



POWERSOUTH
ENERGY COOPERATIVE

Charles R. Lowman
Power Plant
Leroy, AL



Emergency Action Plan-CCR Impoundments

Issued April 2017

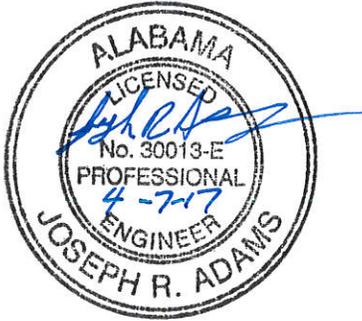


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REPORT
Emergency Action Plan-
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Charles R. Lowman Power Plant

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Engineering. Environmental. Answers.

TABLE OF CONTENTS

1.0 EAP INFORMATION.....	2
1.1 Summary of EAP Responsibilities	2
1.2 Statement of Purpose.....	2
1.3 Project Description	3
1.4 EAP Response Process	3
1.4.1 Step 1: Incident Detection, Evaluation, and Emergency Level Determination	3
1.4.2 Step 2: Notification and Communication	4
1.4.3 Notification Flow Charts	6
1.4.4 Step 3: Termination and Follow-up	7
1.5 General Responsibilities	7
1.5.1 Owner Responsibilities	7
1.5.2 Notification and Communication Responsibilities	7
1.5.3 Evacuation Responsibilities	7
1.5.4 Monitoring, Security, Termination, and Follow-up Responsibilities	7
1.5.5 EAP Coordinator Responsibilities	7
1.6 Preparedness	8
1.6.1 Surveillance and Monitoring	8
1.6.2 Evaluation of Detection and Response Timing.....	8
1.6.3 Response during Periods of Darkness	8
1.6.4 Response during Weekends and Holidays	8
1.6.5 Response during Adverse Weather	8
1.6.6 Alternative Sources of Power	8
1.6.7 Training and Exercise.....	8

1.0 EAP INFORMATION

1.1 Summary of EAP Responsibilities

The following table outlines the critical responsibilities for responding to an incident and implementing this plan.

Table 1 – General Responsibilities

Entity	Responsibilities
Owner/Operator	<ol style="list-style-type: none">1. Verify and assess emergency conditions2. Notify other participating emergency management agencies3. Take corrective action at facility4. Declare termination of emergency at facility5. Update EAP on at least an annual basis6. Respond to emergencies at the facility7. Receive condition status reports from the operator
Affected Towns in Washington/Clarke Counties. Fire and Rescue and Emergency Services	<ol style="list-style-type: none">1. Receive condition status reports from owner2. Notify Public within affected limits3. Conduct evacuation from inundation areas within town limits, if required4. Render assistance to County, as necessary5. Render assistance to Owner, as necessary
Washington/Clarke County Police, Fire and Rescue, and Emergency Services	<ol style="list-style-type: none">1. Receive condition status reports from owner2. Notify public within County.3. Conduct evacuation from inundation areas in County, if required4. Provide mutual aid to County, if requested and able

1.2 Statement of Purpose

The purpose of this EAP is to meet the requirements of the CCR Rule as specified in 40 CFR 257.73 for the Emergency Action Plan of the CCR impoundments.

1.3 Project Description

The Charles R. Lowman Power Plant has three CCR impoundments. Each impoundment is created by use of an elevated earthen berm. The facility is located in Leroy, AL along the western shore of the Tombigbee river. The figure below indicates the relationship of the facility to other communities in the vicinity.

