

EMERGENCY ACTION PLAN

Georgia Power Company
Plant McDonough
Ash Pond #4 (AP-4) Dam
State ID 033-021-00165
Cobb County, GA

I hereby certify that this Emergency Action Plan has been prepared in accordance with the requirements of the United States Environmental Protection Agency (EPA) coal combustion residual rule (40 Code of Federal Regulations (C.F.R.) 257 Subpart D) and the Georgia Department of Natural Resources Environmental Protection (GEPD) Rules for Dam Safety (GASDP Rule) 391-3-8-.11.



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ISSUE DATE: 04/07/2021
REVISION #: 4

**PLANT McDONOUGH ASH POND #4 DAM
EMERGENCY ACTION PLAN
CONCURRENCES**

By my signature, I acknowledge that I, or my representative, have reviewed this plan and concur with the tasks and responsibilities assigned herein for me and my organization.

Georgia Safe Dams Program

Signature

Date

Printed name and title: _____

Georgia Power/Southern Company

Signature

Date

Printed name and title: _____

Cobb County Emergency Management Agency

Signature

Date

Printed name and title: _____

Local Emergency Planning Committee (LEPC)

Signature

Date

Printed name and title: _____

Other Organization (If Needed): _____

Signature

Date

Printed name and title: _____

REVISION RECORD

In accordance with 40 C.F.R. Part 257.73 and GASDP Rule 391-3-8-.11 guidelines this Emergency Action Plan (EAP) must be amended whenever there is a change in conditions that would substantially affect the EAP in effect. Additionally, the EAP should be reviewed annually to ensure the information is accurate. As necessary, this EAP must be updated and a revised EAP placed in the facility's operating record.

Revision Number	Date	Sections Affected/Reason
0	02/17/2017	Creation of EAP
1	11/03/2017	Update based on revised final grading
2	10/16/2018	Update App D - Response Notification Flowcharts, reference to 40 CFR 257.73 requirements, and Section 5.2 to Operations Shift Team Leader
3	04/26/2019	<ul style="list-style-type: none"> • Added GASDP References • Added 40 C.F.R. definitions for Dike and Hazard Potential Classification • Revision to Appendix A figure title • Revision to Appendix B to include Dam Breach Inundation Maps for interim closure condition • Revision to Appendix C to refer to "Incident Commander" • Revision to Appendix D to include Post Incident Reporting Form • Clarified Incident Commander roles in Section 5.1 • Revisions to text in Sections 2.0, 3.0, 3.1, 4.0, 5.3, 5.4, 5.5, 5.7, 5.8, 6.0, 6.1, and 8.0 • Changed references to GPC Environmental Affairs to GPC Environmental and Natural Resources
4	Date Final	<ul style="list-style-type: none"> • Revision to Appendix A– Final Closure Conditions Plan • Revision to Appendix B – Dam Breach Inundation Maps for Final Closure Conditions (B.3 and B.4). • Revision to Facility Description Dam Data. • Updated Formatting Appendix C • Updated Appendix D & E – Added CCR to the end of GPC Environmental and Natural Resources (E&NR), and deleted E&NR Civil Support.

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ACRONYMS AND ABBREVIATIONS

AP-4	Plant McDonough Ash Pond #4
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
E&CS	Engineering & Construction Services
EAP	Emergency Action Plan
EMA	Emergency Management Agency
EPA	Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
GASDP	Georgia Department of Natural Resources Environmental Protection Division – Safe Dams Program Division
GDOT	Georgia Department of Transportation
GEMA	Georgia Emergency Management Agency
GEOP	Georgia Emergency Operations Plan
GPC	Georgia Power Company
H:V	Horizontal:Vertical
HDPE	High-Density Polyethylene
ID	Inside Diameter
NID	National Inventory of Dams
SCS	Southern Company Services

DEFINITIONS

Adverse Consequences. Negative impacts that may result from the failure of a dam. The primary concerns are loss of life, economic loss (including property damage), lifeline disruption and environmental impact.

Category I Dam. State of Georgia Safe Dams Program designation for Hazard Potential indicating that improper operation or failure would result in a probable loss of human life.

Category II Dam. State of Georgia Safe Dams Program designation for Hazard Potential indicating that improper operation or failure would not be expected to result in a probable loss of human life.

Coal Combustion Residuals (CCR). Fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers.

CCR Surface Impoundment. A natural topographic depression, man-made excavation, or diked area which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR.

Dam/Dike/Embankment (GASDP Rule). An artificial barrier that has the ability to impound water, wastewater, or any liquid-borne material for the purpose of storage.

Dam Failure. Catastrophic type of failure characterized by the sudden, rapid and uncontrolled release of impounded water or the likelihood of such an uncontrolled release. It is recognized that there are lesser degrees of failure and that any malfunction or abnormality outside the design assumptions and parameters that adversely affect a dam's primary function of impounding water is properly considered a failure. These lesser degrees of failure can progressively lead to or heighten the risk of catastrophic failure. They are, however, normally amenable to corrective action.

Imminent Failure (Condition A Emergency). Failure of a dam/dike/embankment is imminent or has occurred.

Potential Failure (Condition B Emergency). A potential failure condition of a dam/dike/embankment is a developing condition, but adequate time is available to properly evaluate the problem and implement corrective actions that may alleviate or prevent failure.

Non-Failure Condition. A condition that will not, by itself, lead to a failure, but that requires investigation and notification of internal and/or external personnel.

Dike (40 C.F.R. 257). An embankment, berm, or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

Emergency. A condition that develops unexpectedly, endangers the structural integrity of the dam, and requires immediate action. An emergency can lead to Adverse Consequences in the event of Imminent Failure.

Filter. One or more layers of granular material graded so as to allow seepage through or within the layers while preventing the migration of material from adjacent zones.

Hazard Potential Classification. The possible adverse incremental consequences that result from the release of water or stored contents due to failure of the diked CCR surface impoundment or mis-operation of the diked CCR surface impoundment or its appurtenances. The hazardous potential classifications include high hazard potential CCR surface impoundment, significant hazard potential CCR surface impoundment, and low hazard potential CCR surface impoundment, which terms mean:

High Hazard Potential CCR Surface Impoundment. A diked surface impoundment where failure or mis-operation will probably cause loss of human life.

Low Hazard Potential CCR Surface Impoundment. A diked surface impoundment where failure or mis-operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment's owner's property.

Significant Hazard Potential CCR Surface Impoundment. A diked surface impoundment where failure or mis-operation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.

Inundation Map. A graphic representation of the inundation zone that shows the potential impact area due to a breach of the Ash Pond. The inundation maps in this procedure are based on a specific computer-modeled dam breach scenario; therefore, the boundaries depicted are estimates for that particular model. *The models are considered conservative but larger floods could potentially occur.* Please refer to Appendix B.

Inundation Zone. Area subject to flooding in the event of increased flows due to a dam/dike/embankment failure.

Piping. The progressive development of internal erosion of the dam/dike/embankment or foundation material by seepage.

Probable Maximum Flood. The flood that may be expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in the drainage basin.

Qualified Person. A person or persons trained to recognize specific appearances of structural weakness and other conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR unit by visual observation and, if applicable, to monitor instrumentation.

Sunny Day Failure. A night or day failure that occurs during fair weather or when weather-related flooding is not occurring.

1.0 STATEMENT OF PURPOSE

This Emergency Action Plan (EAP) has been prepared for Plant McDonough's AP-4 dam to meet the requirements of 40 C.F.R. Part 257.73(a)(3) and GASDP Rule 391-3-8-.11. The purpose of this EAP is to minimize danger to human life, economic and ecological damage, and to protect property and assets by providing a pre-planned course of action in the event of possible, impending, or actual dam failure at Plant McDonough's AP-4.

This EAP will provide responding personnel with:

- Pertinent information related to Plant McDonough's AP-4 dam;
- Definition of events or circumstances that represent a safety emergency;
- Procedures that will be followed to detect a safety emergency;
- Notification procedures in the event of a safety emergency;
- Information to assist in decision making;
- A list of responsible persons and their respective responsibilities;
- A list of resources available to support the response effort;
- Provisions for an annual face-to-face meeting with local emergency responders;
- Contact information for emergency agencies and other emergency responders;
- Contact information for additional resources and outside agencies; and
- Maps that delineate the downstream area that could be affected in the event of a failure.

2.0 FACILITY DESCRIPTION

Ash Pond #4 (AP-4) is located at Georgia Power Company's Plant McDonough, a natural gas power plant (formerly coal fired) located in Cobb County, Georgia. This EAP covers emergency response procedures for AP-4, which was originally designed to receive and store coal combustion residuals (CCR) and low volume waste streams produced during the former coal fired electric generating process at Plant McDonough. AP-4 is currently in the process of being closed under 40 C.F.R. 257 (CCR Rule). Plant McDonough's Ash Pond #3 (AP-3) is located west of AP-4, and is being closed in combination with AP-4. During closure both the north and east dam embankments of the AP-4 dam will be lowered significantly, the northern by approximately 58-feet from elevation 846 to elevation 788 which will establish the new low-point in the crest of the dam. The eastern embankment will be lowered by approximately 36 feet from elevation 846 to elevation 810. Based on the potential impacts in the unlikely event of an embankment failure, a hazard potential classification of "High" has been assigned to AP-3 and AP-4 in its interim condition. This EAP provides protocols for this interim and final closed condition. An overview figure of Plant McDonough AP-4 in its interim closure and closed conditions shown in Appendix A.

The interim closure condition includes a system of three temporary detention ponds that retain stormwater during the construction process. Storage capacity of each pond in this interim condition is connected at certain areas, and along with the use of pumps during the construction process, allows all runoff during storm events to be contained in the available storage volume. The low point of the dam crest elevation for the current interim condition is 820 ft-msl, for a total dam height of 57 ft (calculated from the lowest grade downstream of the dam, 763 ft-msl). The drainage basin contributing to this system comprises 52.8 acres.

