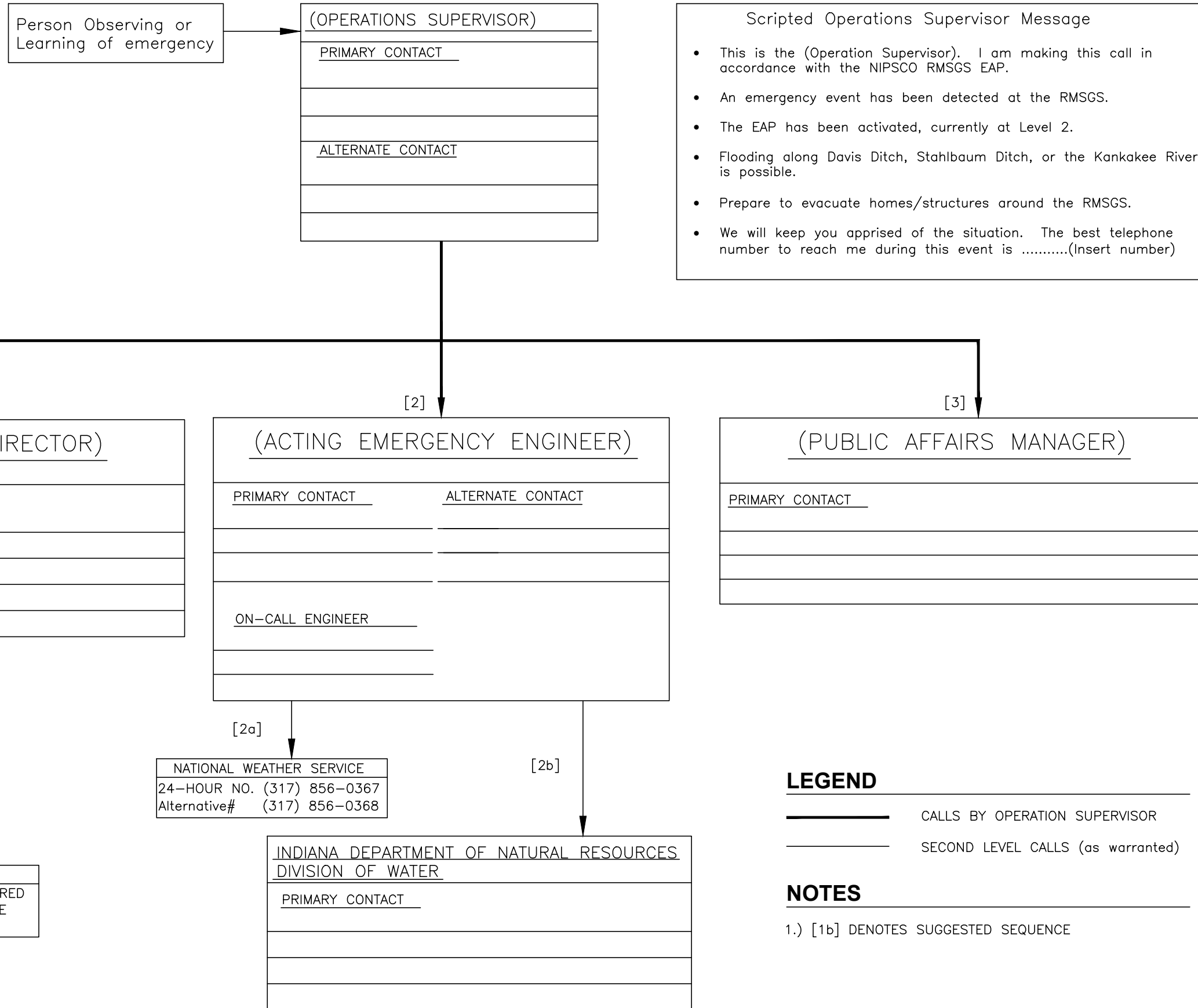
<p>CLIENT NIPSCO SCHAFER GENERATING STATION WHEATFIELD, INDIANA</p>	<p>CONSULTANT</p> <p>DESIGNED TDJ PREPARED DJC REVIEWED APPROVED</p>	
<p>PROJECT EMERGENCY ACTION PLAN</p>		
<p>TITLE NOTIFICATION FLOW CHART FOR EVENT LEVEL 3</p>		
<p>CONTROL 21455411B001.dwg</p>		

Path: \\golder.com\complex\data\office\Detrol\caad\Projects\21455411-NIPSCO\PRODUCT\IONB-Emergency Action Plan | File Name: 21455411B001.dwg | Last Edited By: dcoas Date: 2021-08-04 Time: 2:08:43 PM | Printed By: DCoas Date: 2021-08-04 Time: 2:09:20 PM

1" IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

EVENT LEVEL 2 NOTIFICATION

EMERGENCY EVENT, RAPIDLY DEVELOPING



CLIENT NIPSCO SCHAFER GENERATING STATION WHEATFIELD, INDIANA	CONSULTANT GOLDER MEMBER OF WSP
PROJECT EMERGENCY ACTION PLAN	TITLE NOTIFICATION FLOW CHART FOR EVENT LEVEL 2
PROJECT NO. 21455411	CONTROL 21455411B001.dwg
PROJECT EMERGENCY ACTION PLAN	FIGURE APP D2

