

**INITIAL STRUCTURAL STABILITY ASSESSMENT
PLANT CRIST GYPSUM STORAGE AREA
GULF POWER COMPANY**

EPA's "Disposal of Coal Combustion Residuals from Electric Utilities Final Rule (40 C.F.R. Part 257 and Part 261), §257.73(d), requires the owner or operator of an existing CCR surface impoundment to conduct periodic structural stability assessments. The owner or operator must document whether the design, construction, operation and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering practices for the maximum volume of CCR and CCR wastewater which can be impounded therein.

The CCR surface impoundment located at Gulf Power Company's Plant Crist, referred to as the Plant Crist Gypsum Storage Area, is located on the Plant Crist property in Pensacola, Florida. The CCR surface impoundment is formed by an engineered perimeter embankment. The embankment foundation soils generally consist of competent medium dense to dense sands, silty sands, and clayey sands.

Slope protection against surface erosion is provided by a synthetic liner on the interior of the embankment, with grassy vegetation and some riprap and gravel on the exterior slopes. Wave action is not a concern at this site due to the characteristics of the impoundment (limited width and length). The pond is not operated in such a manner as to normally be subjected to rapid drawdown conditions, and the interior of the pond is lined with 60-mil HDPE underlain by a geosynthetic clay liner (GCL), so rapid drawdown would not adversely affect the embankment soils.

The perimeter embankment has been properly constructed using mechanically stabilized sandy silts, silty sands, and clayey sands. The embankment soils have been compacted to a density sufficient to withstand the range of loading conditions experienced during operation. The vegetated slopes of the embankment are properly maintained to a manageable height to allow for periodic inspection.

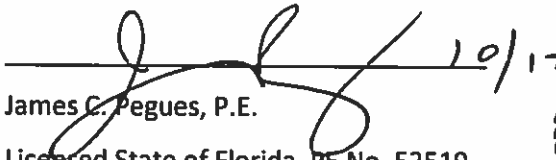
Three discharge points are present in the gypsum storage area. The primary discharge structure for the gypsum storage area is a concrete decant riser. Water from the gypsum cell enters the riser and flows into a HDPE pipe and to the sedimentation pond. A second discharge point is via a HDPE pipe that collects water from a drainage trench on the floor of the gypsum storage cell and transports it to the sedimentation pond. The third discharge control is provided by a concrete box culvert that also

discharges into the sedimentation pond. Where the culvert penetrates the side of the embankment, a concrete headwall prevents damage to the liner or embankment soils. All discharge structures penetrate or travel beneath the embankment separating the gypsum storage area from the sedimentation pond. There are no penetrations of the exterior embankments at the gypsum storage area.

The discharge structures are designed to adequately manage flow during and following the peak discharge from the 100-year 24-hour flood event.

The downstream slopes of the embankment are not subject to inundation under normal conditions.

I hereby certify that the structural stability assessment was conducted in accordance with 40 C.F.R. Part 257.73 (d).


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