Closed AP-4 will have no permanent impoundment, being designed to only temporarily detain water from storm events and drain entirely over a short time. The lowest elevation in the interior of the closed pond will be 770.5 ft-msl, where a 24-inch HDPE pipe culvert outlet will be constructed. This outlet will tie into the existing conveyance culvert pipe that discharges southeast of the dam. The low point of the dam crest elevation at the northern embankment will be 788 ft-msl, giving a total dam height of 25 feet (calculated from the lowest grade downstream of the dam, 763 ft-msl). The dam consists of earthen embankments which are covered with grass and riprap in some areas. The drainage basin contributing to this system comprises 85.1 acres in total, with 64.9 acres draining to the conveyance culvert pipe, east and adjacent to AP-4, and 20.2 acres draining to a detention pond outlet in the southern portion of AP- 3.

The AP-4 dam (National Inventory of Dams (NID) GA01482, GA Permit #033-021-00165) at Plant McDonough has been analyzed with dam breach simulations under the described interim closure and final closed conditions in order to determine the downstream area that would be affected in the event of a dam breach. Inundation maps are provided in Appendix B. The inundation maps are presented for a past interim closure condition as of March 2019 which considers a dam crest elevation of 820 ft.-msl. An additional set of inundation maps is presented for the final closed condition and consider a minimum dam elevation of 788 ft.-msl. Conditions for the dam will be bound by these two scenarios between March 2019 and the completion of closure construction. Closure is projected to be complete in 2021. ***These flood extents are provided for planning purposes only; actual flooding can vary due to actual conditions present at the time of the failure.***

3.0 DETECTION, EVALUATION, AND CLASSIFICATION PROCEDURES FOR EMERGENCIES

3.1 Inspections and Emergency Detection/Evaluation

Trained personnel from Plant McDonough inspect the AP-4 dam on a regular basis to pre-emptively detect and address conditions in a timely manner that could indicate potential issues. Plant McDonough security personnel make visual observations during routine daily patrols of the dam and surrounding areas; personnel from the Plant's environmental compliance group perform weekly inspections; and professional engineers from SCS Fossil Dam Safety perform semi-annual inspections. The GASDP carries out independent inspections every two years.

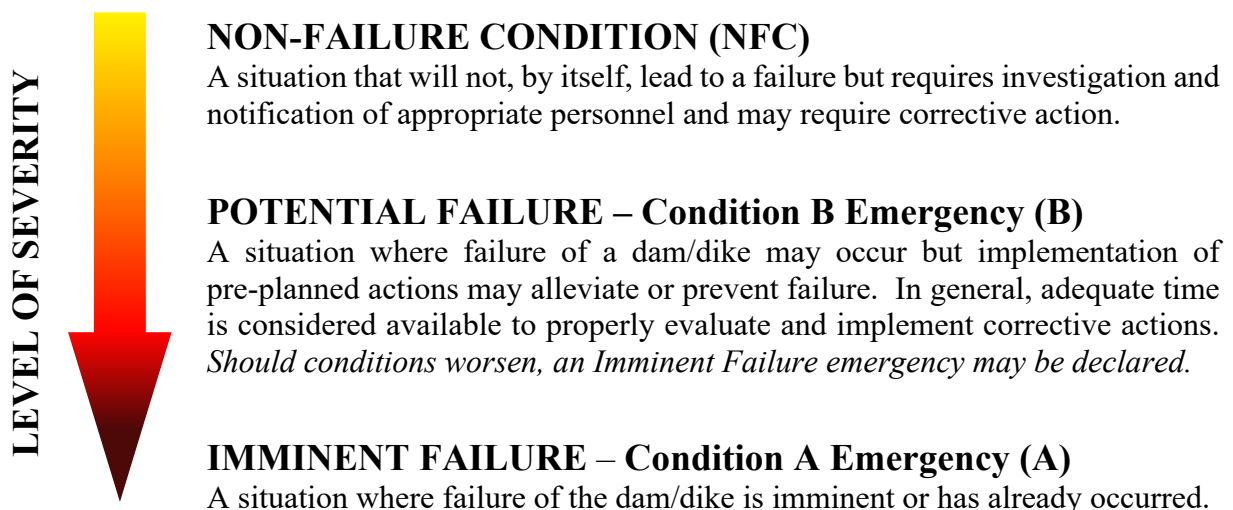
Piezometers and other flow measurement instrumentation are installed along the AP-4 dam. The piezometers are read on a regular basis by plant personnel, and the results are reported to SCS Fossil Dam Safety for evaluation. Flow measurement weirs and drains are inspected on a monthly basis to monitor the quantity of seepage flows.

Plant personnel conducting inspections of the dams are trained on an annual basis by SCS Fossil Dam Safety personnel on the appropriate surveillance and monitoring requirements and are considered Qualified Persons as defined by 40 C.F.R. 257 Subpart D.

Any issues discovered during an inspection are reported to Fossil Dam Safety as prescribed in the Safety Procedure for Dams and Dikes at Fossil Generation Plants (GEN10004). The Fossil Dam Safety Engineer(s) working with plant personnel will recommend a corrective course of action, as needed.

3.2 Condition Severity Classifications

Ash pond dam emergencies will be classified based on the type of event, severity of the situation, and the time required to take corrective measures. This procedure covers the following emergency classifications:



3.3 Guidance for Determining the Emergency Level

The following table details potential situations that could occur at the AP-4 dam. *The Condition Level indicated in the right-most column corresponds with the Condition Severity Classifications in Section 3.2 above.*

Event	Situation	Emergency Level
Earth Spillway Flow	Reservoir water surface elevation at auxiliary spillway crest or spillway is flowing with no active erosion	NFC
	Spillway flowing with active gully erosion	B
	Spillway flow that could result in flooding of people downstream if the reservoir level continues to rise	B
	Spillway flowing with an advancing headcut that is threatening the control section	A
	Spillway flow that is flooding people downstream	A
Embankment Overtopping	AP-4 level is 1 foot below the top of the dam	B
	Water from AP-4 is flowing over the top of the dam	A
Seepage	New seepage areas in or near the dam	NFC
	New seepage areas with cloudy discharge or increasing flow rate	B
	Seepage with discharge greater than 10 gallons per minute	A
Sinkholes	Observation of new sinkhole in AP-4 or on the dam	B
	Rapidly enlarging sinkhole	A
Embankment Cracking	New cracks in the embankment greater than ¼-inch wide without seepage	NFC
	Cracks in the dam with seepage	B
Embankment Movement	Visual movement/slippage of the dam slopes	NFC
	Sudden or rapidly proceeding slides of the dam slopes	A
Instruments	Instrumentation readings beyond predetermined/historic values	NFC
Earthquake	Measurable earthquake felt or reported on or within 50 miles of the dam	NFC
	Earthquake resulting in visible damage to the dam or its appurtenances	B
	Earthquake resulting in uncontrolled release of water from the dam	A
Security Threat	Verified bomb threat that, if carried out, could result in damage to the dam	B
	Detonated bomb that has resulted in damage to the dam or its appurtenances	A
Sabotage / Vandalism	Damage to dam or its appurtenances that could adversely impact the functioning of the dam	NFC
	Modification to the dam or its appurtenances that could adversely impact the functioning of the dam	NFC
	Damage to dam or its appurtenances that has resulted in seepage flow	B
	Damage to the dam or its appurtenances that has resulted in uncontrolled water release	A

4.0 INCIDENT RESPONSE

The majority of past failures of earthen dams across the United States can be attributed to overtopping, seepage leading to internal erosion and piping, and slope instability. Detection of these potential failure modes will be as follows:

Overtopping. AP-4 has a relatively small watershed area compared to the overall size and volume of storage. In addition, the final closure outlet system is designed to safely pass 1/3 of the Probable Maximum Flood (PMP) (GASDP Design Storm) and the interim condition is designed to safely contain 100% of the PMP (40 C.F.R. 257 Subpart D), so overtopping of the dam is a remote possibility. However, in times of extreme flooding, personnel will be dispatched to monitor the dams and any potential overtopping would be discovered prior to the actual overtopping of either dam.

Seepage. Failures due to internal erosion and/or piping resulting from seepage would be detected in the early stages during the regular inspections conducted by plant personnel. Inspectors are trained to look for evidence of seepage. In addition, piezometer readings will reveal changes in subsurface water pressure. Inspection reports, including piezometer readings, are transmitted to trained dam safety engineers for evaluation. Therefore, the conditions that could lead to failures of this type would likely be discovered and corrected, making an actual failure a remote possibility.

Slope Instability. Slope instability would be demonstrated by sloughing of dam slopes, which would be detected by plant personnel during their inspections. The conditions that could potentially lead to a failure of this type would also be detected and corrected in advance making an actual failure a remote possibility.

In the event that conditions are detected that could potentially lead to a dam failure, the flowcharts in Appendices C (Incident Response) and D (Response Notification) will be used to respond to the situation and alert applicable personnel and emergency agencies. In that situation, local emergency management agencies (EMAs) would respond and begin warnings and evacuations as soon as possible following the declaration of a safety emergency.

5.0 RESPONSIBLE PERSONS AND RESPONSIBILITIES

Designated personnel have been trained in the use of these response procedures and are aware of their responsibilities in making the procedures effective. The chain of command and the individual responsibilities for plant personnel, public officials, and agencies are outlined below.

5.1 Plant Manager

The Plant Manager is ultimately responsible for the content, effectiveness, and implementation of the response procedures. *Plant Managers have the authority and responsibility to direct all on-site activities.*

5.2 Operations Shift Team Leader

Operations is the 24-hour point of contact for all plant emergencies. The Operations Shift Team Leader will contact the Plant Incident Commander as necessary.

5.3 Incident Commander

The Plant Operations and Maintenance Manager is normally the Incident Commander. If the Plant Operations and Maintenance Manager is not available, the Operations Shift Team Leader will assume the duties and responsibilities of the Incident Commander until properly relieved by the Plant Manager or their designee.

The Incident Commander or their designee will assess the conditions, direct the corrective and protective measures necessary to mitigate the condition(s), and, if necessary, declare an emergency condition. The Incident Commander or their designee will also declare the termination of an emergency condition. Once outside agencies are notified, the Incident Commander or their designee is responsible for keeping EMA informed of any changes in conditions. See Incident Commander responsibilities for further details.

