CCR RULE EMERGENCY ACTION PLAN

(in accordance with 40 CFR §257.73(a)(3) Emergency Action Plan)

CCR Surface Impoundment Information

Name: Louisville Gas and Electric Mill Creek Ash Treatment Basin

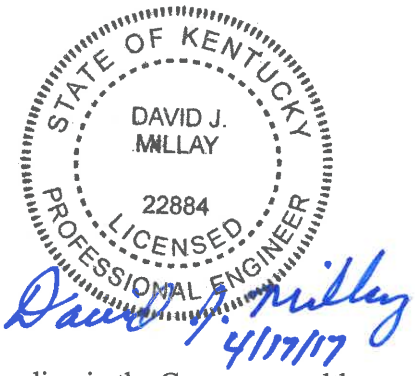
Operator: Louisville Gas and Electric

Address: 14660 Dixie Highway, Louisville, KY 40272

Qualified Professional Engineer

Name: David J. Millay

KY P.E. Number: 22884



I, David J. Millay, being a Licensed Professional Engineer in good standing in the Commonwealth of Kentucky, do hereby certify that this Emergency Action Plan has been prepared in accordance with good engineering practices and meets the requirements of 40 CFR §257.73(a)(3), to the best of my knowledge and belief.

Executive Summary

CCR Rule 40 CFR §257.73(a)(3), Emergency Action Plan (EAP) requirements for CCR surface impoundments, ensures prompt action to any potential emergency related to the CCR surface impoundment based on the hazard potential of the CCR unit. The Mill Creek Ash Treatment Basin (ATB) was determined under 40 CFR §257.73(a)(2) to be a high hazard potential CCR surface impoundment in accordance with classification definitions provided in 40 CFR §257.53; therefore, the Emergency Action Plan is required.

This plan documents the Emergency Action Plan of the Ash Treatment Basin in accordance with the requirements of CCR Rule 40 CFR §257.73(a)(3), Emergency Action Plan requirements for CCR surface impoundments.

Site Description

Louisville Gas and Electric Company (LG&E) owns and operates the Mill Creek ATB, a CCR surface impoundment, at the Mill Creek Generating Station in southwest Jefferson County, Kentucky. The ATB is permitted to operate by the Kentucky Division of Water (KDOW).

The ATB is located entirely on the Mill Creek Generating Station property. The existing ringed embankment is approximately 8,000 feet long with a slightly higher crest elevation along the western embankment than the eastern embankment. Construction on the eastern embankment is scheduled to be completed in 2017 and will increase the crest elevation to a minimum elevation of 458.5 along the entire ringed embankment. A gravel access drive is located along the crest of the embankment.