Path: \\golder.complexdata\office\Detrit\cad\Projects\21455411-NIPSCO\PRODUCTION\B-Emergency Action Plan | File Name: 21455411B001.dwg | Last Edited By: dcoos | Date: 2021-08-04 Time: 2:08:43 PM | Printed By: DCoos | Date: 2021-08-04 Time: 2:09:49 PM

1. IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSIB

EVENT LEVEL 1 NOTIFICATION

EMERGENCY EVENT, IMMINENT DAM FAILURE OR FLASH FLOOD

Person Observing or Learning of emergency

(OPERATIONS SUPERVISOR)
PRIMARY CONTACT _____
ALTERNATE CONTACT _____

Scripted Operations Supervisor Message

- This is the (Operation Supervisor). I am making this call in accordance with the NIPSCO RMSGS EAP.
- An emergency event has been detected at the RMSGS. Failure of a basin is imminent.
- The EAP has been activated, currently at Level 1.
- Flooding along Davis Ditch, an Stahlbaum Ditch and the Kankakee River will occur or is already occurring.
- Immediately evacuate homes/structures around the RMSGS.
- We will keep you apprised of the situation. The best telephone number to reach me during this event is(Insert number)

[1]

[2]

[3]

(WARNING/EVACUATION DIRECTOR)
PRIMARY CONTACT _____

(ACTING EMERGENCY ENGINEER)
PRIMARY CONTACT _____ ALTERNATE CONTACT _____
ON-CALL ENGINEER _____

(PUBLIC AFFAIRS MANAGER)
PRIMARY CONTACT _____

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

[2a]
NATIONAL WEATHER SERVICE
24-HOUR NO. (317) 856-0367
Alternative# (317) 856-0368

[2b]
INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER
PRIMARY CONTACT _____

LEGEND

- CALLS BY OPERATION SUPERVISOR
- SECOND LEVEL CALLS (as warranted)

NOTES

1.) [1b] DENOTES SUGGESTED SEQUENCE

<p>CLIENT NIPSCO SCHAFER GENERATING STATION WHEATFIELD, INDIANA</p>	<p>CONSULTANT GOLDER MEMBER OF WSP</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td>YYYY-MM-DD</td> <td>2021-08-04</td> </tr> <tr> <td>DESIGNED</td> <td>TDJ</td> </tr> <tr> <td>PREPARED</td> <td>DJC</td> </tr> <tr> <td>REVIEWED</td> <td></td> </tr> <tr> <td>APPROVED</td> <td></td> </tr> </table>	YYYY-MM-DD	2021-08-04	DESIGNED	TDJ	PREPARED	DJC	REVIEWED		APPROVED	
YYYY-MM-DD	2021-08-04											
DESIGNED	TDJ											
PREPARED	DJC											
REVIEWED												
APPROVED												
<p>PROJECT EMERGENCY ACTION PLAN</p>												
<p>TITLE NOTIFICATION FLOW CHART FOR EVENT LEVEL 1</p>												
<p>PROJECT NO. 21455411</p>												
<p>CONTROL 21455411B001.dwg</p>												

Path: \\golder.complex\apps\office\Drawings\Projects\21455411\NIPSCO\PRODUCTION\Emergency Action Plan.dwg | File Name: 21455411B001.dwg | Last Edited By: dross Date: 2021-08-04 Time: 2:08:43 PM | Printed By: Dross Date: 2021-08-04 Time: 2:10:09 PM

1. IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

APPENDIX E

Past EAP Activity



Date: June 19, 2019
From: Joe Kutch
Subject: R.M. Schahfer Generating Station Emergency Action Plan Face-to-Face annual review meeting for local emergency responders
Dept.: Environmental
To: CCR Rule Compliance Data and Information Website

On May 29, 2019, a meeting was held at NIPSCO's R.M. Schahfer Generating Station to satisfy the requirements under 40 CFR §257.73(a)(3)(i)(E), and hold a face-to-face meeting with local emergency responders. Invited to this meeting were representatives from NIPSCO, Wheatfield Volunteer Fire Department, Jasper County Sheriff's Office, Jasper County Emergency Management, Porter County Emergency Management, Indiana Department of Natural Resources, and Indiana Department of Natural Resources.



Date: May 22, 2020
From: Joe Kutch
Subject: R.M. Schahfer Generating Station Emergency Action Plan Face-to-Face annual review meeting for local emergency responders
Dept.: Environmental
To: CCR Rule Compliance Data and Information Website

On May 20, 2020, a virtual meeting was held regarding NIPSCO's R.M. Schahfer Generating Station to satisfy the requirements under 40 CFR §257.73(a)(3)(i)(E), and hold a face-to-face meeting with local emergency responders. Invited to this meeting were representatives from NIPSCO, Wheatfield Volunteer Fire Department, Jasper County Sheriff's Office, Jasper County Emergency Management, Porter County Emergency Management, Indiana Department of Natural Resources, and Indiana Department of Natural Resources.



Date: May 20, 2021
From: Joe Kutch
Subject: R.M. Schahfer Generating Station Emergency Action Plan Face-to-Face annual review meeting for local emergency responders
Dept.: Environmental
To: CCR Rule Compliance Data and Information Website

On May 19, 2021, a virtual meeting was held regarding NIPSCO's R.M. Schahfer Generating Station to satisfy the requirements under 40 CFR §257.73(a)(3)(i)(E), and hold a face-to-face meeting with local emergency responders. Invited to this meeting were representatives from NIPSCO, Wheatfield Volunteer Fire Department, Jasper County Sheriff's Office, Jasper County Emergency Management, Porter County Emergency Management, Indiana Department of Natural Resources, and Indiana Department of Natural Resources.

