

## **Winyah Generating Station, Emergency Action Plan for Unit 3&4 Slurry Pond**

### **Scope**

The purpose of this plan is to quickly notify affected individuals of an imminent or actual failure of the Winyah Unit 3&4 Slurry Pond and protect human life. It is intended to prioritize communications with affected homeowners and with emergency response agencies.

*Additional environmental reporting would still be required following [Santee Cooper BMP procedures](#).*

### **Introduction and Physical Description**

The Winyah station's Unit 3&4 Slurry Pond was commissioned in 1980 to manage wastewater and flue gas desulfurization residuals. It also manages wastewater and stormwater from the station's limestone handling and coal pile areas, and the capped West Ash Pond. The pond's perimeter dikes are 30 ft. in height, with dike slopes ranging from 2:1 (horizontal:vertical) to 3:1. Dike elevations are 38 feet (NGVD29) with a crest 15 ft. wide. The pond's total storage capacity is approximately 2,850 acre-feet, with about 8 acre-feet of slurry and water remaining in the pond. The pond treats water through gravity settling, with treated water being discharged to the Cooling Pond's discharge canal. The initial periodic hazard potential assessment was completed in 2016 and the WGS Unit 3&4 Slurry Pond received a High Hazard Potential classification due to the proximity of one residential structure. In the unlikely event of a failure of the Slurry Pond, the potential downstream impacts were modeled and are delineated in Attachment 1, with potential impacts to the nearby residential structure. The most likely cause of a safety emergency is an earthquake due to the proximate location of the Charleston seismic zone. To reduce risk of material being released in the event of a failure, the normal operating level of the pond was lowered to 19.6 ft. NGVD29, which is controlled by a floating pump station. A subsequent periodic hazard potential assessment was completed in 2021 with the WGS Unit 3&4 Slurry Pond again receiving a High Hazard Potential classification due to the proximity of one residential structure.

The Slurry Pond stopped accepting wastewater inflows and any solid waste as of April 11, 2021. This pond is currently undergoing closure by removal of CCR material in accordance with the Federal CCR Rule. The written Closure Plan prepared pursuant to §257.102(b) is posted to the Operating Record and on the [publicly available website](#).

## **Preparedness**

- Perform both weekly (within every 7 days) and annual BMP inspections as described in the Federal CCR Rule.
- Sign up for USGS earthquake notification with magnitude 5.0 or greater in coastal South Carolina near Winyah – WGS Station Manager and Control Room, WGS Station Superintendents, Generation Services Manager, Generation Technical Services (GTS) Superintendent and Environmental Engineer, Waste Management Manager (or equivalent), Civil Projects Supervisor, and Spill Hotline (who will assist in notification and reporting only).
- Include the WGS Control Room on the ECC notification list for a seismic trigger at the Santee Spillway.
- Annual evaluation, to include:
  - Annual meeting with local emergency responders following the Santee Cooper Verification Plan (Attachment 2) and update contact names and telephone numbers as necessary.
  - Annual review of homeowner safety plan with homeowner to update contact names and telephone numbers as necessary (Attachment 3).
  - Annual check of inundation area by Santee Cooper and local emergency preparedness officials (if available) to ensure no other buildings are in the inundation area and, if so, obtain contact names and telephone numbers as necessary.

## **Strategy**

- Immediately upon (1) feeling tremors at the station site, (2) receiving USGS notification of a triggering event (magnitude 5.0 or greater) or similar notification from the Santee Spillway, or (3) identifying a serious structural issue during a routine inspection
  - Activate the verification plan (Attachment 2)
  - Initiate immediate inspection by trained personnel (likely WGS Bulk Materials personnel and/or Shift Supervisors) to determine if a failure or impending failure has occurred
  - If a failure is imminent or has occurred, activate the Emergency Action Plan (Attachment 2) which includes immediately notifying the homeowner and, if assistance is needed, calling 911
  - If a failure or impending failure has not occurred, verify the situation is safe and notify the station manager or designee, the homeowner and Generation Technical Services
    - GTS will consult with a trained Professional Engineer to determine if a follow up inspection is required
    - Stakeholders will be informed of the results of the follow up inspection, if performed, and provided a copy of the final report within 24 hours of its completion