The Incident Commander is responsible for:

1. Verifying that an emergency condition exists.
2. Assessing and declaring the emergency condition.
3. Consulting with SCS Fossil Dam Safety to evaluate conditions and determine corrective actions.
4. Emergency Actions
 - a. If necessary, implement actions to lower the water level in the impoundment in consultation with SCS Fossil Dam Safety.
 - b. Call-out of personnel necessary to perform the work required on the plant site during the emergency.
5. Ensure the notification process as outlined in the Response Notification Flowchart (Appendix D) is completed in an expedient manner.
6. Other responsibilities include:

- a. Establishing lines of communication between the plant and the local EMAs.
- b. Ensuring emergency sources of power are available for the operation of essential equipment such as emergency lighting.
- c. Ensuring the availability of heavy equipment and trained operators to aid in the mitigation effort.

5.4 Plant Security Department

The Plant Security Department is responsible for securing company property and controlling access to company facilities. If necessary, the Plant Security Department will inform the Incident Commander who will perform emergency notifications to Plant Environmental Compliance, the Georgia System Operator, and outside agencies as shown on the Response Notification Flowchart (Appendix D). This consists of the local EMA and if deemed necessary the state EMA. **These notifications are mandatory when an emergency condition has been declared by the Incident Commander.**

5.5 Plant Environmental Compliance

Plant Environmental Compliance personnel are responsible for assessing conditions, contacting the Plant Manager, obtaining assistance from SCS Fossil Dam Safety, and for providing technical updates to the Incident Commander. Plant Environmental Compliance personnel can also request assistance from GPC Environmental and Natural Resources, if conditions warrant.

5.6 Georgia System Operator

The Georgia System Operator contacts the National Weather Service to inform them of conditions at the plant that may lead to potential flooding downstream.

5.7 SCS Fossil Dam Safety

SCS Fossil Dam Safety is responsible for coordinating and providing the technical support necessary to mitigate the emergency condition and for notifying the Hydro Services General Manager of the emergency condition. SCS Fossil Dam Safety shall also notify GPC Supply Chain Management, GPC Environmental and Natural Resources, and the GASDP as shown on the Response Notification Flowchart (Appendix D).

5.8 GPC Personnel

Environmental and Natural Resources

GPC Environmental and Natural Resources is responsible for coordinating long-term environmental response (after the initial emergency response) and for remediation of environmental issues and providing the technical support necessary for any remediation or corrective action needs. Environmental and Natural Resources is also responsible for communicating with environmental regulatory agencies, reporting of environmental releases, and for obtaining environmental permits or variances to existing permits, if needed.

If necessary, Environmental and Natural Resources will also help secure approved contractors for environmental emergency conditions that may exist. They will also provide additional support, such as emergency manpower, material, equipment, and expertise to assist in mitigation efforts, if needed.

Corporate Communications

GPC Corporate Communications is responsible for coordinating the GPC media response and will schedule news briefings and prepare news releases, as required. GPC Corporate Communications will also work with local and State Public Information Officers to ensure that timely, accurate, and consistent information is made available to media outlets.

Corporate Security

GPC Corporate Security is responsible for supporting Plant Security personnel and contracting with local law enforcement for additional security personnel as needed.

Supply Chain Management

Supply Chain Management is responsible for obtaining additional equipment and materials necessary to mitigate the emergency condition and begin the recovery process.

5.9 Emergency Agencies

Local EMAs are responsible for planning and implementing evacuation and sheltering plans as well as directing search, rescue, and recovery efforts. If additional resources are required, the local agencies can contact the Georgia Emergency Management Agency (GEMA) for assistance.

The local EMAs are the point of contact between plant personnel and local jurisdictions. The EMAs are responsible for the direction and control of emergency operations at the local level and keeping local government officials informed of the status of emergency operations.

GEMA generally becomes involved in an emergency situation if the local agencies are not capable of handling the situation or if assistance is requested by a local agency or by the Governor. Refer to the "Georgia Emergency Operations Plan" (GEOP) for an explanation of specific functions. GEMA has responsibilities similar to the local EMAs but is also responsible for mobilizing state military support as well as State Disaster Center operations.

5.10 Law Enforcement

Local Law Enforcement agencies are notified by Plant Security. Law Enforcement is responsible for traffic control and can assist with evacuation, mitigation, and rescue activities.

6.0 NOTIFICATION PROCEDURES

Communication during an emergency event will primarily be by company phone. In the event of system failure, Southern Linc radios and cell phones would be utilized as an alternate method of communication. These numbers are listed on the Response Notification Flowchart located in Appendix D.

Local and state EMA (as notified by the local EMA) will be notified in the event of an emergency, and these agencies will be responsible for notifying the public. In the event of an imminent failure, local and state EMA's (as notified by the local EMA) will be notified to immediately begin evacuation procedures. GPC Corporate Communications will provide information for media outlets and will be responsible for communicating relevant information to the public.

6.1 Incident Response Flowchart for Imminent Failure and Potential Failure Incidents

This EAP and the following Incident Response Flowchart (below and in Appendix C) for Imminent Failure and Potential Failure Emergencies shall be available at appropriate locations at Plant McDonough. Personnel responsible for executing mitigation and/or emergency actions shall be thoroughly familiar with their responsibilities under this EAP.

For Non-Failure Conditions, notification should be made to SCS Fossil Dam Safety.

- A. When an issue is detected, the Incident Commander will notify plant personnel in accordance with the Incident Response Flowchart (below and in Appendix C). Plant Environmental Compliance should contact SCS Fossil Dam Safety immediately for technical consultation. SCS Fossil Dam Safety will provide an evaluation of the conditions and provide a determination of whether there is an immediate threat to the dam/dike. If there is an immediate threat of dam/dike or dike failure, declare an **Imminent Failure Emergency** and proceed to Step J.
- B. If no immediate threat is detected by SCS Fossil Dam Safety, determine if the problem detected could possibly lead to failure of the dam/dike. If there is a potential for failure but corrective measures may be taken to moderate or alleviate failure, declare a **Potential Failure Emergency** and proceed to Step D.
- C. If the problem is evaluated and not deemed by SCS Fossil Dam Safety to have the potential to cause failure, the dam/dike will be considered to be in a **Non-Failure Condition**. This is not an emergency condition, and no emergency condition will be declared. For this condition, appropriate personnel will be notified, repair or maintenance activities shall be scheduled and completed, and follow up inspections and analysis shall be completed.
- D. If a **Potential Failure Emergency** has been declared, the Incident Commander will notify personnel and agencies listed on the Response Notification Flowchart (Appendix D). Document all communications using the appropriate forms contained in Appendix E. Once outside agencies have been notified of an issue or potential problem, plant management is responsible for keeping local EMAs informed of any change in conditions.
- E. Begin corrective measures to attempt to alleviate or prevent failure.

- F. Evaluate the effectiveness of the corrective measures. If the corrective actions are successful, update all personnel/agencies previously contacted of the status of the improved conditions and document relevant communications using the forms provided in Appendix E. At this time, the Incident Commander will end the emergency condition. SCS Fossil Dam Safety will be responsible for preparing the after-action report.
- G. If the corrective measures are not effective, SCS Fossil Dam Safety will determine if there is time to take additional corrective measures.
- H. If there is not time to take additional corrective measures and failure is imminent, declare an **Imminent Failure Emergency** and proceed to Step J.
- I. If there is time to implement additional corrective measures, return to Step E. Additional support can be requested from SCS Civil Field Services or outside contractors, as needed.
- J. If an **Imminent Failure Emergency** has been declared by the Incident Commander or their designee, ensure that all personnel have been moved to a safe area and perform notifications per the Response Notification Flowchart (Appendix D). Document all communications using the appropriate forms contained in Appendix E. Once outside agencies have been notified of a problem or potential problem, the Incident Commander or their designee is responsible for keeping local EMAs informed of any change in conditions. SCS Fossil Dam Safety will be responsible for preparing the after-action report.

6.2 Additional Considerations

All emergency phone calls should be recorded on the *Emergency Notification Log Sheet* contained in Appendix E.

All other communication shall be documented using the *Data Recording Sheet* located in Appendix E.

Once an emergency has been declared, a consistent message shall be developed and communicated to personnel on the Response Notification Flowchart.

7.0 RESOURCES AVAILABLE TO SUPPORT EMERGENCY RESPONSE EFFORTS

7.1 Alternative Sources of Power

There are no electrically-powered gates or other equipment used for operating either dam. A 5,000 watt emergency generator is available for use, if needed, during emergency operations.

7.2 Emergency Materials and Equipment

Materials

The following materials are stockpiled on site:

- GDOT washed #10 sand (10NS)
- # 57 stone
- # 89 stone
- GDOT Type 3 rip rap

These materials are protected by silt fencing or safety fencing and are labeled “**For Emergency Use Only.**” Appendix F contains the instructions for how to construct an emergency reverse filter.

Equipment

Equipment necessary to take corrective actions can be obtained from local rental / contractor companies.

8.0 PROVISIONS FOR ANNUAL COORDINATION

Annual coordination amongst representatives of Plant McDonough, GPC, SCS Fossil Dam Safety, and local EMAs will include a face-to-face meeting or exercise to review and, if needed, update the EAP. The EAP annual meeting or exercise will include the following:

- Calling all contacts on the notification charts in the EAP to verify that the phone numbers and persons in the specified positions are current. The EAP will be revised if any of the contacts have changed.
- Contacting Cobb County Local Emergency Planning Committee (LEPC) to verify the phone numbers and notify of any changes to the EAP. Updated copies of the EAP should be provided to the LEPC.
- SCS Fossil Dam Safety training plant personnel responsible for the maintenance of the dam and surrounding property in the use of this EAP and of basic dam inspection and safety principals.
- Confirming that the local resources are available.