APPENDIX F

EAP Review and Revision Log

APPENDIX F

EAP REVIEW AND REVISION

EAP Annual Review

An annual review of the EAP will be conducted by the Director Station Chemistry and Environmental Compliance and will include, at a minimum, the following:

- The Director Station Chemistry and Environmental Compliance will contact all parties listed in the EAP to verify that the phone numbers and persons in the positions are current;
- Contact the local law enforcement/emergency response agency to verify that the phone numbers are correct;
- Ask the appropriate contact persons listed in the EAP if they know where the copy of the EAP is kept and if they know and understand their roles; and
- Call the locally available resources to verify that the contact numbers are up to date.

After conducting the EAP Annual Review, the Director Station Chemistry and Environmental Compliance will complete the attached Form F.1, EAP Annual Review Verification Statement.

EAP Periodic Test

The Director Station Chemistry and Environmental Compliance will conduct periodic tests of the EAP. The periodic test will consist of a meeting held at the NIPSCO RMSGS, which will include a tabletop exercise. Attendance should include the IDNR, at least one member of local law enforcement and other key members listed in the EAP. Before the meeting, it may be helpful if members of the EAP visit the basins to familiarize themselves with the site.

The tabletop exercise will involve presenting an emergency scenario or unusual event involving one or more of the basins. This scenario should be developed prior to the meeting. The participants will discuss the responses and actions to be taken to resolve the emergency. The Director Station Chemistry and Environmental Compliance will control the discussion throughout the exercise. All paperwork should be filled out as if it were an actual event to ensure realistic responses and approaches. After the exercise, the EAP will be reviewed and discussed. A written summary of the test will be prepared by the Director Station Chemistry and Environmental Compliance and the EAP will be revised as necessary.

Revision

The Director Station Chemistry and Environmental Compliance will be responsible for ensuring that the EAP is up to date and that all parties involved have the most recent revision. After a revision has been made, the Director Station Chemistry and Environmental Compliance will collect the old copies from each

RMGS EAP

party and provide them with the most recent version. This will ensure that each party involved has the most current information and that all copies are identical. EAP distribution and Copy Control numbers will help this process. An example EAP Distribution List is included in Appendix G.

FORM F.1

EAP ANNUAL REVIEW VERIFICATION STATEMENT

Name of Dam: _____

Date of Drill: _____

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

Additional Comments: _____

*(Individual responsible for conducting
EAP Annual Review)* Date

(Printed name)

(Operations Supervisor) Date

(Printed name)

APPENDIX G

EAP Distribution

APPENDIX H

Supplementary Information

APPENDIX H.1 - TRAINING

1.0 NIPSCO PERSONNEL

In addition to the annual EAP review and periodic test, training of the EAP process and personnel responsibilities are to be conducted annually for the Operations-Shift Supervisor or designee, Acting Emergency Engineer or designee, Public Affairs Manager, and any other staff that may assume responsibility for the roles above or have some involvement in the EAP process, including equipment operators, and security and site inspection personnel. The following topics should be covered:

- Review of EAP Purpose and 4-Step EAP Process
- Review of RMSGs Basin Layout, Associated Infrastructure, and Typical Operation of the Basins
- Review of Roles and Responsibilities of the Director Station Chemistry and Environmental Compliance, Operations Supervisor, Acting Emergency Engineer, Public Affairs Manager, and Warning and Evacuation Director
- Review of Unusual or Emergency Event Definitions and Event Level Determination as well as other nomenclature relevant to EAP Process
- Review of Notification Requirements and Scripted Messages
- Review of Expected Actions
- Review of Termination Process
- Review of Evacuation Routes

Training records are to be kept in the environmental coordinator's office and updated on an annual basis. EAP training can be conducted in concert with Basin Operation, Maintenance, and Inspection annual training. When covering RMSGs Basin Layout information above, basin-specific information such as freeboard, emergency outlet location and capacity, pumping and piping systems, and lowest crest elevation locations should be reviewed. Additional general information such as seepage, piping and general dam design may be covered as well.

APPENDIX I

Glossary

APPENDIX I

GLOSSARY

Acre-Foot. A term used in measuring the volume of water that would cover one acre to a depth of one foot. It is equal to 43,560 cubic feet.

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

Breach. An eroded opening through a dam 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 dam.

Culvert. A closed channel to convey water.

Crest of Dam. Top of dam.

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

Dam. A barrier constructed across a watercourse for the purpose of impounding or diverting water.

- a. Embankment dam. Any dam constructed of excavated natural materials or of industrial waste materials.
- b. Concrete dam. Any dam constructed of concrete materials.

Dam failure. The uncontrolled release of reservoir contents.

Drain, toe. A system of pipe and/or pervious material along the downstream toe of a dam 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 on 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 the dam owner and other involved agencies to address an unusual 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 dam owners/operators save lives, minimize property damage, and

minimize environmental impacts caused by large releases from a dam, dam failure, 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 dam, or endanger persons or property, and demands immediate attention.

Filter (filter zone). A band of granular material graded (either naturally or by selection) so as to allow seepage through or within the layers while preventing the migration of material from adjacent zones.

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 of other reference flood. Some related terms are:

- a. Flood, Inflow Design (IDF). That flood used in the design of a safe dam and its appurtenant works particularly for sizing the spillway and outlet works, and for determining maximum temporary storage and height of dam requirements.
- b. Flood, Probable Maximum (PMF). The largest flood reasonably expected at a point on a stream because of a probable maximum storm and favorable runoff conditions.