**Revision and Distribution Requirements**

Following the requirements of 40 CFR 257.73(a)(3), this plan must be evaluated every five years and revised as necessary. The plan’s contact information and process will be reviewed annually as part of the annual evaluation and updated if appropriate. Changes in hazard potential, etc. will be evaluated on an on-going basis, but at least as part of the quinquennial review (including hazard potential classification, structural stability evaluation by a third party, and safety factor assessments). Updated plans will be posted on the CCR website online and distributed to each individual/office included on the notification list (Attachment 4). This plan was based on the initial versions of this periodic, quinquennial review, published in fall 2016 as well as the subsequent review performed in 2021 that retained the same hazard classification.

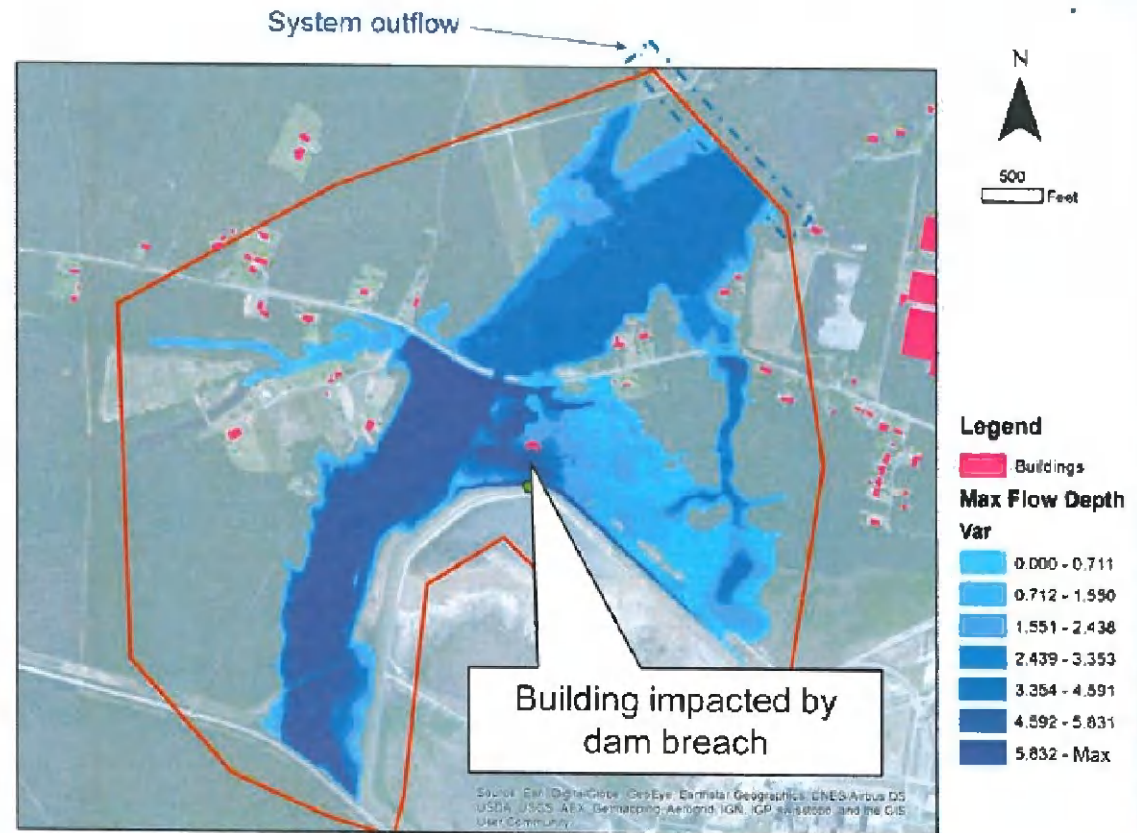
**Certification**

This Emergency Action Plan meets the requirements of 40 CFR 257.73(a)(3).

