



27 October 2021

Mr. Michael Malone
CPS Energy
500 McCullough Avenue
San Antonio, Texas 78215

Project No: 0352436
Subject: Inflow Design Flood Control Plan – 5-Year Update
Calaveras Power Station
San Antonio, Texas

Dear Mr. Malone:

Environmental Resources Management Southwest, Inc. (ERM) is pleased to provide this Inflow Design Flood Control System Plan (IDFCSP) for the Calaveras Power Station to assist CPS Energy in complying with Title 40, Code of Federal Regulations, Part 257 (40 CFR §257) [aka. the Coal Combustion Residual (CCR) Rule]. This IDFCSP is the 5-year update required under 40 CFR §257.82 Hydrologic and Hydraulic Capacity Requirements for CCR Surface Impoundments.

CPS Energy owns and operates the Calaveras Power Station, which is located in unincorporated Bexar County, Texas, approximately 13 miles southeast of San Antonio. Currently, CPS Energy operates the following two CCR surface impoundments at the Power Station:

- Sludge Recycle Holding (SRH) Pond (separated into the north pond and south pond by a concrete dividing wall); and
- Evaporation Pond (EP).

CPS Energy formerly operated two CCR surface impoundments at the Power Station:

- North Bottom Ash Pond (BAP); and
- South BAP.

The J.T. Deely Power Plant, located at the Calaveras Power Station, ceased operation at the end of December 2018 and sluiced bottom ash has not been received at the BAPs since that time.

All the surface impoundments are constructed as elevated diked structures. The SRH Pond, located adjacent to the Power Plants, receives CCR and non-CCR flows from various sources within the J.K. Spruce Plant and all flows are co-mingled in the SRH Pond. The SRH Pond shares a common embankment with the North and South BAPs. The EP, located approximately a mile north of the Power Plants, currently receives non-CCR flows (industrial wastestreams) that are trucked to the EP from the J.K. Spruce Plant and from other CPS Energy power

generation facilities. While these flows are not considered CCR, the EP was originally constructed as a fly ash landfill in 1990, and then converted to a fly ash impoundment in 1996.

The North and South BAPs share a common embankment that separates the BAPs, and are immediately east and share an embankment with the SRH Pond. The BAPs have been dewatered and are currently undergoing closure.

40 CFR §257.82(a)(3) requires that CCR surface impoundments with a low hazard potential be designed for a 1-percent annual chance of exceedance flood (average return frequency of no less than once in 100 years) and that CCR surface impoundments with a significant hazard potential be designed for the 0.1-percent annual chance of exceedance flood (average return frequency of no less than once in 1,000 years). The EP is classified as a low hazard impoundment and the SRH Pond is classified as a significant hazard impoundment due to possible failure damaging the power plant infrastructure, operations and utilities. The BAPs were classified as significant hazard impoundments due to possible failure damaging the power plant infrastructure, operations and utilities; however, since the BAPs have been dewatered, that classification is not applicable.

Because the surface impoundments are elevated diked structures, the drainage area for the units is limited to the area that receives direct rainfall within the interior footprint of the units. Storm water that falls into a portion of the Power Station; however, is also pumped into the SRH Pond. The 100-year, 24-hour design storm rainfall for the area is approximately 11.4 inches, according to the National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 11: Precipitation-Frequency Atlas of the United States and obtained from the Precipitation Frequency Data Server (PFDS). The estimated 1,000-year, 24-hour storm event for the area is approximately 19.3 inches.

The inflow design flood control system for any significant hazard impoundment includes maintaining a minimum 24-inch freeboard during dry weather. This is the standard operating condition for the SRH Pond. In the event of a major rain event, plant personnel will monitor water levels in the SRH Pond. If freeboard is reduced to 20 inches, storm water pumps feeding the SRH Pond from other portions of the Power Station will be shut down. This remaining freeboard will be sufficient to handle excess storm water from the 1,000-year storm rainfall. Note that the design rainfall for the 1,000-year, 24-hour storm is 19.3 inches. The above procedure presumes that a rainfall event is already partially complete by the time the freeboard reaches 19.3 inches (the total rainfall for a 1,000-year, 24-hour event), therefore the 20-inch freeboard threshold for pump shutdown is conservative.

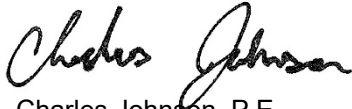
Note 1: The SRH Pond had two concrete overflow spillways that discharged to the South BAP. Since the BAPs are undergoing closure, these spillways have been filled with road base/caliche as of the 2019 annual inspection.

The low hazard EP does not have alternative locations for discharge. It will be required to maintain a minimum 12-inch freeboard during dry weather, sufficient to handle excess storm water from the 100-year storm.

Based on our evaluation of the available information for these operating surface impoundments, this IDFCSF meets the requirements of 40 CFR §257.82(c).

Sincerely,

Environmental Resources Management Southwest, Inc.


Charles Johnson, P.E.