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

Gate. A movable, watertight barrier for the control of water.

- a. Outlet gate. A gate controlling the flow of water through a reservoir outlet.
- b. Slide gate (sluice gate). A gate that can be opened or closed by sliding in supporting guides.

Height, 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 dam crest and the lowest point of the excavated foundation.

Hydrograph, breach or dam failure. A flood hydro graph resulting from a dam 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 runoff 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 runoff volumes.

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 agencies of all kinds to effectively communicate using common terminology.

Incident Manager. The Incident Manager is the highest ranking official available at the scene of an unusual or emergency event. All personnel involved in the operating procedures of the dam or emergency operations should be trained in the fundamentals of ICS.

Instrumentation. An arrangement of devices installed into or near dams (i.e., piezometer, inclinometer, strain gage, survey points, etc.) that provide measurements that can be used to evaluate performance parameters of a structure.

Intake. Any structure in a reservoir, dam or river for the purpose of directing water into a conduit, tunnel, canal or pipeline.

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

Length of dam. The length along the top of the dam between contact abutments. This also includes the spillway, power plants, navigation lock, fish pass, etc., where these form part of the length of the dam. If detached from the dam, 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 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 Flood (PMF). The maximum runoff condition resulting from the most severe combination of hydrologic and meteorological conditions that are considered reasonably possible for the drainage basin under study.

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.

Public Information Officer (PIO). A Property staff member designated by the (EAP Coordinator). During EAP operations, the PIO will be the contact person at the Property for the media, and will keep the media informed of the EAP operations.

Relief Wells. A line of vertical wells or boreholes to facilitate drainage of the foundation and abutments and to reduce water pressure.

Reservoir. A body of water impounded by a dam and 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 dam, 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 dam, to convey reservoir overflow into the natural channel below the dam or into an adjacent natural drainage channel.

Standing Operating Procedures (SOP). A comprehensive, single-source document providing accurate and current instructions for normal operation, maintenance, monitoring, and inspection of a dam and appurtenant features.

Stoplogs. Timbers or steel beams placed on top of each other with their ends held in guides on each side of a channel or conduit so as to provide a cheaper or more easily handled means of temporary closure than a bulkhead gate.

Storage. The retention of water or delay of runoff 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 intake and the reservoir bottom.
- b. Active Storage. The reservoir volume between the normal reservoir water surface elevation and the invert of the lowest intake.
- c. Flood Storage. The reservoir volume between the crest of the dam and the normal reservoir water surface elevation.

Unusual Event. An event which takes place, or a condition which develops, that is not normally encountered in the routine operation of the dam and reservoir, or necessitates a variation from the operating procedures.

Note:

Glossary terms and definitions provided in this Appendix are from the EAP Guidance Template provided by the IDNR.

APPENDIX J

Action Data Sheets

EVENT: <u>FLOODING - OVERTOPPING</u>		Sheet
LEVEL: 1		A1
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.3 have been made. B. Continue to monitor the situation and stay in contact with emergency agencies and the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance. Dam failure may be imminent or in progress so ensure that the area is evacuated. C. Record all information, observations, and actions on an Event Log Form. D. Establish a means to keep in frequent contact with the <u>Director Station Chemistry and Environmental Compliance or designee</u> until Event Level 1 is terminated. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. Send a qualified individual to the site as soon as possible. B. If portable pumps are available, designate a qualified team to use the portable pumps to pump water levels down in the affected basin for as long as necessary. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate the situation as events progress, or whenever conditions change. Determine whether:</p> <ul style="list-style-type: none"> A) The event remains at the current Event Level 1. B) The event can be terminated at the direction of the Director Station Chemistry and Environmental Compliance. <p>Based on this determination, follow the appropriate actions below.</p>		
A) EVENT LEVEL 1	B) TERMINATED	
Continue recommended actions on this sheet	Go to Termination and Follow-up (Section 5)	

EVENT: <u>EARTHQUAKE</u>		Sheet
LEVEL: 3		B3
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor:</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.1 have been made. B. Observe and inspect the upstream/downstream slopes, spillway structures and crest without compromising the safety of anyone performing these tasks. Slides/slumps may have occurred which will increase the risk of failure. Beware of areas with known seepage that may have been weakened. Look for increased seepage in these areas or new seepage areas. Confer with the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance or designee to determine any preventative action that must be taken. Work with the Director Station Chemistry and Environmental Compliance to develop a plan to minimize dam failure risk and avoid damage downstream. C. Record all information, observations, and actions on an Event Log Form (Appendix K). D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <ul style="list-style-type: none"> A) The event can be terminated if an inspection has been completed and no failures were documented. B) The event remains at the current Event Level 3 until an inspection is completed and cleared by the <u>Director Station Chemistry and Environmental Compliance</u>. C) The event warrants escalation to Event Level 2 if failures were encountered during the inspection and determined to be significant by the <u>Director Station Chemistry and Environmental Compliance</u>. <p>Based on this determination, follow the appropriate actions below.</p>		
A) TERMINATION	B) EVENT LEVEL 3	C) EVENT LEVEL 2
Go to Termination and Follow-up (Section 5)	Continue recommended actions on this sheet	Go to Event Level 2 or Event Level 1 Notification Chart