APPENDIX A

Interim Closure Condition (November 2018 Site Aerial) Closed Condition Plan



Path: \\atlanta\cadd\Southern Company\1777449 EAP AP-4\Production\1 File Name: 2019 AERIAL.dwg

REFERENCES

1. IMAGE TAKEN FROM GOOGLE EARTH PRO ON MARCH 07, 2019. IMAGE DATED NOVEMBER 16, 2018.

© 2018

Google™

Source: Google Earth Pro 2018

IMAGE DATED: 11/16/2018
SUPPLIED BY AND SOURCED UNDER LICENCE
FROM GOOGLE EARTH PRO ON : 03/07/2019
IMAGE GEOREFERENCED BY GOLDER AND
INTENDED FOR INDICATIVE PURPOSES ONLY

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES



PROJECT
PLANT MCDONOUGH - ATKINSON
CCR UNIT AP- 3 / 4
EMERGENCY ACTION PLAN

TITLE
EXISTING CONDITIONS NOVEMBER 2018 SITE AERIAL

CONSULTANT	YYYY-MM-DD	2019/03/07
DESIGNED	GLH	
PREPARED	CCP	
CHECKED	GLH	
REVIEWED / APPROVED	WRS	



PROJECT NO.
1777449

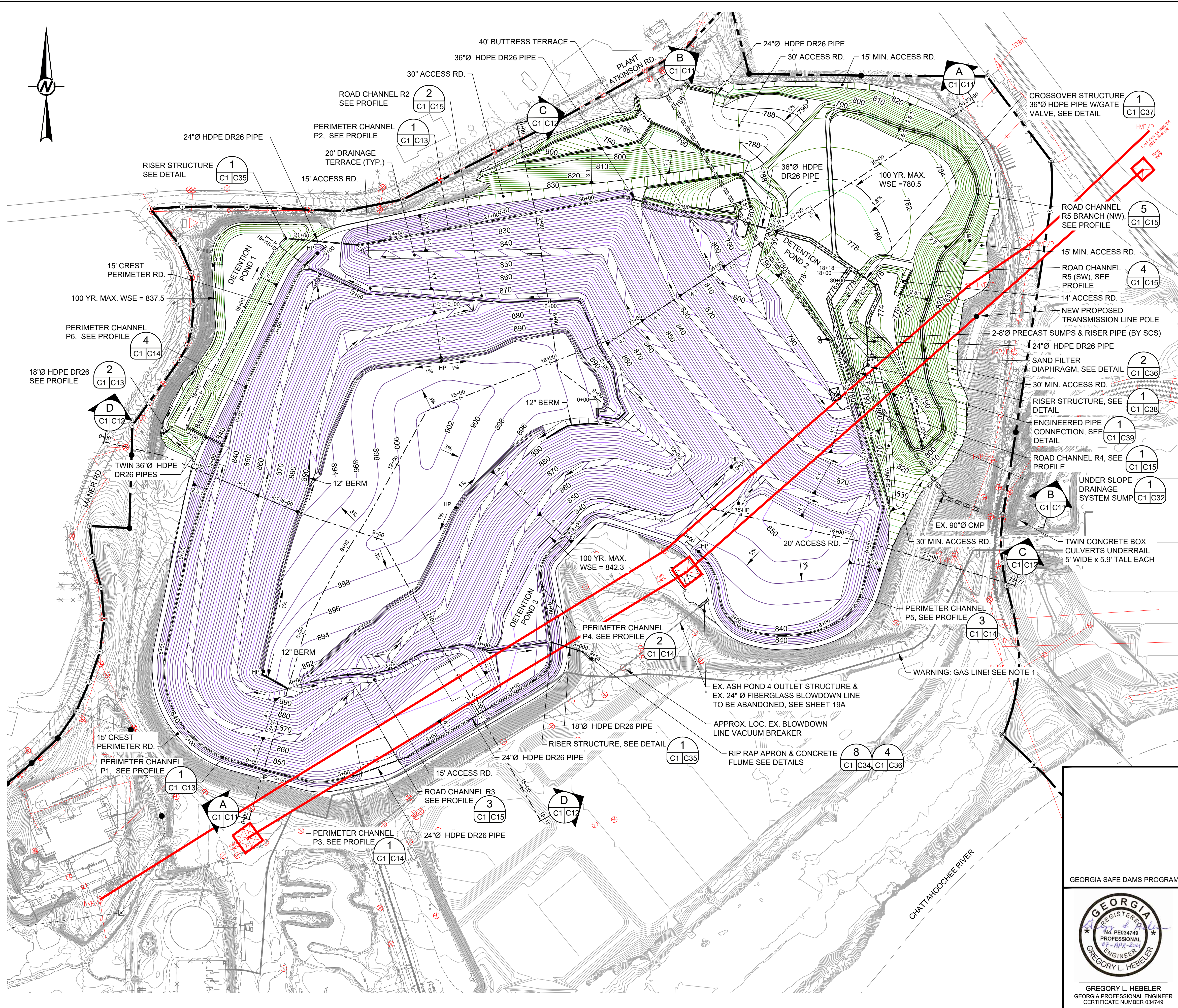
PROJECT ID
MCD15017

REV.
-

FIGURE
A.1

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A3S D

Path: \\atlantiacad\Southern Company\1225193 2015 Plant McDonough\PRODUCT\DESIGN\1 File Name: 1225193 CDP PLAN-SEC-DET.dwg



LEGEND

- EXISTING CONTOURS (SEE REFERENCE 1)
- PROPERTY BOUNDARY MARKERS/LIMITS
- 810 FINAL CLOSURE CONTOURS (SEE NOTE 2)
- 810 CLEAN CLOSURE CONTOURS
- EXISTING OVERHEAD ELECTRIC LINES IN ASH POND 3 & 4 AREA TO REMAIN & TO BE PROTECTED

REFERENCES

1. THE EXISTING TOPOGRAPHY AND CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEYING CO, INC. THE DATE OF THE SURVEY PROVIDED AND SHOWN ON THIS SET OF PLANS IS 10-16-2012. REFER TO THE SURVEY DRAWING TITLED "TOPOGRAPHIC MAP PREPARED FOR GEORGIA POWER COMPANY PLANT MCDONOUGH - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF PHOTOGRAPHY 10-26-12. PROJECT NO. 13225 - 01-13-2013."
2. THE REVISED TOPOGRAPHY & CONTOUR ELEVATIONS WERE PROVIDED BY GEORGIA POWER LAND DEPARTMENT. THE DATA SHOWN IS AN UPDATE TO THE PLANS DONE ON 10-16-2012 & THE ONSITE CHANGES SINCE THAT 2012 SURVEY. THE REVISED SURVEY WAS DONE ON 1-12-2016 & MERGED WITH THE DATA ON 10-16-2012.
3. GEORGIA POWER COMPANY PLANT MCDONOUGH ASH PONDS - GEORGIA STATE PLANE WEST SURVEY FEET - DATE OF SURVEY 1-12-2016 - LAND ENG. PROJECT # 20160020.

NOTES

1. 24 INCH DIAMETER NATURAL GAS FEED FOR POWER PLANT RUNS WITHIN SOUTHERN PORTION OF EXISTING ASH POND 3 PERIMETER BERM. CONTRACTOR TO NOT WORK WITHIN 50 FEET OF THIS LINE WITHOUT NOTIFICATION OF AND APPROVAL OF OWNER.
2. FINAL CLOSURE CONTOURS (PURPLE) DELINEATE FINAL LIMITS OF ASH.
3. CLEAN CLOSURE CONTOURS (GREEN) DELINEATE AREAS WHERE ANY EXISTING ASH IS TO BE COMPLETELY REMOVED.
4. OUTLET STRUCTURE SHALL BE ISOLATED AND REMAIN ISOLATED FROM UNTREATED CCR CONTACT WATER THROUGHOUT CONSTRUCTION.
5. EXISTING AP-4 SPILLWAY OUTLET STRUCTURE TO BE DEMOLISHED AND COVERED WITH CLEAN FILL 3 FEET MINIMUM BELOW CLOSURE COVER SYSTEM. EXISTING BLOWDOWN LINE TO BE ABANDONED BY GROUTING TO THE BLOWDOWN VACUUM BREAK.

APRIL 2021 - ISSUED FOR
APPROVAL & CONSTRUCTION



△	04/2021	GLH	DETENTION POND 2 AREA GRADING REVISIONS	CRP	JDG	GLH
△	02/2021	GLH	DETENTION POND 2 AREA GRADING REVISIONS	CRP	JDG	GLH
△	12/2020	GLH	REVISED NORTH AND SOUTH ACB CHANNEL GRADING AND POND 3 LINER EXTENTS	AVR	LS/JDG	GLH
△	09/2020	GLH	REV. SUMP ALIGNMENT	RMS	LS	GLH
△	08/2020	GLH	REVISED SOUTH ACB CHANNEL AND POND 2 GRADING	AVR	LS	GLH
△	06/2019	GLH	ADD SUMPS BY SCS	RMS	HI	GLH
△	01/2019	GLH	REV. BORROW AREA & POND 2 GRADES	RMS	JKM	GLH
△	09/2017	GLH	LOWER DAM & TOP DECK	RMS	JKM	GLH
△	01/2017	GLH	LOWER DAM, REV. PONDS 1 & 2	RMS	WRS	WRS
REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RWW