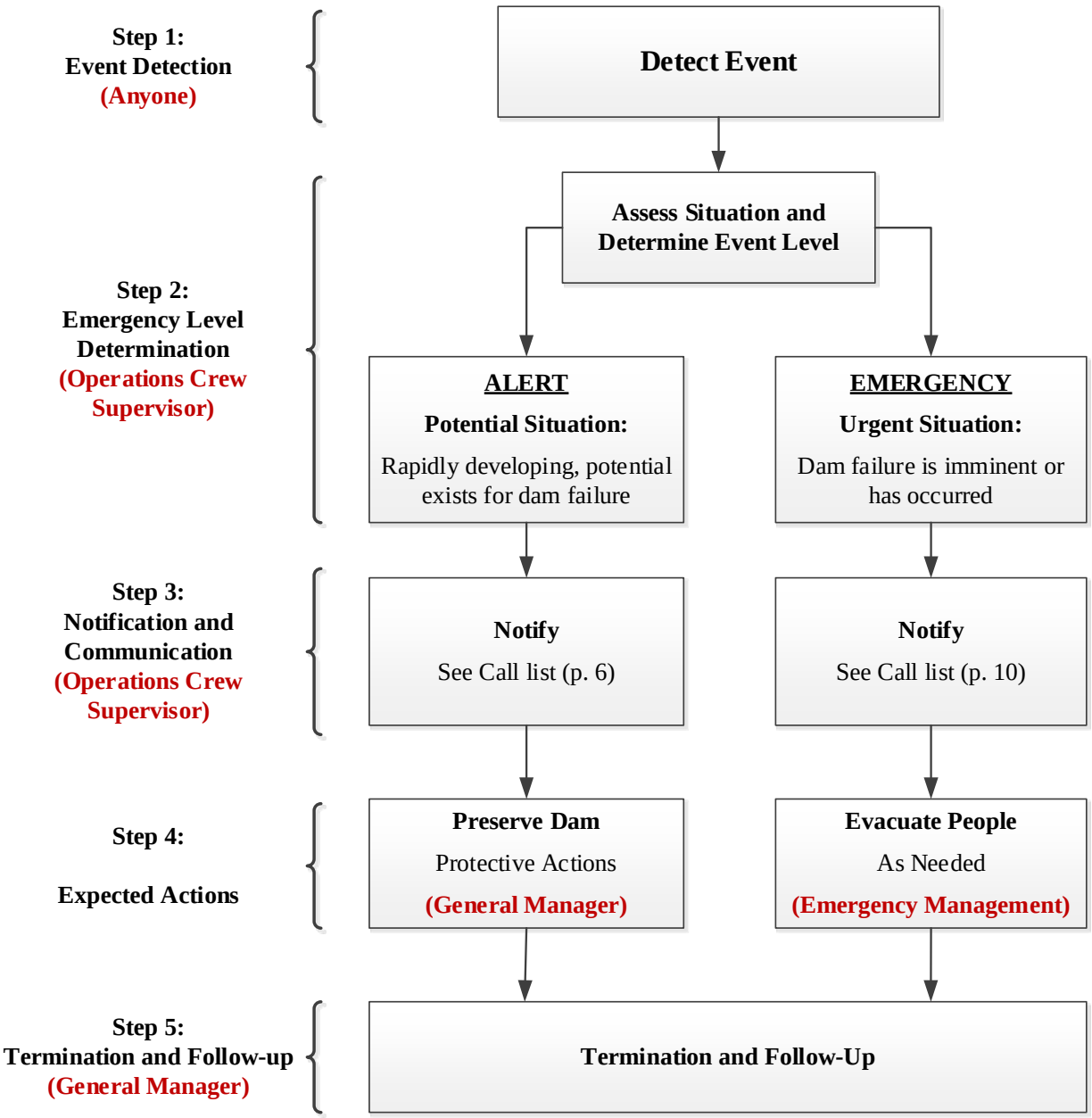
CCR Rule §257.73(a)(3), Emergency Action Plan (EAP)

40 CFR §257.73(a)(3) requires that the owner or operator of a CCR unit determined to be either a high hazard potential CCR surface impoundment or a signification hazard potential CCR surface impoundment must prepare and maintain a written Emergency Action Plan. The Mill Creek Ash Treatment Basin was determined under §257.73(a)(2) to be a high hazard potential CCR surface impoundment in accordance with classification definitions provided in 40 CFR §257.53; therefore, the Emergency Action Plan is required.

Included in this Mill Creek Ash Treatment Basin Emergency Plan are details pertaining to emergency event detection and level determination. The plan outlines the actions necessary for each level determination, outlining the roles and responsibilities of all parties, and notification flow charts including emergency management contact information. An inundation map illustrating the potential impact of an event at the Mill Creek Ash Treatment Basin is attached. Incorporated in the EAP are provisions for an annual face-to-face meeting with representatives from Louisville Gas and Electric and local emergency responders.

Below is a flow chart which provides an overview of the Impoundment EAP process if an emergency event is detected at the Mill Creek Generating Station Bottom Ash Pond. **Roles responsible for initiating each step are shown in red in the chart below.** Role responsibilities are detailed in this report (p. 7 and p. 11).