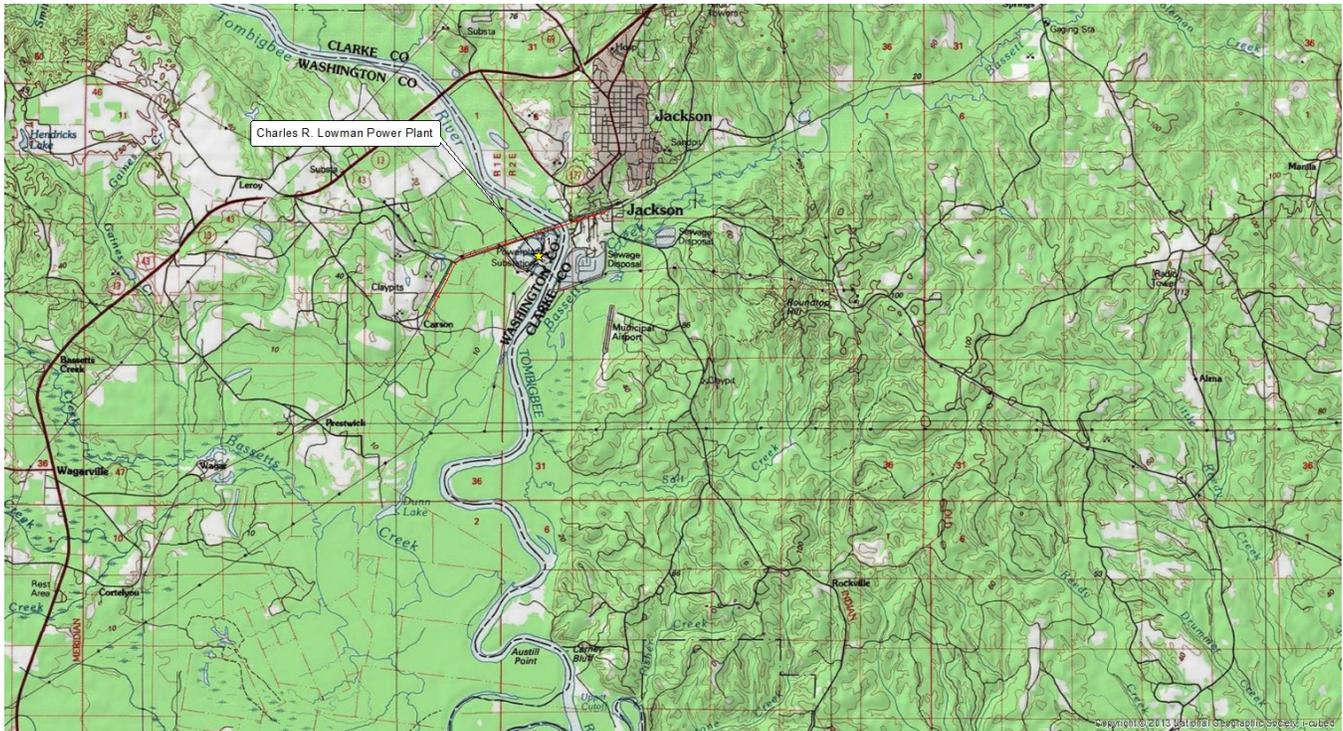


Figure 1-Potentially Affected Communities Map

As can be seen in Figure 2 the Tombigbee River (which flows south) is the county boundary shared by Washington and Clarke counties. Figure 2 also indicates that there are no communities downstream for at least 5 miles that will be affected by an emergency. Also, review of available aerial photography indicates that at the time of this report there are no areas of substantial residential development within 5 miles downstream of the facility.

1.4 EAP Response Process

It is important that the following procedures are used to ensure reliable and timely determination of an emergency event. When an unusual or emergency incident is identified at the CCR impoundments the following steps shall be followed:

1.4.1 Step 1: Incident Detection, Evaluation, and Emergency Level Determination

All unusual conditions or incidents that are detected shall be categorized into 4 Emergency Level categories. These categories are based on the severity of the condition or triggering event. These categories are High Flow, Non-Failure, Potential failure, and Imminent failure and are described in more detail below. Table 2 below outlines some events that may occur at the impoundments and their respective categories. These are only some of the events and other triggers that may occur that must be interpreted by the reviewing personnel.