CLIENT
GEORGIA POWER COMPANY /
SOUTHERN COMPANY SERVICES



PROJECT
PLANT MCDONOUGH
ASH POND NO. 3 & 4 CLOSURE PLAN

TITLE
FINAL COVER GRADING PLAN

CONSULTANT	YYYY-MM-DD	2016/01/21
DESIGNED	GLH	
PREPARED	RMS	
REVIEWED	WRS	
APPROVED	WRS	



PROJECT NO. 1539180 PROJECT ID MCD15017 REV. 9 SHEET C1

GEORGIA SAFE DAMS PROGRAM



GREGORY L. HEBEL
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

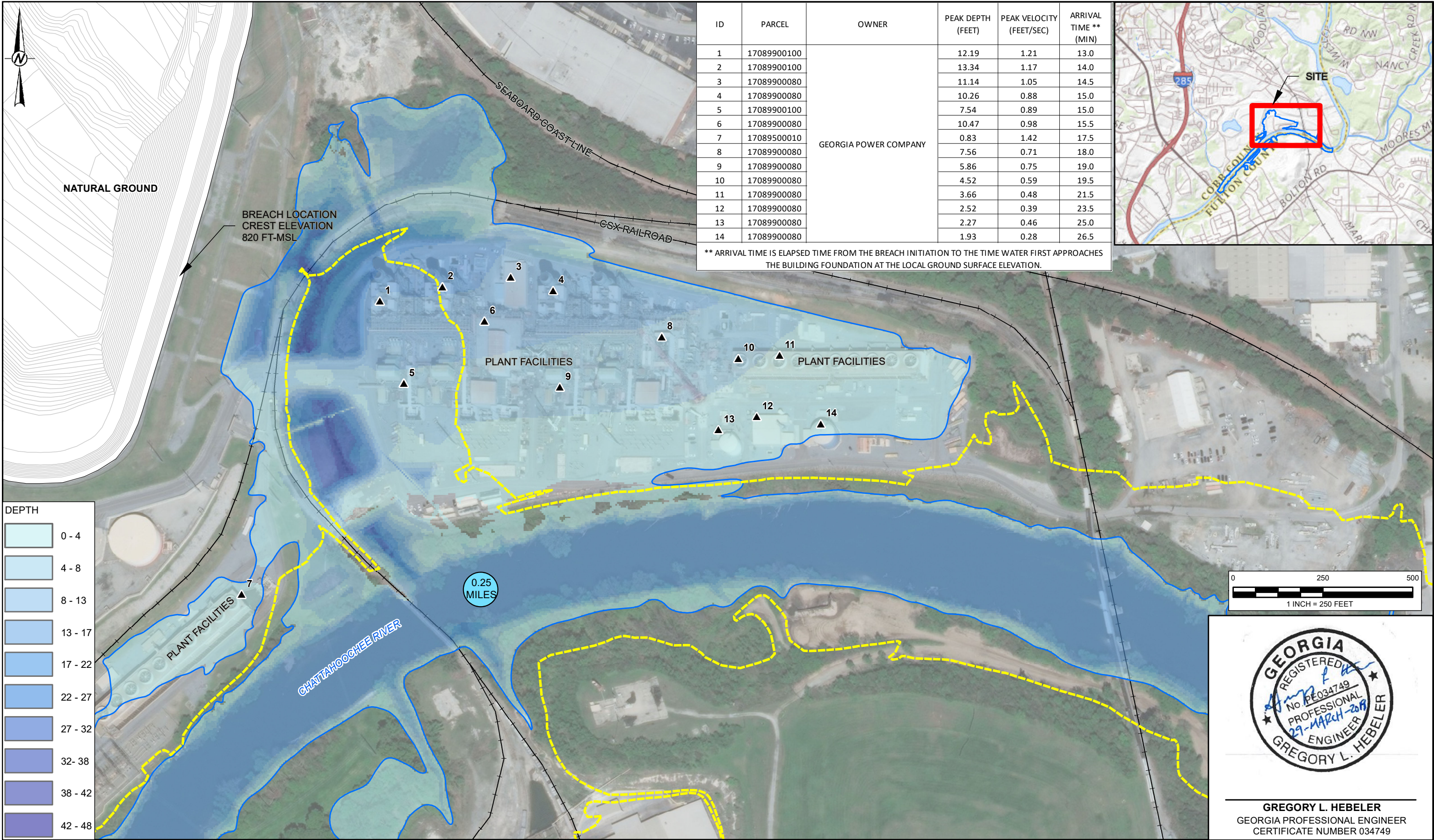
1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI D

APPENDIX B

Inundation Maps:

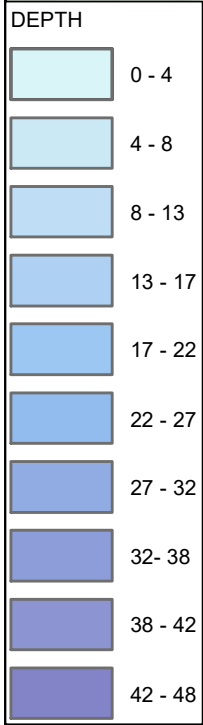
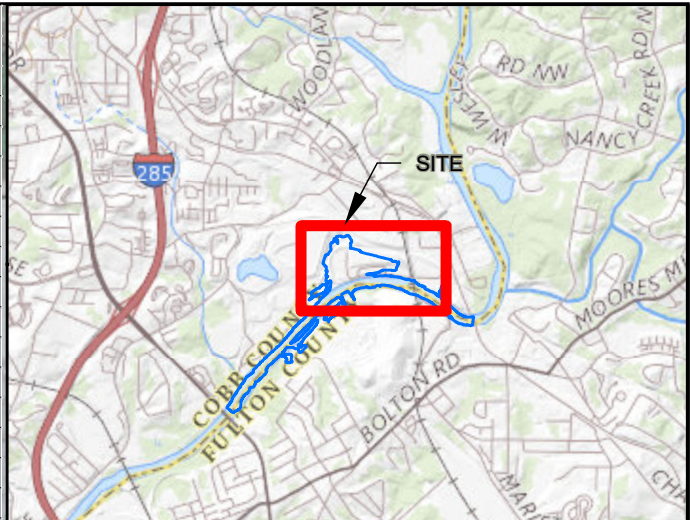
B.1 and B.2 Interim Closure Condition

B.3 and B.4 Closed Condition



ID	PARCEL	OWNER	PEAK DEPTH (FEET)	PEAK VELOCITY (FEET/SEC)	ARRIVAL TIME ** (MIN)
1	17089900100	GEORGIA POWER COMPANY	12.19	1.21	13.0
2	17089900100		13.34	1.17	14.0
3	17089900080		11.14	1.05	14.5
4	17089900080		10.26	0.88	15.0
5	17089900100		7.54	0.89	15.0
6	17089900080		10.47	0.98	15.5
7	17089500010		0.83	1.42	17.5
8	17089900080		7.56	0.71	18.0
9	17089900080		5.86	0.75	19.0
10	17089900080		4.52	0.59	19.5
11	17089900080		3.66	0.48	21.5
12	17089900080		2.52	0.39	23.5
13	17089900080		2.27	0.46	25.0
14	17089900080		1.93	0.28	26.5

** ARRIVAL TIME IS ELAPSED TIME FROM THE BREACH INITIATION TO THE TIME WATER FIRST APPROACHES THE BUILDING FOUNDATION AT THE LOCAL GROUND SURFACE ELEVATION.



- LEGEND
- ▲ IMPACTED STRUCTURES
 - FEMA ZONE AE FLOODPLAIN
 - INUNDATION ZONE-820 FT-MSL

NOTES

INUNDATION EXTENTS ESTIMATED USING USACE 2D HECRAS VERSION 5.0.6 ASSUMING SUNNY DAY BREACH CONDITIONS AND INITIAL WATER SURFACE ELEVATION OF 820 FT-MSL, BREACH FORMATION TIME OF 22 MINUTES, AND BREACH WIDTH OF 59 FEET. THE ACTUAL BREACH INUNDATION ZONE MAY VARY FROM THAT SHOWN AND BE DEPENDENT ON THE HYDROLOGIC AND BREACH CONDITIONS AT THE TIME OF FAILURE. ELEVATION DATA UTILIZES COBB COUNTY AND SCS PROCURED LIDAR DATA.

CLIENT
GEORGIA POWER COMPANY/
SOUTHERN COMPANY SERVICES



DATE 2019-03-08
PREPARED JRJ
REVIEW JDG
APPROVED GLH

PROJECT
PLANT MCDONOUGH-ATKINSON
CCR UNIT AP- 3/4 BREACH ANALYSIS
TITLE
EAST DAM BREACH
INUNDATION MAP
PROJECT No. 1777449
CONTROL
Rev. 0