Impoundment EAP Process Overview



Event Detection

The first step in the Impoundment EAP process is the observation and detection of an unusual event. An unusual event may be detected by:

- Observation at or near the impoundment by anyone including employees, contractors, government personnel (local, state, or Federal), landowners, or the public.
- Evaluation of instrument data.
- Earthquake felt or reported in the vicinity of the impoundment.
- Forewarning of conditions that may cause an unusual event or emergency at the impoundment (for example: a severe weather or flash flood forecast).
- Routine visual inspection (for example: the presence of new seeps, increased or cloudy flow at existing seeps, cracks, or slumps on the upstream or downstream face of the embankments, wave or runoff erosion).

During an impoundment event, the ***Operations Crew Supervisor*** is responsible for classifying the unusual event, making notifications and serving as the primary point of contact for all parties notified. **See detailed role responsibilities on pages 7 and 11.**

Whenever an unusual event is detected, the observer should immediately notify and report the event to the ***Operations Crew Supervisor.*** If in doubt, the observer should use caution and report the event. Examples of an unusual event include:

- Embankment Overtopping
- New or Increasing Seepage
- New or Enlarging Sinkhole
- Active Embankment Cracking
- Embankment Movement or Sliding
- Unusual Instrument Reading
- Earthquake
- Security Threat, Sabotage, or Vandalism
- Principal Spillway or Operational Equipment Failure

Event Level Determination

After an unusual event is reported, the ***Operations Crew Supervisor*** is responsible for classifying the event into one of the following event levels:

ALERT LEVEL — A situation that does not immediately threaten impoundment stability or pose a hazard to life, but has the potential to do so. The impoundment condition should be closely monitored and remedial actions should be taken, if time allows. Emergency management personnel should be placed on alert and frequently updated on the situation development. Once notified, emergency management personnel will determine the appropriate actions.

EMERGENCY LEVEL — A situation where impoundment failure is imminent or has occurred and poses a hazard to life. Emergency management personnel should be notified immediately. Once notified, emergency management personnel will determine the appropriate actions.

Although not inclusive of all situations, the following table gives examples of Alert Level and Emergency Level events and may be used as a guideline when determining event level:

Table 1: Guidelines for Event Level Determination

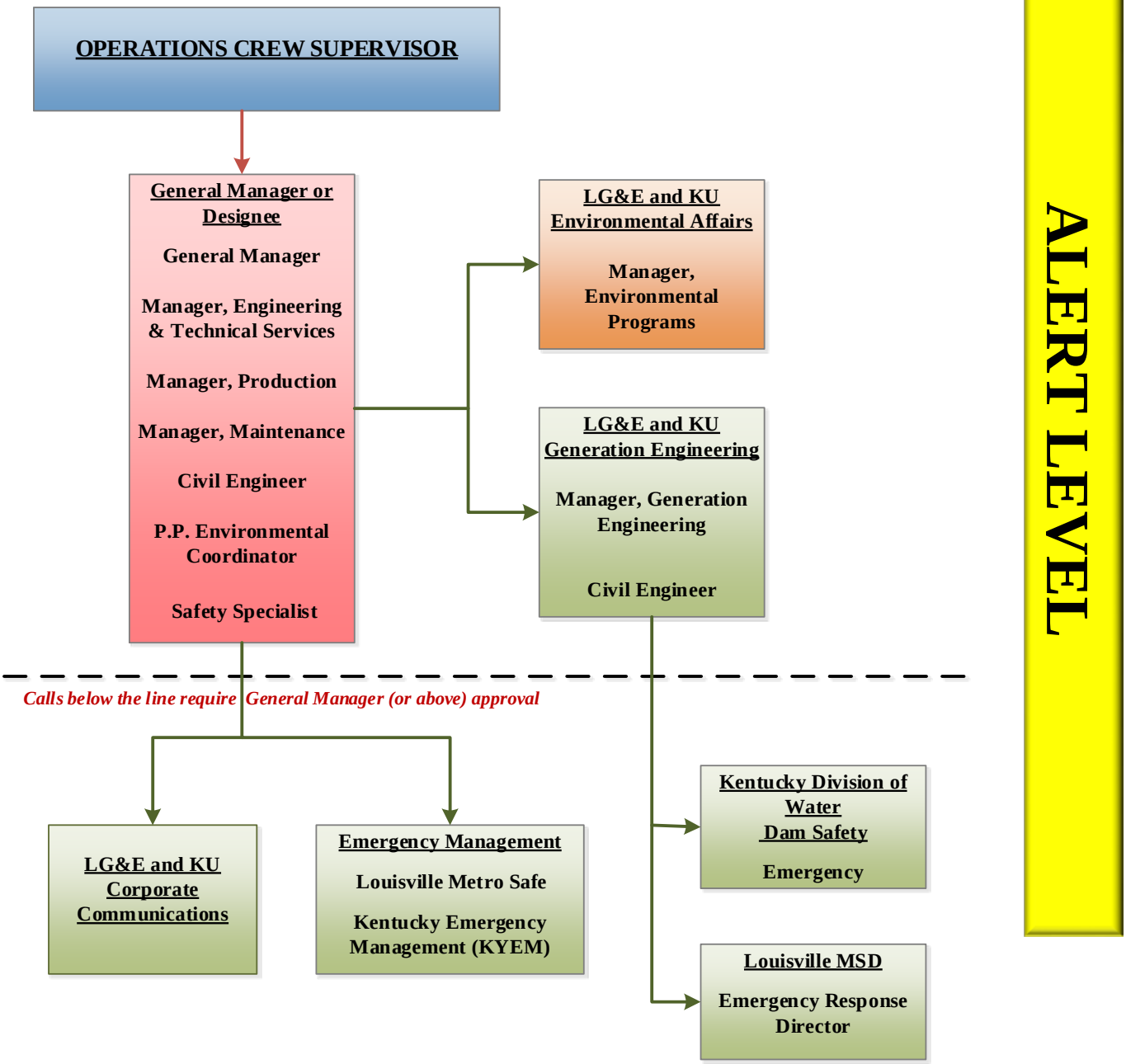
	ALERT LEVEL	EMERGENCY LEVEL
Embankment Overtopping	Reservoir level is above normal, close to the impoundment crest, and rapidly rising.	Water from the reservoir is flowing over the top of the embankment crest.
Seepage	Seepage is observed with cloudy discharge or an increasing flow rate.	Seepage flow rate is rapidly increasing; embankment soil is depositing on slopes or discharge point.
Sinkholes	A sinkhole in reservoir area or on embankment is observed.	A sinkhole rapidly enlarging is observed.
	Reservoir level is falling without apparent cause.	Whirlpools or other evidence exists indicating that the reservoir is draining rapidly.
Embankment Movement or Cracking	Embankment crest, slopes, abutments, and/or foundation show active settlement or sliding.	Sudden or rapid slides, settlement, or cracking of the embankment crest, slopes, abutments, and/or foundation.

Once the event level has been determined, the ***Operations Crew Supervisor*** shall begin the notification process outlined in the notification flowchart corresponding to the event level (**p. 6** or **p. 10**).

Alert Level Event

NOTIFICATION FLOWCHART (Alert Level Event)

In the event that an Alert Level event has occurred at the Mill Creek Ash Treatment Basin, the following notification flowchart indicates who is to be notified, by whom, and in what priority. *Information may be exchanged both up and down the notification flowchart.*



NOTE: At least ONE person listed in each box should be contacted. Call priority is listed from top to bottom.

ROLES AND RESPONSIBILITIES (Alert Level Event)

The following roles and responsibilities have been identified to respond to an Alert Level Event at the Mill Creek Ash Treatment Basin:

Operations Crew Supervisor on duty

- Determine the event level.
- Notify personnel in the order listed on the Alert Level notification flowchart.
- Document the reported Alert Level event using Impoundment EAP CALL LOG (p. 8) and Impoundment EAP EVENT LOG (p. 9).

General Manager (or designee)

- Verify event level determination.
- Notify or approve the notification of personnel listed on the Alert Level notification flowchart, as appropriate.
- Serve as the primary contact for and coordinator of all Alert Level actions.
- Notify and coordinate technical support with ***Generation Engineering***.
- Notify ***Emergency Management*** as necessary.
- Notify ***LG&E and KU Corporate Communications*** of possible need for communications to employees, local general public and external stakeholders of the Alert Level event.
- Declare and document termination of event and perform follow-up.