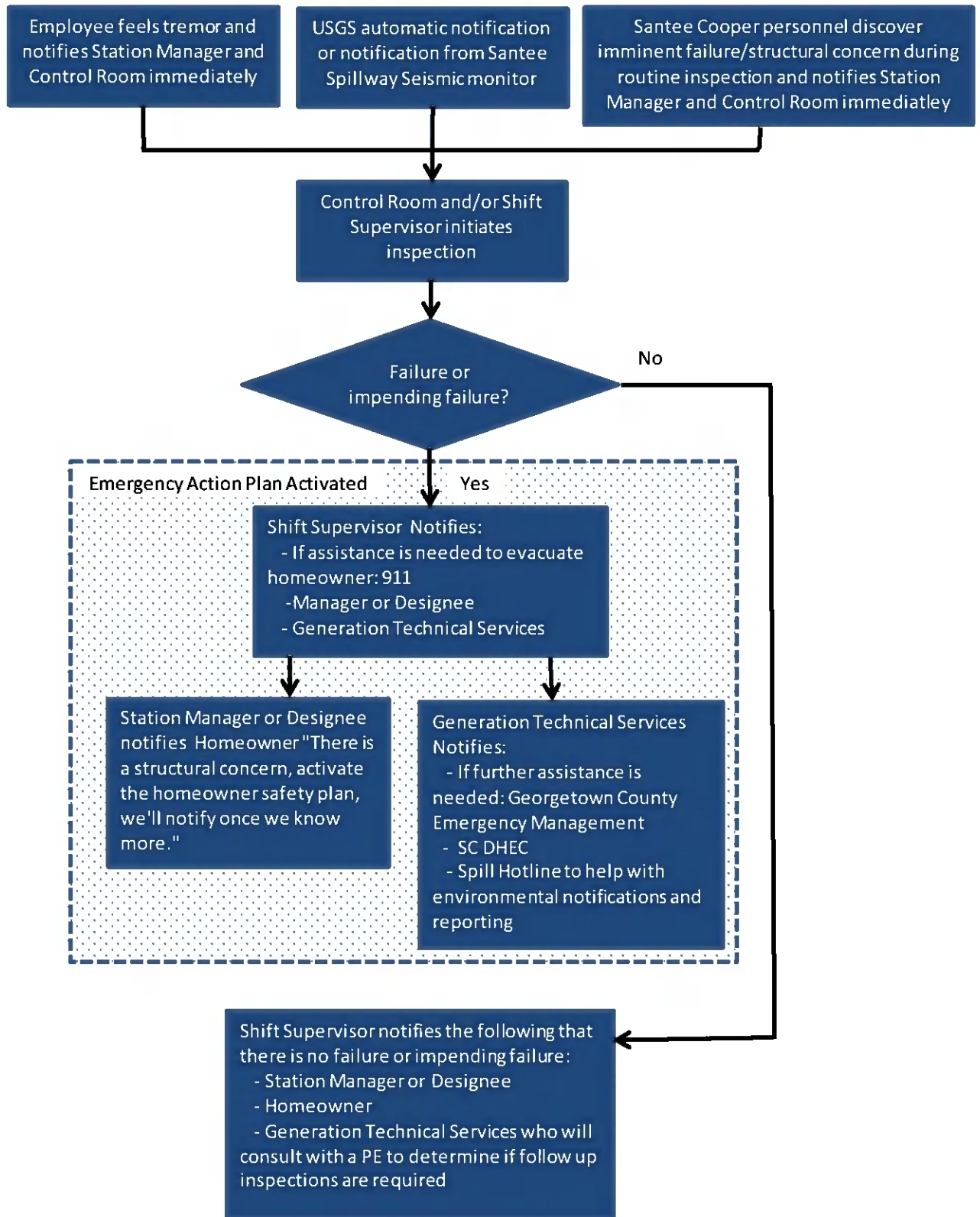
<i>Charles J. Corrigan III</i>	5/17/2022
Chip Corrigan, P.E.	Date
#31512, South Carolina	