Table 2-Determining Emergency Level Guidance

Emergency Level	Situation
Potential Failure	Storm water runoff with active gully erosion.
Potential Failure	Reservoir drainage equipment has failed and/or water levels are within 6 inches of overtopping the embankments.
Potential Failure	New seepage areas with cloudy discharge or increasing flow.
Potential Failure	Observation of sinkhole development on or near embankments.
Potential Failure	New cracks in the embankments with seepage.
Potential Failure	Earthquake results in damage to impoundments.
Potential Failure	Damage from outside sources that has resulted in seepage flow.
Imminent Failure	Reservoir water levels have risen to the point that overtopping is occurring.
Imminent Failure	Rapidly enlarging sinkhole.
Imminent Failure	Sudden or rapidly developing sliding of embankments.
Imminent Failure	Damage to embankment tops to is causing uncontrolled water release.

High-Flow (Non-Emergency)

This category indicates that flooding is occurring on the Tombigbee river but there is no threat to the impoundments. This category may not have a direct threat to the impoundments but the effects of flooding could rapidly develop into an overtopping condition that could wash material downstream or cause a failure. During High-flow levels the river stage should be monitored to ensure no damage is occurring to the impoundments. This category is used to convey to emergency agencies the potential for downstream effects should the situation escalate.

Non-Failure (Non-Emergency)

This category is for events that will not, by themselves, lead to a failure. These include items such as new embankment seepage, erosion, or equipment malfunction that could result in impoundment overtopping.

Potential Failure (Emergency)

This category indicates that conditions are developing that could lead to failure. This could include conditions where water levels are approaching overtopping, significant cracking in the structures, new and substantial leaking, or horizontal movement of the embankments. This category conveys that there is time to analyze the situation before the impoundment fails and steps can be made to moderate or alleviate the failure.

Imminent Failure (Emergency)

This category indicates the failure is about to occur, occurring, or has already occurred. For the purpose of emergency response, authorities may assume the worst-case condition for this category.

1.4.2 Step 2: Notification and Communication

When an emergency level has been determined, notification should be made per the Notifications Flowchart. It is important that information is conveyed efficiently, correctly, and the emphasis on the appropriate severity of the emergency to all involved parties. The below table lists notification information by category. This information at a minimum should be conveyed by each person to their responsible contact as communication progresses through the Notification Flowchart.