EVENT: <u>EARTHQUAKE</u>		Sheet
LEVEL: 2		B2
RECOMMENDED ACTIONS		
<p><u>On-Shift Supervisor:</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.2 have been made. B. Careful observation and inspection of every part of the dam is necessary without compromising the safety of anyone performing these tasks. If potential failure areas were noted in the inspection for Event Level 3, continue to monitor these areas with the <u>Director Station Chemistry and Environmental Compliance's</u> supervision. Evacuate the immediate area of all personnel and equipment. C. Record all information, observations, and actions on an Event Log Form (Form 3.1). D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Inspect the impoundments and assess the opportunity for remedial action. If possible, lower the water level in the impoundments at a rate not to exceed 3 foot/day. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least twice daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <ul style="list-style-type: none"> A) The event warrants downgrade to Event Level 3 if the Director Station Chemistry and Environmental Compliance has determined that the impoundments are stable and remedial actions have started. 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 2 until remedial action has been completed. C) The event warrants escalation to Event Level 1 if potential failure is imminent. Evacuate the downstream areas immediately. <p>Based on this determination, follow the appropriate actions below.</p>		
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: <u>EARTHQUAKE</u>		Sheet
LEVEL: 1		B1
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.3 have been made. B. Continue to monitor the situation and stay in contact with emergency agencies and the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance. Dam failure may be imminent so ensure that the area is evacuated. C. Record all information, observations, and actions on an Event Log Form. D. Establish a means to keep in frequent contact with the <u>Director Station Chemistry and Environmental Compliance or designee</u> until Event Level 1 is terminated. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. <u>In general, this will be to review all pertinent information in order to recommend appropriate actions to the On-Shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation.)</u> <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. Send a qualified individual to the site as soon as possible. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate the situation as events progress, or whenever conditions change. Determine whether:</p> <ul style="list-style-type: none"> A) The event remains at the current Event Level 1. B) The event can be terminated when structure has been inspected and no visible signs of impact are observed. <p>Based on this determination, follow the appropriate actions below.</p>		
A) EVENT LEVEL 1	B) TERMINATED	
Continue recommended actions on this sheet	Go to Termination and Follow-up (Section 5)	

EVENT: <u>SEEPAGE</u>		Sheet
LEVEL: 3		C3
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor:</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.1 have been made. B. Observe and inspect the upstream/downstream slope and concentrate on inspection near the downstream toe. Be aware of areas with known seepage and monitor the color and discharge rate if possible. Look for increased seepage in these areas or new seepage areas. Confer with the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance or designee to determine any preventative action that must be taken. Work with the Director Station Chemistry and Environmental Compliance to determine if remedial action should be taken. C. Record all information, observations, and actions on an Event Log Form. D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <ul style="list-style-type: none"> A) The event can be terminated if an inspection has been completed and no increase in seepage from existing areas was documented and no new seepage areas were encountered. B) The event remains at the current Event Level 3 until an inspection is completed and cleared by the <u>Director Station Chemistry and Environmental Compliance</u>. C) The event warrants escalation to Event Level 2 if large seepage volumes and piping has occurred. <p>Based on this determination, follow the appropriate actions below.</p>		
A) TERMINATION	B) EVENT LEVEL 3	C) EVENT LEVEL 2
Go to Termination and Follow-up (Section 5)	Continue recommended actions on this sheet	Go to Event Level 2 or Event Level 1 Notification Chart

EVENT: <u>SEEPAGE</u>		Sheet
LEVEL: 2		C2
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor:</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.2 have been made. B. Observe and inspect the upstream/downstream slope and concentrate inspections near the downstream toe. Continue to monitor the seepage areas as long as personnel can do it safely. Confer with the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance or designee to determine any preventative action that must be taken. Work with the Director Station Chemistry and Environmental Compliance to determine if/what remedial action should be taken. C. Record all information, observations, and actions on an Event Log Form. D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <ul style="list-style-type: none"> A) The event can be downgraded to Event Level 3 after being cleared through an inspection following completion of remedial action. B) The event remains at the current Event Level 2 until an inspection is completed and cleared by the <u>Director Station Chemistry and Environmental Compliance</u>. C) The event warrants escalation to Event Level 1 if failures were encountered during the inspection and determined to be significant by the <u>Director Station Chemistry and Environmental Compliance</u>. <p>Based on this determination, follow the appropriate actions below.</p>		
A) TERMINATION	B) EVENT LEVEL 2	C) EVENT LEVEL 1
Go to Termination and Follow-up (Section 5)	Continue recommended actions on this sheet	Go to Event Level 1 or Event Level 1 Notification Chart

EVENT: <u>SEEPAGE</u>		Sheet
LEVEL: 1		C1
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.3 have been made. B. Continue to monitor the situation and stay in contact with emergency agencies and the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance. Dam failure may be imminent so ensure that the area is evacuated. C. Record all information, observations, and actions on an Event Log Form. D. Establish a means to keep in frequent contact with the <u>Director Station Chemistry and Environmental Compliance or designee</u> until Event Level 1 is terminated. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. Send a qualified individual to the site as soon as possible. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate the situation as events progress, or whenever conditions change. Determine whether:</p> <ul style="list-style-type: none"> A) The event remains at the current Event Level 1. B) The event can be terminated at the direction of the Director Station Chemistry and Environmental Compliance. <p>Based on this determination, follow the appropriate actions below.</p>		
A) EVENT LEVEL 1	B) TERMINATED	
Continue recommended actions on this sheet	Go to Termination and Follow-up (Section 5)	