Generation Engineering Civil Engineer

- Coordinate technical support with ***Mill Creek Civil Engineer and staff.***
- Confirm the Operations Crew Supervisor's event level determination, if time permits.
- Advise the General Manager of remedial actions to take if an Alert Level event occurs, if time permits.
- Notify ***KYDOW Dam Safety***, as necessary and if time permits.
- Conduct impoundment structural integrity inspections as necessary.
- Prepare technical documentation as necessary.

Emergency Management – All External Agencies notified

As appropriate and deemed necessary by Emergency Management:

- Prepare to alert the public.
- Prepare emergency personnel for possible evacuation.
- Initiate emergency preparations or actions.

ALERT LEVEL

Impoundment EAP CALL LOG

Alert Level Event

(To be completed by all designated on Notification Flowchart during the emergency event)

Date: _____

Documented by: _____

The person making the contacts should initial and record the time of the call and who was notified for each contact made. See the Notification Flowchart for critical contact information.

Call Description	Person Contacted	Time Contacted	Contacted By

ALERT LEVEL

Impoundment EAP EVENT LOG

Alert Level Event

(To be completed by all designated on Notification Flowchart during the emergency event)

Date: _____

Documented by _____

When and how was the event detected? _____

_____

_____

_____

Weather Conditions: _____

_____

General description of emergency situation: _____

_____

_____

_____

Event Level Determination (circle one): ALERT or EMERGENCY

Event Level Determination made by _____

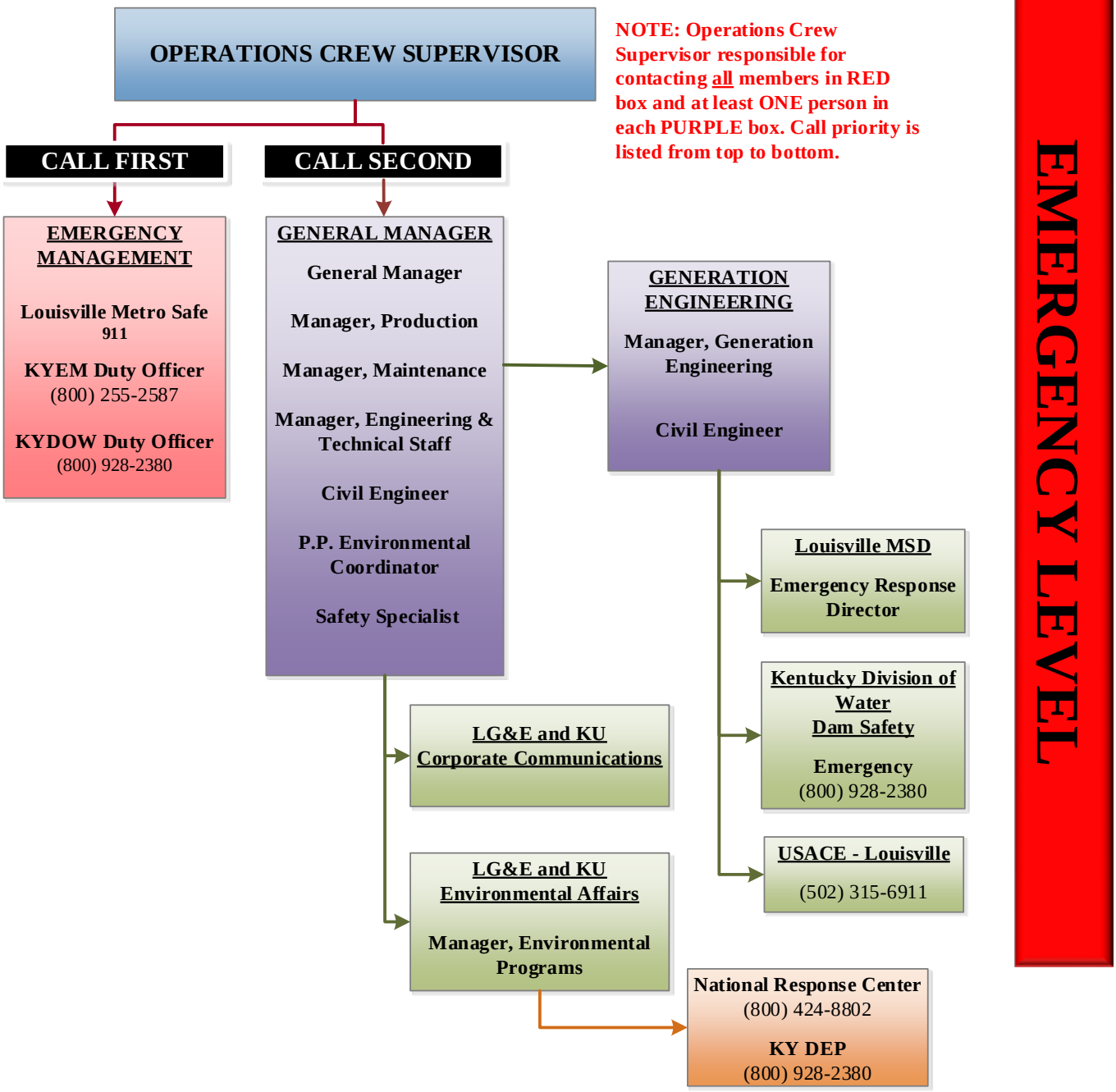
Date	Time	Action Taken or Event Progression Milestone	Action Taken by

