

UPDATED INFLOW DESIGN FLOOD CONTROL SYSTEM PLAN
PLANT GASTON ASH POND
ALABAMA POWER COMPANY

Section 257.82 of EPA's regulations requires the owner or operator of an existing or new CCR surface impoundment or any lateral expansion of a CCR surface impoundment to design, construct, operate and maintain an inflow design flood control system capable of safely managing flow during and following the peak discharge of the specified inflow design flood. The owner or operator also has to prepare a written plan documenting how the inflow flood control system has been designed and constructed to meet the requirements of this section of the rule.

The existing CCR surface impoundment referred to as the Plant Gaston Ash Pond is located at Alabama Power Company's Plant Gaston. The inflow design flood consists of the rainfall that falls within the limits of the surface impoundment, runoff from approximately 47 acres of adjoining watershed, and a nominal amount (relative to rainfall) of process flows. Stormwater is temporarily stored within the limits of the surface impoundment and discharged through an outlet structure consisting of an 8-foot concrete riser connected to a 36-inch diameter concrete spillway pipe.

The inflow design flood has been calculated using the Natural Resources Conservation Service method (also known as the Soil Conservation Service (SCS) method) using the PMF storm event required for a High hazard potential facility. Runoff curve number data was determined using Table 2-2A from the Urban Hydrology for Small Watersheds (TR-55). Appendix A and B from the TR-55 were used to determine the rainfall distribution methodology. Precipitation values were determined from NOAA's Precipitation Frequency Data Server (Atlas-14).

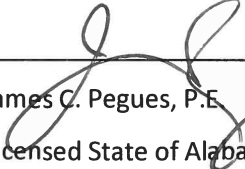
The NRCS provided information on the soil characteristics and hydrologic groups present at the site. It was determined that the hydrological group "B" should be used to best reflect the characteristics of the soils on site. This information was placed into Hydraflow Hydrographs 2013 and used to generate appropriate precipitation curves, storm basin routing information, and resulting rating curves to evaluate surface impoundment capacity.

Initial calculations indicated the unit exhibited a risk of overtopping a portion of the embankment located along the southeastern section of the surface impoundment near the primary spillway structure

during the inflow design storm. This section of the impoundment embankment has been modified through grading and the installation of an articulated concrete block armament system to allow it to operate as an auxiliary spillway during the design storm. The impoundment has sufficient spillway and storage capacity to adequately manage flow during and following the peak discharge from the design storm event.

The facility is operated subject to and in accordance with § 257.3-3 of EPA's regulations.

I hereby certify that the inflow design flood control system plan meets the requirements of 40 C.F.R. Part 257.82.


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