EVENT: <u>CRACKING</u>		Sheet
LEVEL: 3		D3
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor:</u></p> <p>A. Make sure notifications on Figure D.1 have been made.</p> <p>B. Observe and inspect the upstream/downstream slope and crest for cracks. Be aware of areas with known cracks. Look for cracks increasing in size and for seepage. Confer with the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance or designee to determine any preventative action that must be taken. Work with the Director Station Chemistry and Environmental Compliance to determine if remedial action should be taken.</p> <p>C. Record all information, observations, and actions on an Event Log Form.</p> <p>D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately.</p> <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <p>A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation.</p> <p><u>Acting Emergency Engineer:</u></p> <p>A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate.</p>		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <p>A) The event can be terminated if an inspection has been completed and increase in cracking was noted and remedial action has been completed.</p> <p>B) The event remains at the current Event Level 3 until an inspection is completed and cleared by the <u>Director Station Chemistry and Environmental Compliance</u>.</p> <p>C) The event warrants escalation to Event Level 2 if large cracks are evident.</p> <p>Based on this determination, follow the appropriate actions below.</p>		
A) TERMINATION	B) EVENT LEVEL 3	C) EVENT LEVEL 2
Go to Termination and Follow-up (Section 5)	Continue recommended actions on this sheet	Go to Event Level 2 or Event Level 1 Notification Chart

EVENT: <u>CRACKING</u>		Sheet
LEVEL: 2		D2
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor:</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.2 have been made. B. Continue to observe and inspect the cracks in the embankment. Confer with the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance or designee to determine any preventative action that must be taken. Work with the Director Station Chemistry and Environmental Compliance to determine if/what remedial action should be taken. C. Record all information, observations, and actions on an Event Log Form. D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <ul style="list-style-type: none"> A) The event can be downgraded to Event Level 3 after being cleared through an inspection following completion of remedial action. B) The event remains at the current Event Level 2 until an inspection is completed and cleared by the <u>Director Station Chemistry and Environmental Compliance</u>. C) The event warrants escalation to Event Level 1 if failures were encountered during the inspection and determined to be significant by the <u>Director Station Chemistry and Environmental Compliance</u>. <p>Based on this determination, follow the appropriate actions below.</p>		
A) TERMINATION	B) EVENT LEVEL 2	C) EVENT LEVEL 1
Go to Termination and Follow-up (Section 5)	Continue recommended actions on this sheet	Go to Event Level 1 Notification Chart

EVENT: <u>MOVEMENT</u>		Sheet
LEVEL: 3		E3
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor:</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.1 have been made. B. Observe and inspect the upstream/downstream slope and crest for movement if personnel can remain safe while performing this task. Confer with the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance or designee to determine any preventative action that must be taken. Work with the Director Station Chemistry and Environmental Compliance to determine if remedial action should be taken. C. Record all information, observations, and actions on an Event Log Form. D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <ul style="list-style-type: none"> A) The event can be terminated if an inspection has been completed and movement was determined to be surficial. B) The event remains at the current Event Level 3 until an inspection is completed and cleared by the <u>Director Station Chemistry and Environmental Compliance.</u> C) The event warrants escalation to Event Level 2 if movement surfaces appear to be deep. <p>Based on this determination, follow the appropriate actions below.</p>		
A) TERMINATION	B) EVENT LEVEL 3	C) EVENT LEVEL 2
Go to Termination and Follow-up (Section 5)	Continue recommended actions on this sheet	Go to Event Level 2 or Event Level 1 Notification Chart

EVENT: <u>MOVEMENT</u>		Sheet
LEVEL: 2		E2
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor:</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.2 have been made. B. Continue to observe and inspect the movement surfaces. Confer with the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance or designee to determine any preventative action that must be taken. Work with the Director Station Chemistry and Environmental Compliance to determine if/what remedial action should be taken and if it can be completed safely. C. Record all information, observations, and actions on an Event Log Form. D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <ul style="list-style-type: none"> A) The event can be downgraded to Event Level 3 after being cleared through an inspection following completion of remedial action. B) The event remains at the current Event Level 2 until an inspection is completed and cleared by the <u>Director Station Chemistry and Environmental Compliance</u>. C) The event warrants escalation to Event Level 1 if failures were encountered during the inspection and determined to be significant by the <u>Director Station Chemistry and Environmental Compliance</u>. <p>Based on this determination, follow the appropriate actions below.</p>		
A) TERMINATION	B) EVENT LEVEL 2	C) EVENT LEVEL 1
Go to Termination and Follow-up (Section 5)	Continue recommended actions on this sheet	Go to Event Level 1 Notification Chart

EVENT: <u>OVERTOPPING</u>		Sheet
LEVEL: 1		F1
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor</u></p> <p>F. Make sure notifications on Figure D.3 have been made.</p> <p>G. Continue to monitor the situation and stay in contact with emergency agencies and the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance. Dam failure may be imminent or in progress so ensure that the area is evacuated.</p> <p>H. Record all information, observations, and actions on an Event Log Form.</p> <p>I. Establish a means to keep in frequent contact with the <u>Director Station Chemistry and Environmental Compliance or designee</u> until Event Level 1 is terminated.</p> <p>J. Place barricades at appropriate areas within the event level basin to block access.</p> <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <p>B. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation.</p> <p><u>Acting Emergency Engineer:</u></p> <p>C. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. Send a qualified individual to the site as soon as possible.</p> <p>D. If portable pumps are available, designate a qualified team to use the portable pumps to pump water levels down in the affected basin for as long as necessary.</p>		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate the situation as events progress, or whenever conditions change. Determine whether:</p> <p>C) The event remains at the current Event Level 1.</p> <p>D) The event can be terminated at the direction of the Director Station Chemistry and Environmental Compliance.</p> <p>Based on this determination, follow the appropriate actions below.</p>		
A) EVENT LEVEL 1	B) TERMINATED	
Continue recommended actions on this sheet	Go to Termination and Follow-up (Section 5)	