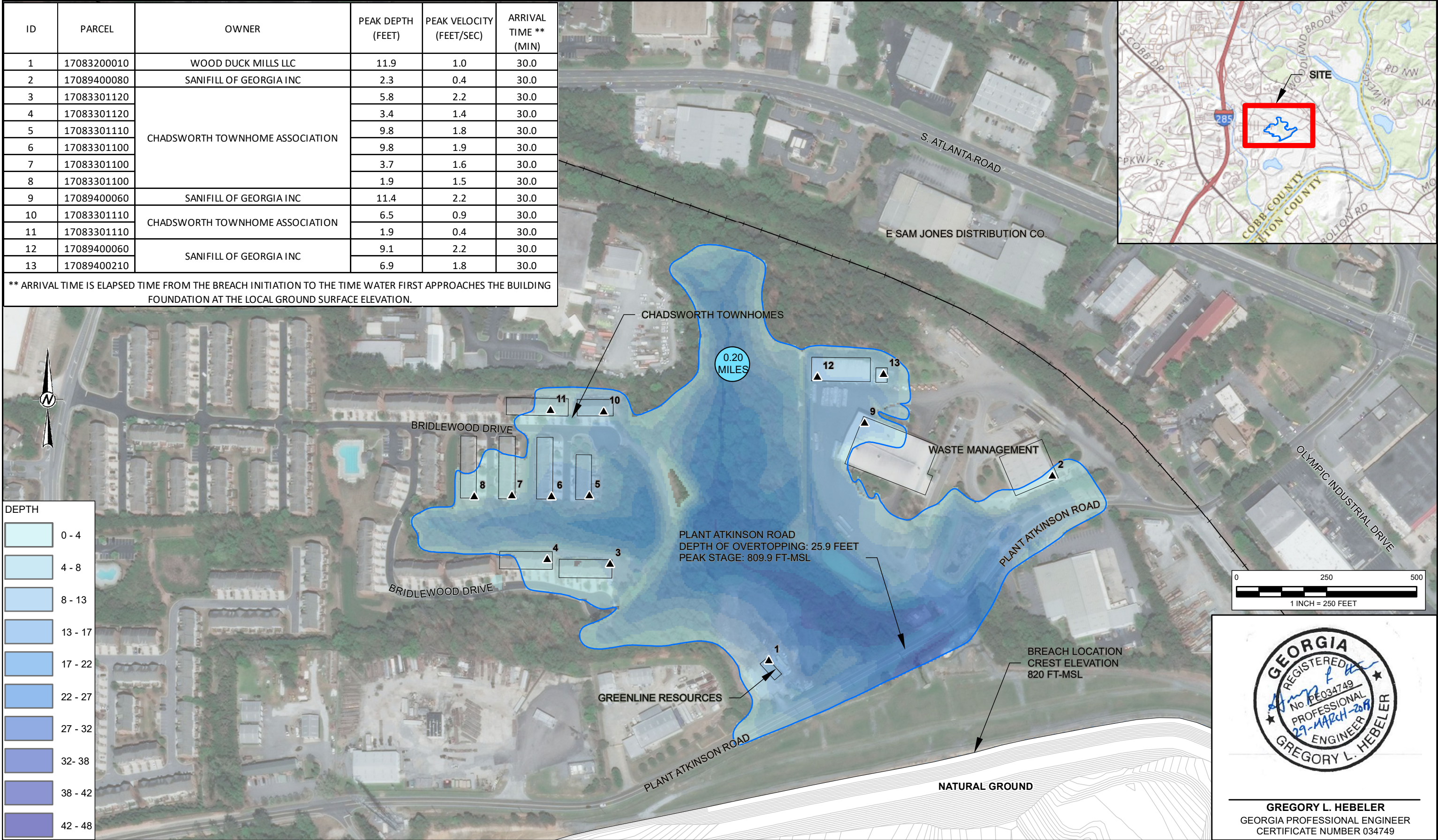


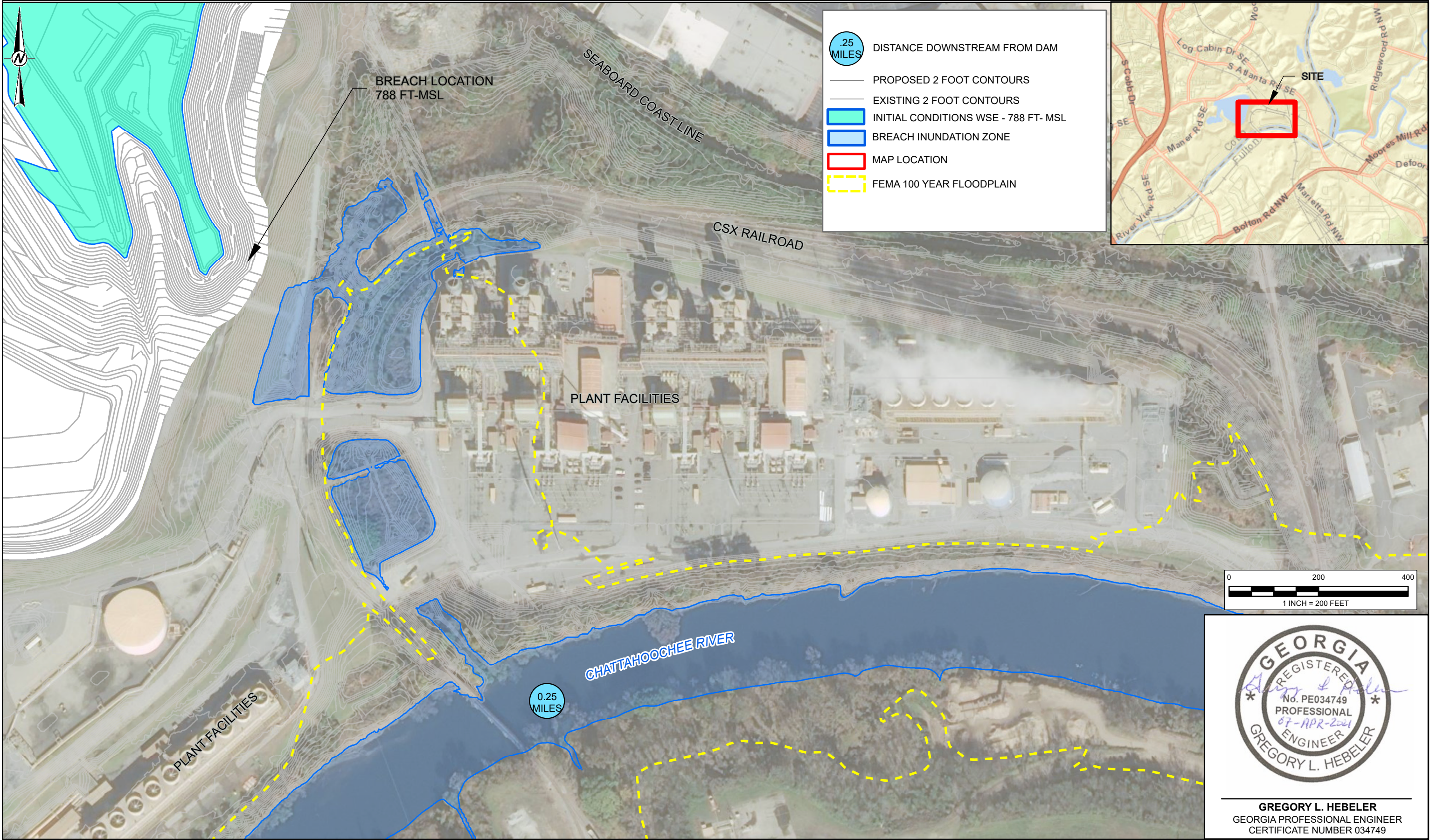
GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

FIGURE
B1

ID	PARCEL	OWNER	PEAK DEPTH (FEET)	PEAK VELOCITY (FEET/SEC)	ARRIVAL TIME ** (MIN)
1	17083200010	WOOD DUCK MILLS LLC	11.9	1.0	30.0
2	17089400080	SANIFILL OF GEORGIA INC	2.3	0.4	30.0
3	17083301120	CHADSWORTH TOWNHOME ASSOCIATION	5.8	2.2	30.0
4	17083301120		3.4	1.4	30.0
5	17083301110		9.8	1.8	30.0
6	17083301100		9.8	1.9	30.0
7	17083301100		3.7	1.6	30.0
8	17083301100		1.9	1.5	30.0
9	17089400060	SANIFILL OF GEORGIA INC	11.4	2.2	30.0
10	17083301110	CHADSWORTH TOWNHOME ASSOCIATION	6.5	0.9	30.0
11	17083301110		1.9	0.4	30.0
12	17089400060	SANIFILL OF GEORGIA INC	9.1	2.2	30.0
13	17089400210		6.9	1.8	30.0

** ARRIVAL TIME IS ELAPSED TIME FROM THE BREACH INITIATION TO THE TIME WATER FIRST APPROACHES THE BUILDING FOUNDATION AT THE LOCAL GROUND SURFACE ELEVATION.





REFERENCES
1. EXISTING TOPOGRAPHY AND CONTOUR ELEVATIONS PROVIDED BY GEORGIA LAND DEPARTMENT AND METRO ENGINEERING AND SURVEY CO. 10-16-2012
2. PROPOSED CLOSURE DESIGN TOPOGRAPHY GENERATED FROM GOLDR DESIGN GRADES

NOTES
THE METHOD USED TO DEVELOP THE INUNDATION ZONE IS APPROXIMATE AND SHOULD BE USED AS GUIDANCE FOR ESTABLISHING EVACUATION ZONES. BREACH BOTTOM WIDTH WAS TAKEN AS TWO TIMES THE HEIGHT OF THE DAM AND TIME TO BREACH FORMATION WAS TAKEN TO BE 0.27 HOURS IN ACCORDANCE WITH GA SAFE DAMS STANDARDS. ACTUAL AREAS INUNDATED WILL DEPEND ON FAILURE AND PRE-FAILURE HYDROLOGIC CONDITIONS AND MAY DIFFER SIGNIFICANTLY FROM THE INFORMATION SHOWN ON THIS MAP.

CLIENT
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SOUTHERN COMPANY SERVICES



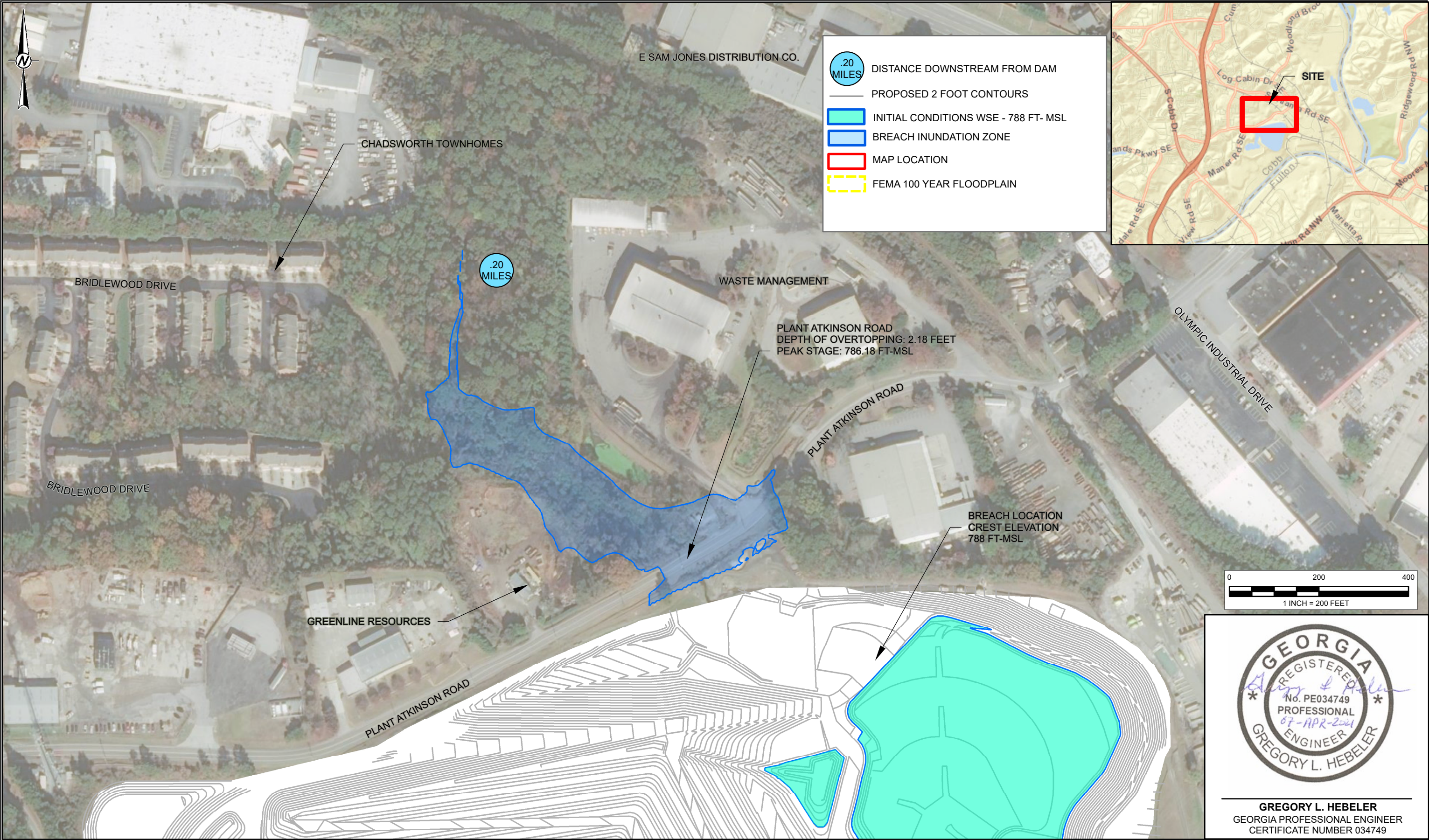
DATE 2021-03-29
PREPARED EC
REVIEW JDG
APPROVED GLH