# 10-foot Grid Cell FLO-2D Results

- Inundation Area
  - Pennyroyal Creek
  - 1 Building Impacted
- Max Depth
  - Approx. 15.3 feet
- Max Velocity
  - Approx. 21.2 fps



**Attachment 2: Verification plan**



**\*\*\*Contact numbers listed in Attachment 4!!!\*\*\***

### Attachment 3: Homeowner Safety Plan.

Santee Cooper has determined that your home could be affected by water and material from one of our wastewater ponds in the event of a structural failure. The most likely failure scenario is a serious earthquake, such as the Charleston earthquake of 1886.

In the event that you are notified of a failure or impending failure of the Winyah Unit 3&4 Slurry Pond, immediately retreat to the second floor of your home. If you are notified while you are not at home, we suggest you remain where you are until you receive further word from Winyah station personnel.

- In the event that Santee Cooper detects or is notified of an earthquake resulting in a failure or impending failure, we will immediately call to provide notice to you. Santee Cooper will also notify you if, after a routine inspection, we observe a serious structural problem at the impoundment that results in a failure or impending failure. Upon receiving such a call, you should immediately retreat to the second floor of your home.
- Concurrently, Santee Cooper will notify local emergency responders to be on-notice should evacuation be necessary, and we will dispatch trained inspectors to the pond to look for signs of damage.
- Upon completion of the inspection, you will be contacted again and informed of the results of the inspection.
  - If an emergency situation *is* detected, we will immediately contact you and local emergency response personnel.
  - If an emergency situation *is not* present, we will immediately contact you with further information and guidance. We will also consult with a trained Professional Engineer to determine if a follow up inspection is needed. You will be kept informed of the results of this follow up inspection and provided a copy of this report within 24 hours of its completion.

**Attachment 4. Notification Telephone Numbers and Plan Distribution List.**

**Winyah Station Manager**

**Darla Barnette**

- o) (843) 761-8000, ext. 2402
- c)

**Santee Cooper employees' cell phone numbers to be redacted for online posting in this section.**

**Winyah Control Rooms**

- 1&2) (843) 761-8000, ext. 2428
- 3&4) (843) 761-8000, ext. 2444

**Generation Services Manager**

Matt McCants

- o) (843) 761-8000, ext. 5158
- c)

**Generation Technical Services Superintendent**

Domenic Ciccolella

- o) (843) 761-8000, ext. 7078
- c)

**Generation Technical Services Environmental Engineer**

Chip Corrigan

- o) (843) 761-8000, ext. 5855
- c)

**Georgetown County Emergency Management – to be contacted after calling 911, if needed**

Primary) (843) 545-3273

Secondary) (843) 461-7055

**SCDHEC**

Emergency, SCDHEC's Emergency Response Number: (888) 481-0125

Other, SCDHEC Director of Water Facilities Permitting, Bureau of Water: (803) 898-4157

***Homeowner Contact Information:  
Emergency Use Only, Not For Publication Online!!!***

**Homeowner [Private]:**

- h)
- c)

Address:

**Names, addresses, and telephone numbers to be redacted for online posting in this section.**

<b>Revision Date</b>	<b>Description</b>	<b>Prepared by</b>
	Original	Generation Technical Services
03/02/2018	General revision/review	Generation Technical Services
04/24/2019	Update contact information and physical description of the pond, add calling 911 to the verification plan	Generation Technical Services
04/15/2020	Update contact information	Generation Technical Services
05/25/2021	Update contact information	Generation Technical Services
05/17/2022	Minor plan updates: <ul style="list-style-type: none"> <li>• 2021 Quinquennial Hazard Potential Classification update</li> <li>• 2021 Notice of intent to close CCR unit update</li> <li>• Update contact information</li> </ul>	Generation Technical Services