ALERT LEVEL

Emergency Level Event

NOTIFICATION FLOWCHART (Emergency Level Event)

In the event that an Emergency Level event has occurred at the Mill Creek Ash Treatment Basin, the following notification flowchart indicates who is to be notified, by whom, and in what priority. *Information may be exchanged both up and down the notification flowchart.*



ROLES AND RESPONSIBILITIES (Emergency Level Event)

The following roles and responsibilities have been identified to respond to an Emergency Level Event at the Mill Creek Ash Treatment Basin:

Operations Crew Supervisor on duty

- Determine the event level.
- Notify personnel in the order listed on the Emergency Level notification flowchart.
- Document the reported Emergency Level event using Impoundment EAP CALL LOG (p. 13) and Impoundment EAP EVENT LOG (p. 14).

General Manager (or designee)

- Verify event level determination.
- Notify or approve the notification of personnel listed on the Emergency Level notification flowchart, as appropriate.
- Serve as the primary contact for and coordinator of all Emergency Level actions.
- Notify ***LG&E and KU Corporate Communications*** of need for communications to employees, local general public and external stakeholders of the Emergency Level event.
- Declare and document termination of event and perform follow-up.

Generation Engineering Civil Engineer

- Coordinate technical support with ***Mill Creek Civil Engineer and staff.***
- Confirm the Operations Crew Supervisor's event level determination, if time permits.
- Advise the General Manager of remedial actions to take if an Emergency Level event occurs, if time permits.
- Conduct impoundment structural integrity inspections as necessary.
- Prepare technical documentation as necessary.
- Notify and coordinate emergency technical support with ***KYDOW Dam Safety*** personnel.

Emergency Management – All External Agencies notified

As appropriate and deemed necessary by Emergency Management:

- Alert the public.
- Alert emergency personnel.
- Initiate emergency preparations or actions. (**Inundation Map, p. 15**)

EMERGENCY LEVEL

Impoundment EAP CALL LOG

Emergency Level Event

(To be completed by all designated on Notification Flowchart during the emergency event)

Date: _____

Documented by: _____

The person making the contacts should initial and record the time of the call and who was notified for each contact made. See the Notification Flowchart for critical contact information.