EVENT: <u>GATE OR TRASHRACK FAILURE/BLOCKED</u>		Sheet
LEVEL: 3		G3
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor:</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.1 have been made. B. Maintenance personnel should try to open/close gates or remove debris. C. Record all information, observations, and actions on an Event Log Form. D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <ul style="list-style-type: none"> A) The event can be terminated if the gates are freed and will reliably open/close or if the water level can be controlled without overtopping the dam. B) The event remains at the current Event Level 3 until an inspection of the gates is completed and cleared by the <u>Director Station Chemistry and Environmental Compliance</u>. C) The event warrants escalation to Event Level 2 if the gates can't be opened/closed or trash racks cannot be cleared of debris and the water level in the pond continues to rise. <p>Based on this determination, follow the appropriate actions below.</p>		
A) TERMINATION	B) EVENT LEVEL 3	C) EVENT LEVEL 2
Go to Termination and Follow-up (Section 5)	Continue recommended actions on this sheet	Go to Event Level 2 or Event Level 1 Notification Chart

EVENT: <u>GATE OR TRASHRACK FAILURE</u>		Sheet
LEVEL: 2		G2
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor:</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.2 have been made. B. Continue to monitor the gates or trash rack and have maintenance personnel work on opening. Confer with the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance or designee to determine any preventative action that must be taken. Work with the Director Station Chemistry and Environmental Compliance to determine if/what remedial action should be taken and if it can be completed safely or if the gates should be replaced. The water level in the pond should be lowered if possible. C. Record all information, observations, and actions on an Event Log Form. D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <ul style="list-style-type: none"> A) The event can be downgraded to Event Level 3 after being cleared through an inspection following completion of remedial action. B) The event remains at the current Event Level 2 until an inspection is completed and cleared by the <u>Director Station Chemistry and Environmental Compliance</u>. C) The event warrants escalation to Event Level 1 if the gates cannot be opened or the trash racks cannot be cleared of debris, the water level continues to rise and overtopping is imminent. <p>Based on this determination, follow the appropriate actions below.</p>		
A) TERMINATION	B) EVENT LEVEL 2	C) EVENT LEVEL 1
Go to Termination and Follow-up (Section 5)	Continue recommended actions on this sheet	Go to Event Level 1 Notification Chart

EVENT: <u>GATE OR TRASH RACK FAILURE</u>		Sheet
LEVEL: 1		G1
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.3 have been made. B. Continue to monitor the situation and stay in contact with emergency agencies and the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance. The dam is overtopping and failure may be imminent so ensure that the area is evacuated. C. Record all information, observations, and actions on an Event Log Form. D. Establish a means to keep in frequent contact with the <u>Director Station Chemistry and Environmental Compliance or designee</u> until Event Level 1 is terminated. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-Shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>(Acting Emergency Engineer):</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. Send a qualified individual to the site as soon as possible. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate the situation as events progress, or whenever conditions change. Determine whether:</p> <ul style="list-style-type: none"> A) The event remains at the current Event Level 1. B) The event can be terminated when gates operate as intended and is verified by the Director Station Chemistry and Environmental Compliance, and the water level is at or below safe operating level and not rising. <p>Based on this determination, follow the appropriate actions below.</p>		
A) EVENT LEVEL 1	B) TERMINATED	
Continue recommended actions on this sheet	Go to Termination and Follow-up (Section 5)	

EVENT: <u>INSTRUMENTS</u>		Sheet
LEVEL: 3		H3
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor:</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.1 have been made. B. If an abnormal reading is obtained, re-read the instrumentation. Contact maintenance personnel for a solution if the instrumentation is not working properly. C. Record all information, observations, and actions on an Event Log Form (Form 3.1). D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <ul style="list-style-type: none"> A) The event can be terminated if there was an incorrect reading of the instruments or instruments were repaired. B) The event remains at the current Event Level 3 until a normal reading is obtained. C) The event warrants escalation to Event Level 2 if the instruments are operating properly and the readings indicate unsafe operating conditions. <p>Based on this determination, follow the appropriate actions below.</p>		
A) TERMINATION	B) EVENT LEVEL 3	C) EVENT LEVEL 2
Go to Termination and Follow-up (Section 5)	Continue recommended actions on this sheet	Go to Event Level 2 Notification Chart

EVENT: SABOTAGE		Sheet
LEVEL: 3		13
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor:</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.1 have been made. B. If sabotage is suspected, call Law Enforcement for further evaluation. Determine degree of sabotage and if it is likely to cause failure. Inspect the principal spillways, embankments and instruments for damage. Reduce water level and/or cease plant inflows if necessary. C. Record all information, observations, and actions on an Event Log Form (Form 3.1). D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <ul style="list-style-type: none"> A) The event can be terminated if the suspected sabotage is unlikely to cause dam failure. B) The event remains at the current Event Level 3 until an inspection of the pond is completed and cleared by the <u>Director Station Chemistry and Environmental Compliance</u>. C) The event warrants escalation to Event Level 2 if the sabotage may cause dam failure. <p>Based on this determination, follow the appropriate actions below.</p>		
A) TERMINATION	B) EVENT LEVEL 3	C) EVENT LEVEL 2
Go to Termination and Follow-up (Section 5)	Continue recommended actions on this sheet	Go to Event Level 2 or Event Level 1 Notification Chart