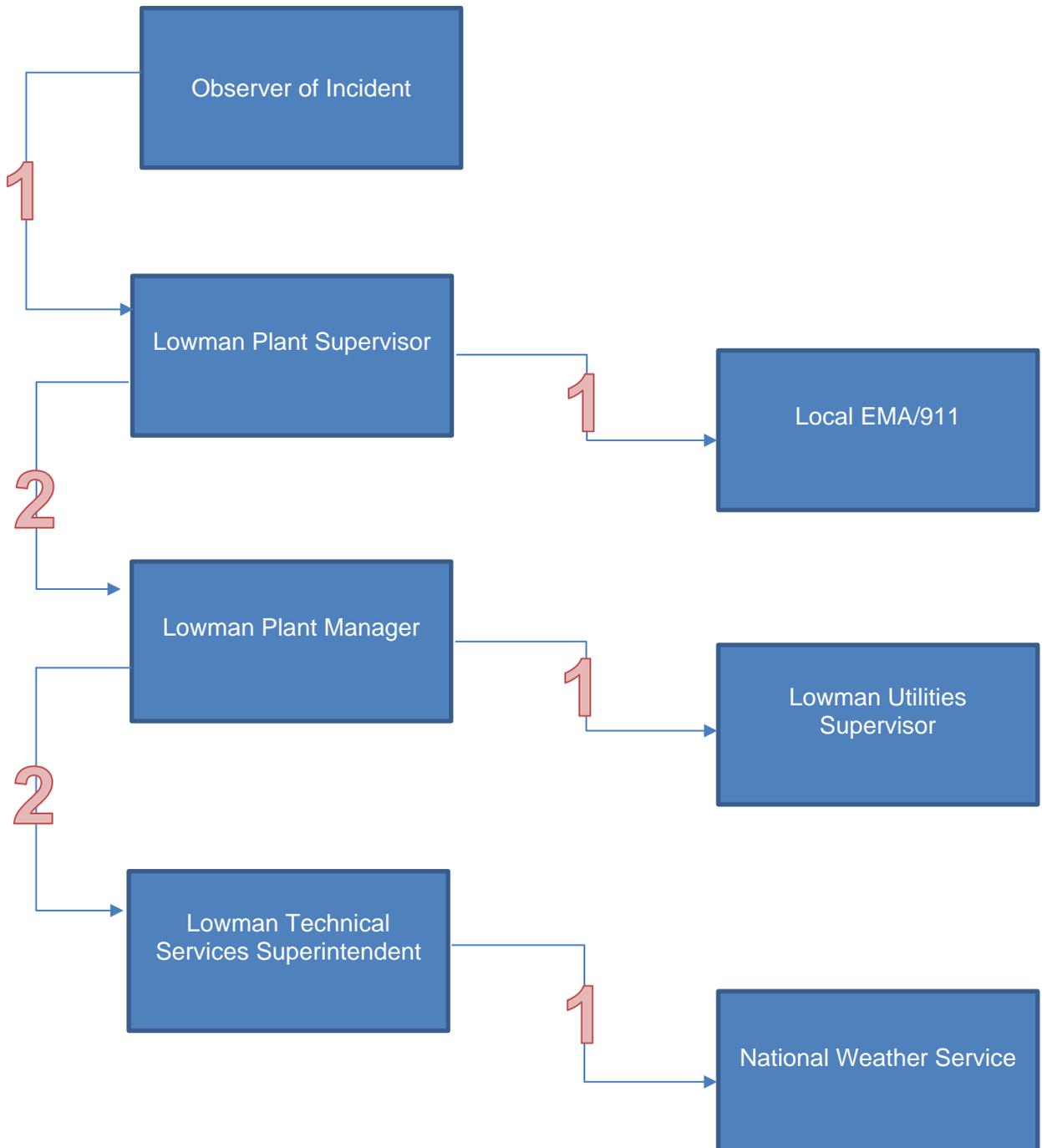
Table 3-Initial Notification Information by Emergency Level

Emergency Level	Information to External Organizations
Potential Failure	<ol style="list-style-type: none"> 1. Explain what is happening at the impoundments. 2. State you are determining this to be a POTENTIAL FAILURE. 3. Describes what actions are being taken to prevent failure. 4. Provide an estimate of how long the impoundment could be at risk of failure. 5. Explain what areas are at risk from failure. 6. Indicate when you will give the next status report. Subsequent reports should occur no more than 24 hours apart. Indicate who can be called for any follow-up questions.
Imminent Failure	<ol style="list-style-type: none"> 1. Explain that the impoundment is failing, is about to fail, or has failed. 2. State you are determining this to be an IMMEDIATE FAILURE. 3. Explain what areas are at risk of failure. 4. Indicate when you will give the next status report. Subsequent reports should occur no more than 24 hours apart. 1. Indicate who can be called for any follow-up questions.

The EAP may go through several Emergency Levels during an event as conditions improve or deteriorate. If the Emergency Level does change the notification procedure begins anew and should follow the corresponding level guidance. Actions shall be determined at the time of incident and by those officials involved.

1.4.3 Notification Flow Charts

*Numbers indicate the order in which each person issues notifications to the respective person or agency.



1.4.4 Step 3: Termination and Follow-up

The termination of an emergency is dependent on the Emergency category of the triggering event. In general, an EAP cannot be terminated until assurances are met that the triggering event will not worsen or produce the potential for damage to the public, property, or environment. It is the Owner's responsibility to notify authorities that the condition has been stabilized. It shall be the responsibility of the government officials to disseminate the termination to all involved agencies.

Following the termination of an incident, the owner and all involved parties should perform an evaluation of the incident called an After Action Review. This review should include at a minimum the following discussing topics:

- The events or conditions leading up to the incident.
- Significant actions performed by each party and improvements for future emergencies.
- Any and all strengths and deficiencies found during the process. These could include communications, logistics, staffing, leadership, etc.
- Corrective actions identified and a planned course to address recommendations.