Call Description	Person Contacted	Time Contacted	Contacted By

EMERGENCY LEVEL

EAP EVENT LOG

Emergency Level Event

(To be completed by all designated on Notification Flowchart during the emergency event)

Date: _____

Documented by _____

When and how was the event detected? _____

_____

_____

_____

Weather Conditions: _____

_____

General description of emergency situation: _____

_____

_____

_____

Event Level Determination (circle one): ALERT or EMERGENCY

Event Level Determination made by _____

Date	Time	Action Taken or Event Progression Milestone	Action Taken by

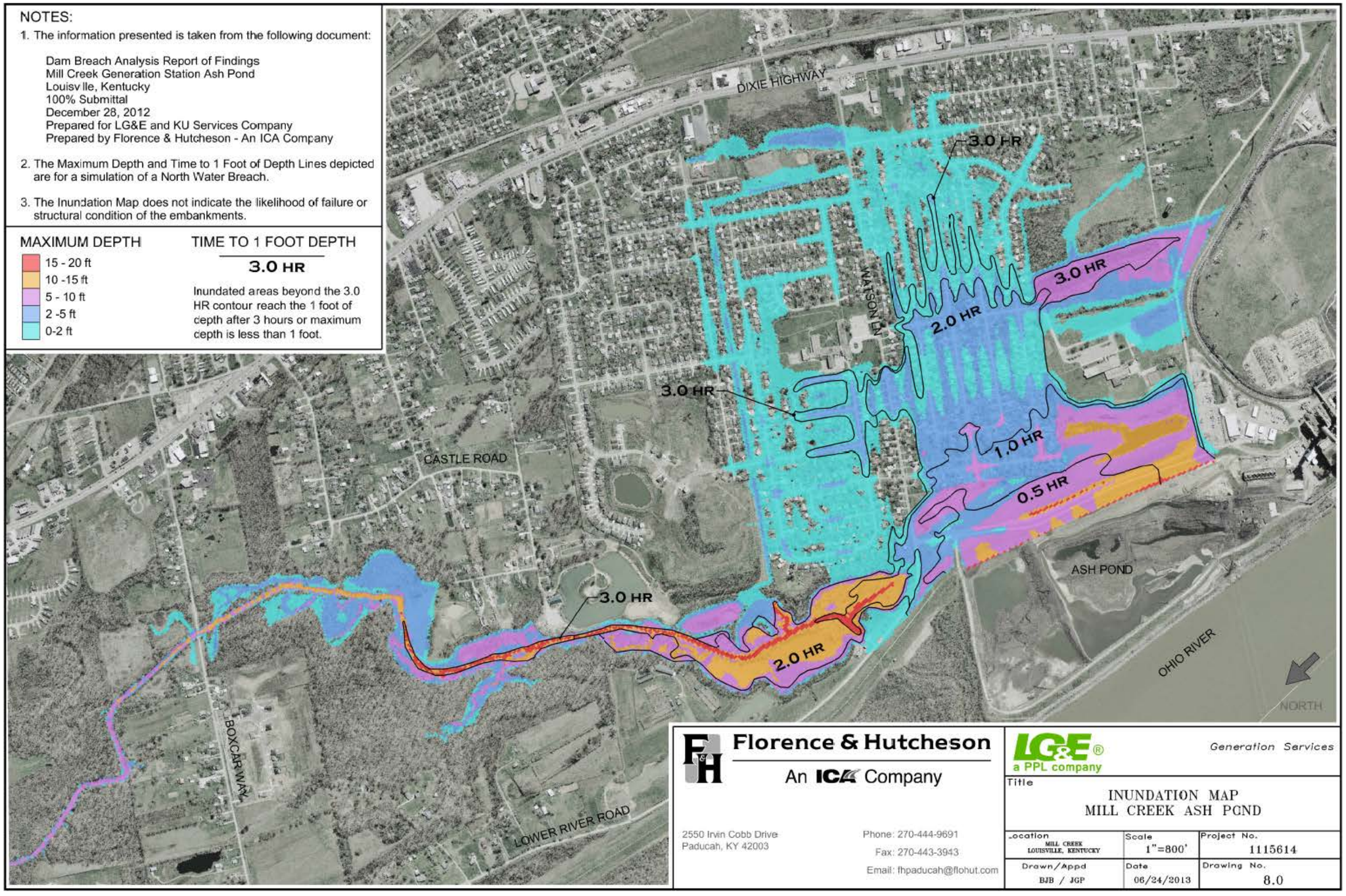
EMERGENCY LEVEL

Inundation Maps

The following inundation maps illustrate surrounding areas that could be potentially impacted by a failure of the impoundment structure or spillway and the estimated time that the areas may be impacted. Emergency Management is encouraged to use the map as a guide when planning evacuation routes and procedures.