EVENT: SABOTAGE		Sheet
LEVEL: 2		12
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor:</u></p> <ul style="list-style-type: none"> A. Make sure notifications on Figure D.2 have been made. B. If the embankment or spillways have been damaged, provide temporary protection with sandbags, riprap or other materials. Work with the Director Station Chemistry and Environmental Compliance to determine what remedial action should be taken and if it can be completed. The water level in the pond should be lowered if possible. C. Record all information, observations, and actions on an Event Log Form (Form 3.1). D. Contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> at least daily to report the latest observations and conditions. If conditions change significantly, contact the <u>Director Station Chemistry and Environmental Compliance or designee</u> immediately. E. Place barricades at appropriate areas within the event level basin to block access. <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <ul style="list-style-type: none"> A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation. <p><u>Acting Emergency Engineer:</u></p> <ul style="list-style-type: none"> A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. 		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate conditions at least daily, or whenever conditions change significantly. Using Table 2, determine whether:</p> <ul style="list-style-type: none"> A) The event can be downgraded to Event Level 3 after being cleared through an inspection following completion of remedial action. B) The event remains at the current Event Level 2 until an inspection is completed and cleared by the <u>Director Station Chemistry and Environmental Compliance</u>. C) The event warrants escalation to Event Level 1 if the damage will cause failure. <p>Based on this determination, follow the appropriate actions below.</p>		
A) TERMINATION	B) EVENT LEVEL 2	C) EVENT LEVEL 1
Go to Termination and Follow-up (Section 5)	Continue recommended actions on this sheet	Go to Event Level 1 Notification Chart

EVENT: <u>SABOTAGE</u>		Sheet
LEVEL: 1		11
RECOMMENDED ACTIONS		
<p><u>On-shift Supervisor</u></p> <p>A. Make sure notifications on Figure D.3 have been made.</p> <p>B. Continue to monitor the situation and stay in contact with emergency agencies and the Acting Emergency Engineer and/or the Director Station Chemistry and Environmental Compliance. If malicious human activity that could endanger public safety is suspected, contact Law Enforcement immediately to help evaluate the situation. Contact the Director Station Chemistry and Environmental Compliance if the principal spillway has been damaged or plugged, implement measures to protect and/or unplug the damaged structure or re-route the flow.</p> <p>C. Record all information, observations, and actions on an Event Log Form.</p> <p>D. Establish a means to keep in frequent contact with the <u>Director Station Chemistry and Environmental Compliance or designee</u> until Event Level 1 is terminated.</p> <p>E. Place barricades at appropriate areas within the event level basin to block access.</p> <p><u>Director Station Chemistry and Environmental Compliance or designee:</u></p> <p>A. Review all pertinent information in order to recommend appropriate actions to the On-shift Supervisor. If necessary, contact local emergency contractors and/or other individuals that may be able to assist in monitoring the situation.</p> <p><u>Acting Emergency Engineer:</u></p> <p>A. Provide decision support and technical support to the <u>Director Station Chemistry and Environmental Compliance or designee</u> as appropriate. Send a qualified individual to the site as soon as possible.</p>		<u>Time/Date Completed</u>
EVALUATION / DECISION		
<p>Evaluate the situation as events progress, or whenever conditions change. Determine whether:</p> <p>A) The event remains at the current Event Level 1.</p> <p>B) The event can be terminated at the direction of the Director Station Chemistry and Environmental Compliance.</p> <p>Based on this determination, follow the appropriate actions below.</p>		
A) EVENT LEVEL 1	B) TERMINATED	
Continue recommended actions on this sheet	Go to Termination and Follow-up (Section 5)	

APPENDIX K

Unusual or Emergency Event Log

**APPENDIX K
UNUSUAL OR EMERGENCY EVENT LOG**

YOU ARE (CIRCLE ONE): Operations Supervisor / Designated Staff / Director Station Chemistry and Environmental Compliance or designee / Acting Emergency Engineer / Sheriff / Other

GENERAL DESCRIPTION OF EMERGENCY SITUATION:

DETECTION:

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

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

LEVEL DETERMINATION:

What initial level has the (Operations Supervisor or designee) assigned to the event?

ACTIONS AND EVENT PROGRESSION

Date	Time	Action/Event Progression	Taken By

REPORT PREPARED BY: _____ **DATE:** _____

APPENDIX L

Contacts

APPENDIX L - CONTACTS

1.0 NIPSCO CONTACTS

Director Station Chemistry and Environmental Compliance

Primary Contact _____

Alternate Contact _____

Operations Supervisor

Primary Contact _____

Alternate Contact _____

Acting Emergency Engineer

Primary Contact _____

Alternate Contact _____

On-Call Engineer _____

Warning/Evacuation Director

Primary Contact _____

Public Affairs Manager

Primary Contact _____

IDNR Division of Water

Primary Contact _____

2.0 LOCALLY AVAILABLE EQUIPMENT, LABOR, AND MATERIALS

2.1 On-site

2.2 Heavy Equipment Contractors

Name	Available Equipment/Service	Phone # and Address



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