PROJECT
PLANT MCDONOUGH-ATKINSON
CCR UNIT AP- 1 BREACH ANALYSIS
TITLE
**EAST DAM BREACH
INUNDATION MAP**

PROJECT No. 1539180 CONTROL Rev. 1 FIGURE B3



GREGORY L. HEBEL
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749



REFERENCES
1. EXISTING TOPOGRAPHY AND CONTOUR ELEVATIONS PROVIDED BY COBB COUNTY LIDAR.
2. PROPOSED CLOSURE DESIGN TOPOGRAPHY GENERATED FROM GOLDER DESIGN GRADES

NOTES
1. THE METHOD USED TO DEVELOP THE INUNDATION ZONE IS APPROXIMATE AND SHOULD BE USED AS GUIDANCE FOR ESTABLISHING EVACUATION ZONES. BREACH BOTTOM WIDTH WAS TAKEN AS 50 FEET AND TIME TO BREACH FORMATION WAS TAKEN TO BE 0.27 HOURS IN ACCORDANCE WITH GA SAFE DAMS STANDARDS. THE INITIAL STORED WATER ELEVATION IS TAKEN TO BE 788 FT-MSL (ELEVATION OF LOW POINT IN PROPOSED DAM GRADING). ACTUAL AREAS INUNDATED WILL DEPEND ON FAILURE AND PRE-FAILURE HYDROLOGIC CONDITIONS AND MAY DIFFER SIGNIFICANTLY FROM THE INFORMATION SHOWN ON THIS MAP.
2. THE NORTH BREACH CURRENTLY HAS NO MAPPED FLOODPLAIN AND IS DESIGNATED BY FEMA AS A ZONX AREA OF MINIMAL FLOOD HAZARD.

CLIENT
GEORGIA POWER COMPANY/
SOUTHERN COMPANY SERVICES



DATE 2021-03-29
PREPARED EC
REVIEW JDG
APPROVED GLH

PROJECT
PLANT MCDONOUGH-ATKINSON
CCR UNIT AP- 1 BREACH ANALYSIS
TITLE
**NORTH DAM BREACH
INUNDATION MAP**
PROJECT No. 1539180
CONTROL
Rev. 1

GREGORY L. HEBELER
GEORGIA PROFESSIONAL ENGINEER
CERTIFICATE NUMBER 034749

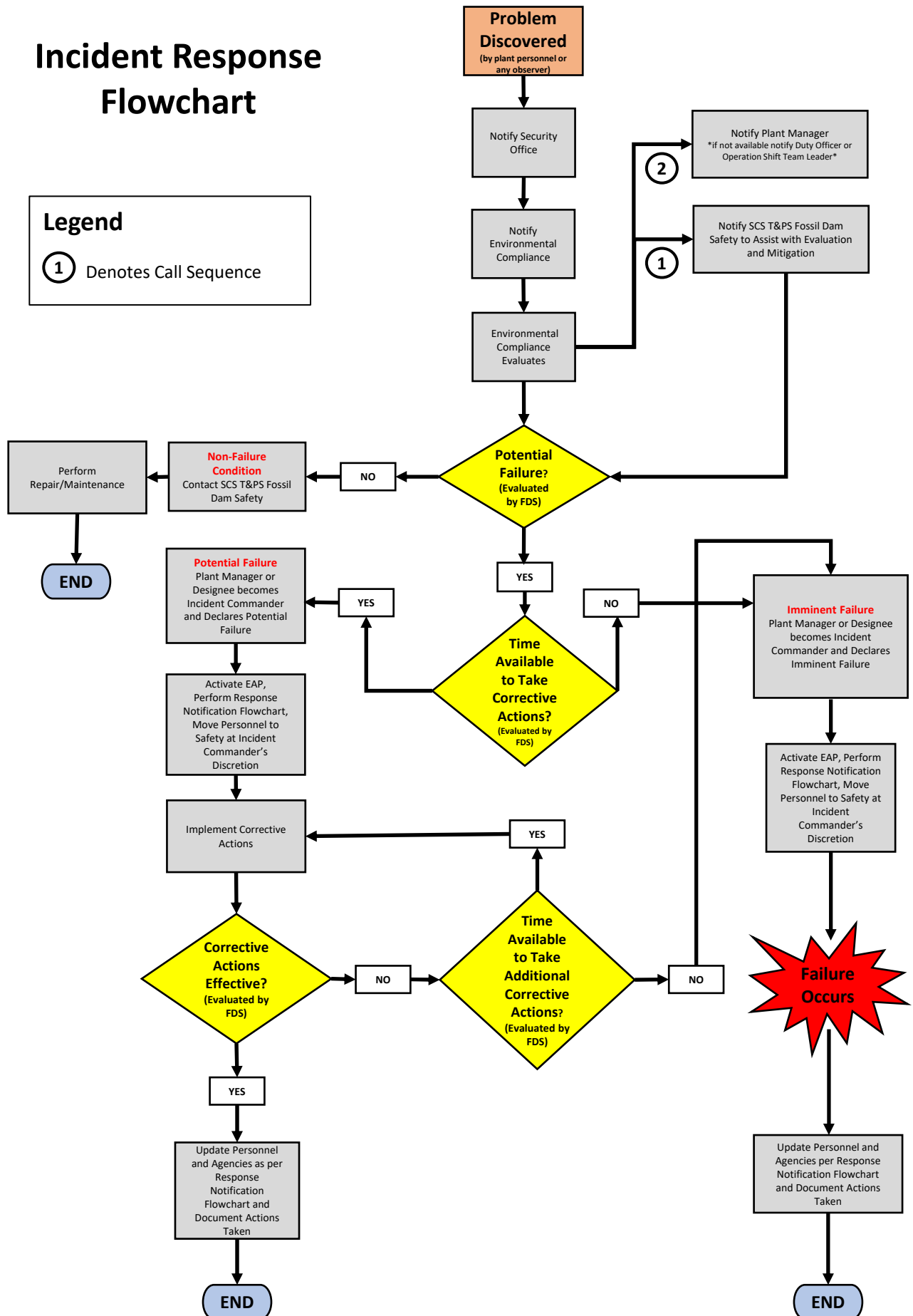
APPENDIX C

Incident Response Flowchart

Incident Response Flowchart

Legend

① Denotes Call Sequence

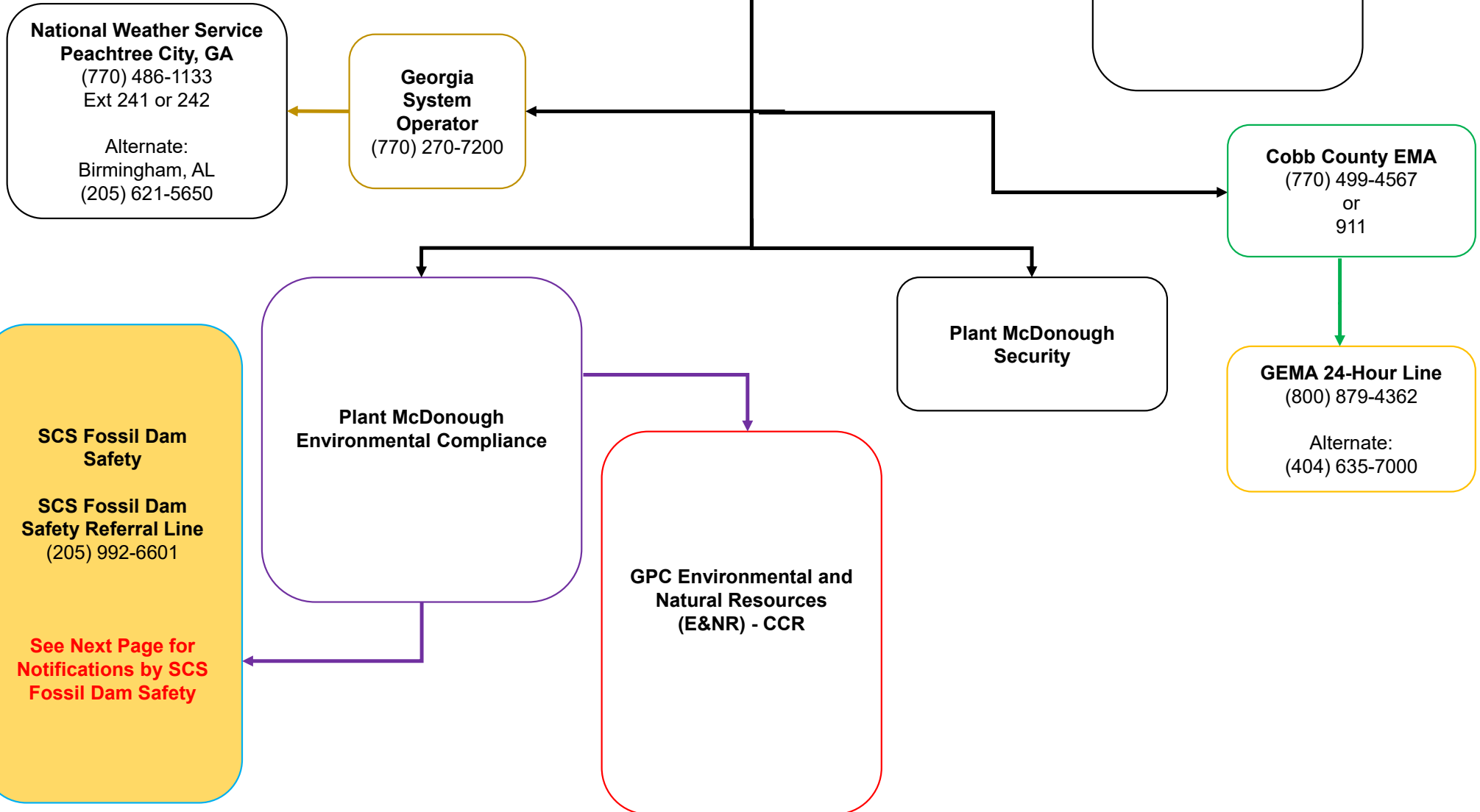
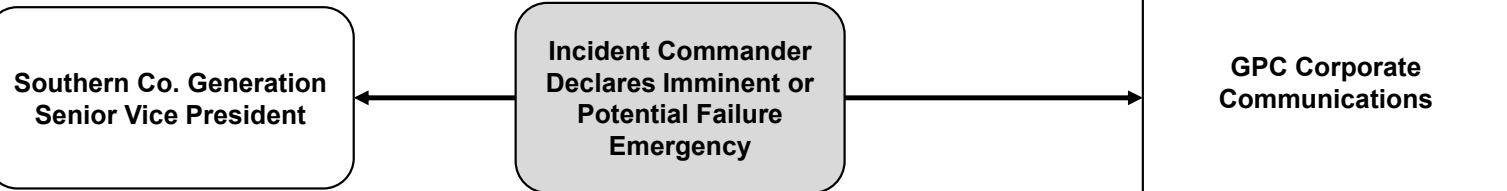