The After Action Review should be documented in an After Action Report (AAR) and used for revisions to the EAP.

1.5 General Responsibilities

The determination of responsibility for EAP tasks is very important to clearly specify the responsibilities of all involved. The following sections clarify the individuals responsible for actions and the actions expected of them.

1.5.1 Owner Responsibilities

The Owner's responsibilities include but are not limited to:

1. Assignment and education of operating/inspecting personnel
2. Detection and evaluation of incidents.
3. Classification of incidents.
4. Establishment and enforcement of organizational emergency chain of command.
5. Notification of emergency personnel.
6. Performing appropriate response to limit the deterioration of a situation and to help prevent the loss of life, property, or damaging affects to the environment.

1.5.2 Notification and Communication Responsibilities

The Owner shall clearly identify in the EAP the individuals authorized to notify emergency authorities. In the event of an imminent failure this responsibility may be delegated to the Operator. If at any time the authorized personnel changes the EAP should be updated.

1.5.3 Evacuation Responsibilities

All evacuation planning and implementation is the responsibility of local emergency authorities with that legal authority.

1.5.4 Monitoring, Security, Termination, and Follow-up Responsibilities

In the event of an incident, a single person should be assigned by the owner to be onsite and monitor the situation from the beginning to the termination. This person is responsible for status updates through the owner's chain of command.

1.5.5 EAP Coordinator Responsibilities

The owner shall specify an EAP Coordinator to be responsible for overall EAP related activities. This person shall establish training, coordinate EAP exercises, answering EAP questions, etc.

1.6 Preparedness

Preparedness are those activities that take place before an incident develops. These activities help to facilitate response to an incident and help prevent or alleviate the effects of one.

1.6.1 Surveillance and Monitoring

Systematic and regular surveillance and monitoring of the embankments will allow for detection or prevention of emergency incidents. Prompt detection and evaluation of incidents is critical to ensuring a timely and effective response. The impoundments shall be inspected at least weekly to detect any abnormalities. An inspection log should be maintained and held for record purposes. Items to be monitored should include at a minimum the condition of slopes and vegetation, the status of impoundment water levels, and if applicable the river stage adjacent to the impoundments.

1.6.2 Evaluation of Detection and Response Timing

The total time taken for the EAP is of critical importance. Measures should be taken to create an efficient way to implement an EAP. Should the onsite inspection personnel detect a situation of concern he/she shall report the concern within 24 hours to determine if an emergency exists. If an emergency is determined EAP procedures should be initiated promptly. Timely implementation of the EAP and communication will directly impact the effectiveness of efforts.

1.6.3 Response during Periods of Darkness

The facility is manned 24 hours a day 365 days a year. Therefore, response during a period of darkness will not change from the primary response. The Owner may provide additional lighting to the facility if available.

1.6.4 Response during Weekends and Holidays

The facility is manned 24 hours a day 365 days a year. Therefore, response during weekends and holidays will not change from the primary response.

1.6.5 Response during Adverse Weather

Primary access to the site shall be by ground based vehicles from Carson Road by way of Highway 43. If for some reason access to Carson Road is not available secondary road access can be obtained by Batley Road.

In the event that all roadway access is unavailable the site may be accessed by boat from the Tombigbee River. No immediate moorings are provided and this should be used only if necessary.

1.6.6 Alternative Sources of Power

In the event of a power loss and the need for electrical equipment is present, gas driven emergency generators shall be utilized to operate equipment.

1.6.7 Training and Exercise

Training in the determination of incidents and their respective emergency categories is recommended for all personnel that will be involved in the EAP. Exercise of the notification flowchart will also help to ensure a timely response of personnel and to determine if for some reason the flowchart is no longer current. On an annual basis members of the notifications flowchart, to include representatives for emergency agencies, shall meet to discuss any changes to the EAP or any improvements that can be made to enhance readiness or the dissemination of information.