

UPDATED INFLOW DESIGN FLOOD CONTROL SYSTEM PLAN
PLANT BARRY 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 Barry Ash Pond is located at Alabama Power Company's Plant Barry. The facility consists of a CCR storage area. The inflow design flood consists primarily of the rainfall that falls within the limits of the surface impoundment, along with a nominal amount (relative to the rainfall) of process flows. Stormwater is temporarily stored within the limits of the surface impoundment and discharged through a 54-inch CMP outlet pipe that is accessed via a four sided concrete outfall structure. The CMP pipe has been lined to yield an effective inner diameter of 51-inches.

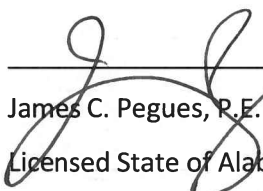
The inflow design flood has been calculated using the Natural Resources Conservation Service method (also known as the Soil Conservation Service (SCS) method) using the 1000-yr storm event required for a Significant hazard potential facility. Runoff curve number data was determined using Table 2-2A from 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 "C" and "D" 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 on the south end of the surface impoundment during the inflow design storm. This south dike has been raised through the placement of compacted fill, and will now provide the needed storage capacity without overtopping.

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.


James C. Pegues, P.E.

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