The inundation maps are developed through dam failure analyses. The purpose of an inundation map is to depict a hypothetical worst case scenario. This scenario models the flood extents caused by a hypothetical dam failure. It is important to note that dam failure analyses are used for prudent emergency planning and preparation purposes do not indicate the structural integrity of the dam. Parameters used for the dam failure analyses were determined using hydrologic criteria from Kentucky Division of Water (KDOW's) *Engineering Memorandum No. 5* and dam failure analysis guidelines set forth in KDOW's *A General Discussion of Dam Breach Analysis.*

Inundation Map – Ash Treatment Basin



Event Termination

Prior to termination of an impoundment EAP emergency event that has not caused actual impoundment failure, ***Generation Engineering*** should conduct a structural integrity inspection of the impoundment to determine the impoundment status. If it is determined conditions do not pose a threat to people or property, the ***General Manager*** will be advised that impoundment EAP operations may be terminated.

The ***General Manager*** is responsible for terminating EAP operations and relaying this decision to the ***Operations Crew Supervisor***, ***Emergency Management***, plant safety personnel, and any other external agencies that were previously notified. *It is the responsibility of each person on the notification flowchart to notify subsequent contacts that they originally informed of the emergency event that the event has been terminated.* All event and call logs should be maintained in plant files.

Generation Engineering shall complete the Impoundment Emergency Situation Report to document the impoundment status, emergency event and actions that were taken. ***Generation Engineering*** should submit a copy of the completed report to the ***Impoundment EAP Coordinator.***.

Event Termination relates only to the emergency condition and related operations. Continued or renewal of operation of the generating station will require an evaluation of any damages that have occurred to the impoundment and/or to the plant. Operational changes or a curtailment of power generation may be required until any needed repairs can be made.

IMPOUNDMENT EMERGENCY SITUATION REPORT

MILL CREEK ASH TREATMENT BASIN, JEFFERSON COUNTY, KENTUCKY
KYDOW ID: 927

(To be completed by Generation Engineering following the termination of the emergency.)

Pond Impacted: ASH TREATMENT BASIN

Current Date: _____ Time: _____

Weather conditions: _____

General description of emergency situation: _____

_____

_____

_____

_____

Area(s) of dam affected: _____

_____

_____

_____

Extent of dam damage: _____

Possible cause(s): _____

Effect on dam's operation: _____

Initial reservoir elevation: _____ Time: _____

Maximum reservoir elevation: _____ Time: _____

Final reservoir elevation: _____ Time: _____

Description of area flooded downstream/damages/injuries/loss of life: _____

_____

_____

Other data and comments: _____

Observer's name and telephone number: _____

Report prepared by: _____ Date: _____

Impoundment EAP Maintenance & Training

Impoundment EAP Coordinator

An impoundment EAP Coordinator has been designated to facilitate all impoundment EAP-related activities, including (but not limited to) preparing revisions to the impoundment EAP including distribution, training, and coordination annual face-to-face exercises and reviews. All questions or change requests should be addressed to the impoundment EAP coordinator.

Impoundment EAP Review Meeting Schedule

With coordination between the ***General Manager*** and the ***Impoundment EAP Coordinator***, the Impoundment EAP will be internally reviewed every five years in accordance with 40 CFR 257.73(3)(ii)(B). The review shall include verification of:

- Notification flowchart contact information.
- Notification flowchart contacts know the location of their EAP document.
- Printed impoundment EAP documents' version and revision dates.

In coordination with the ***General Manager***, the ***Impoundment EAP Coordinator*** shall facilitate an annual face-to-face meeting or exercise between LG&E Mill Creek representatives and the local emergency responders. The first exercise will be conducted in summer, 2017 and every year annually as planned by the impoundment EAP Coordinator. This will be completed to satisfy the requirements of 40 CFR 257.73(3)(i)(E).