APPENDIX D

Response Notification Flowchart

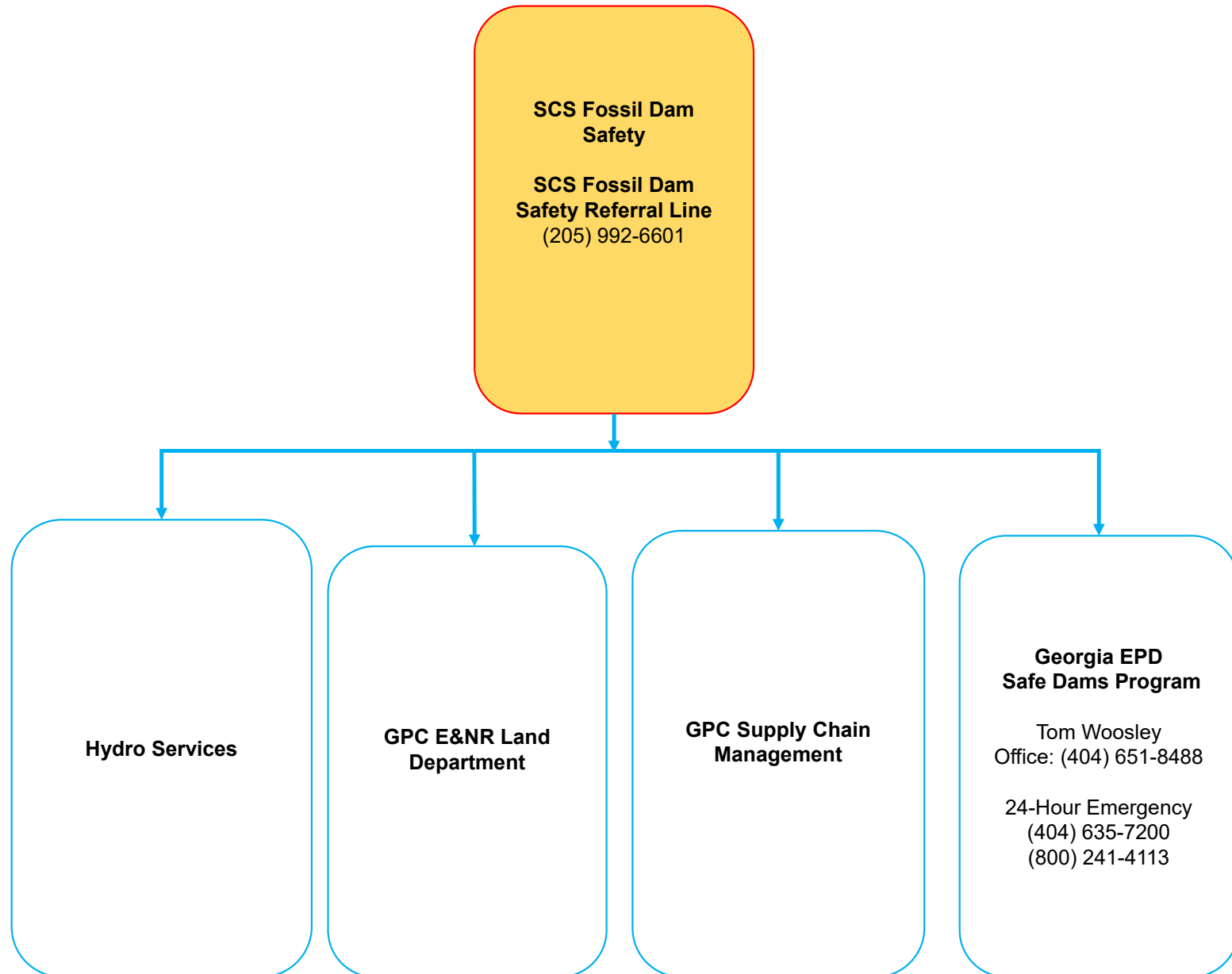
Response Notification Flowchart

Imminent Failure or Potential Failure Emergencies



Response Notification Flowchart

Imminent Failure or Potential Failure Emergencies
SCS Fossil Dam Safety Notifications



APPENDIX E

Emergency Notification Log Sheet
Data Recording Sheet
Post Incident Reporting Form

EMERGENCY ACTION PLAN

EMERGENCY NOTIFICATION LOG SHEET

The Emergency Notification Log Sheet is for use in an event of an emergency to document notifications. *Please refer to the Response Notification Flowchart for name and numbers of agencies / personnel to be contacted.* **All notifications must be documented.**

TO BE USED BY PLANT MANAGER / INCIDENT COMMANDER:

Agency Notified	Date	Time	Person Contacted	Contacted By	Comments
Security Office					
Plant Compliance & Support					
Southern Co. SVP					
GPC Corporate Communications					
Georgia System Operator					
Cobb County EMA					

TO BE USED BY SECURITY OFFICE:

Agency Notified	Date	Time	Person Contacted	Contacted By	Comments
GPC Corporate Security					
Local Law Enforcement					

EMERGENCY ACTION PLAN

EMERGENCY NOTIFICATION LOG SHEET

The Emergency Notification Log Sheet is for use in an event of an emergency to document notifications. *Please refer to the Response Notification Flowchart for name and numbers of agencies / personnel to be contacted.* **All notifications must be documented.**

TO BE USED BY PLANT COMPLIANCE AND SUPPORT:

Agency Notified	Date	Time	Person Contacted	Contacted By	Comments
SCS Fossil Dam Safety					
GPC Enviro. & Natural Resources- CCR					

TO BE USED BY GPC ENVIRONMENTAL & NATURAL RESOURCES:

Agency Notified	Date	Time	Person Contacted	Contacted By	Comments
GPC E & NR Civil Support					

TO BE USED BY SCS FOSSIL DAM SAFETY:

Agency Notified	Date	Time	Person Contacted	Contacted By	Comments
Hydro Services					
GPC E&NR Land Department					
Supply Chain Management					
GA Safe Dams Program					

EMERGENCY ACTION PLAN

DATA RECORDING SHEET

The Data Recording Sheet will be used to record important information relating to dam safety emergency.

Team Member(s): _____

Date of Incident: _____

Time of Incident: _____

Type of Emergency: _____

Emergency Coordinator: _____

Description of Events:* _____

What is Being Done:* _____

*Attach additional pages as necessary.

For incoming questions, refer all calls to:

Media Inquiries: Georgia Power Company Corporate Communications
See Response Notification Flowchart for phone numbers.

EMA Inquiries: Incident Commander/Emergency Coordinator

Environmental Agency Inquiries: GPC Environmental & Natural Resources

EMERGENCY ACTION PLAN POST INCIDENT REPORTING FORM

Dam State ID No.: 033-021-00165

Dam location: _____
(City) (County) (Stream/River)

Date: _____ Time: _____

Weather conditions: _____

General description of emergency situation:

Area(s) of dam affected (attach sketch/drawing):

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: _____

APPENDIX F

Instructions for the Construction of an Emergency Reverse Filter

EMERGENCY REVERSE FILTER CONSTRUCTION

The purpose of the reverse filter is to slow down the flow of water in order to reduce the ability of the water to carry soil particles. The size of the soil particle that a flow of water can carry is a function of the 3rd power of the velocity of the flow. The slower the velocity, the less soil the water can carry. The other function of the filter is to trap soil particles before they exit.

The usual components of a reverse filter are as follows:

-) GDOT washed #10 sand (10NS)
-) # 89 stone
-) # 57 stone
-) GDOT Type 3 rip rap

These materials should be stockpiled in a location where they can easily and quickly be moved to the seepage site. Two truckloads of each type of material should be stored in a convenient location that is out of the way. It is best if they are located so that a backhoe or front end loader can pick them up and transfer them directly to the seepage site. Transport schemes that require multiple vehicles and multiple operators are usually impossible to implement at night or on weekends. The stockpiles should be labeled “Granular Filter Stockpile – Emergency Use Only” to keep them from being appropriated for other purposes by those unaware of their purpose.

To build a reverse filter over a boil or area of concentrated seepage, follow the directions below. A cross section of the reverse filter construction is provided on the next page.

- 1) Clear loose material from around the site.
- 2) Place 6” of #10 washed sand over the area of concern, and extend it for at least 12” beyond the seepage limits.
- 3) Place 6” of #89 stone over the sand, and extend it for at least 6” beyond the sand.
- 4) Place 6” of #57 stone over the sand, and extend it for at least 6” beyond the #89 stone.
- 5) If necessary to stabilize the #57 stone, place rip rap on top of the #57 stone. Conditions that may make the rip rap necessary are anticipated surface flows that might wash away the filter or increasing seepage flows that may try to shift the lighter filter materials.

If the flow is too fast for the sand to remain in place, a layer of #57 stone or GDOT Type 3 rip rap may be placed over the boil to slow the flow down. This is followed by a layer of #89 stone, then the sand, and then the #89, #57 and rip rap in succession.

Sometimes a seep will pop out on the edge of a newly applied filter. In this case, it is generally necessary to apply the granular filter as a blanket to the general area rather than as a spot treatment. The layers are as described above but will cover a larger area.

Filter fabric or geotextile is not acceptable as a substitute for the sand. The fabric tends to smear and clog if applied in a wet situation.

CROSS SECTION OF A REVERSE FILTER OVER A SEEP OR BOIL

