

**TEXAS MUNICIPAL POWER AGENCY
GIBBONS CREEK STEAM ELECTRIC STATION
COAL COMBUSTION RESIDUE SURFACE IMPOUNDMENTS**

40 CFR §257.83(b) – Annual Inspection by a qualified professional engineer

§257.83(b)(1) Annual inspections by a qualified professional engineer are required for coal combustion residue (CCR) surface impoundments. These inspections must, at a minimum, include:

(i) Review of Available Information

CCR ponds located at the Gibbons Creek Steam Electric Station (GCSES) include ash ponds A, B and C and the scrubber sludge pond. A review of available information is limited to a draft copy of the history of construction, various portions of the original plans and specifications, some 1995 site plans and a review of weekly inspection reports from October, 2015 through January, 2016. The ponds were originally constructed in 1977 and 1978. Issues noted in the weekly inspection reports generally duplicate the issues noted below from the visual inspection. This was the initial annual inspection, therefore, no previous annual inspections or periodic structural stability assessments were available.

(ii) Visual Inspection of CCR Units

Ash Ponds

General: An inspection was performed on December 14, 2015 of Ash Ponds A, B and C. The ponds and embankments appear to be in overall good condition. Water levels were at or near their normal operating levels at the time of inspection. Minor seepage was observed on the north bank of the ponds where piping is located just south of the ash pond pump complex. These areas are being monitored for changing conditions but appear to be stable at this time. Vegetation/grass should be mowed and kept at 6 inch height or less. Most areas were properly mowed but some areas had vegetation higher than 6 inches. Minor areas of wave action erosion at the water line should also be monitored and repaired if necessary.

Scrubber Sludge Pond

General: An inspection of the scrubber sludge pond was also performed on December 14, 2015. The pond and embankment also appears to be in overall good condition. Vegetation needs to be mowed and kept at 6 inches height or less. Some holes or tears in the poly liner were observed above the water line (where visible). Some brush and vegetation is growing through the holes in the liner. The perimeter ditch on the south and east sides of the sludge pond have cattails growing. These areas should be monitored to determine if the wet areas are from pond seepage or just low areas that hold water. The staff gage is mostly submerged in sludge and should be relocated.

(iii) Visual Inspection of any hydraulic structures underlying the base of the CCR Units or passing through the dike of the CCR units

Based on available copies of the original site plans, there is underground piping under the south and north ends of the ash ponds and along the most eastern side of pond A. Concrete box culverts are located at the north and south ends of the interior dikes to allow overflows between

ponds C and B and ponds B and A. Drop inlets are located at the south ends of the interior dikes that accept overflows (above elevation 266.0) and take the effluent to the ash pond treatment system. A visual inspection of these areas indicated no apparent signs of any problems other than minor seepage along the north bank between the pond and pump station complex. According to plant personnel, this seepage is not new and is being monitored during routine inspections.

(2) Inspection Report (initial inspection)

The initial inspection was performed on December 14, 2015. In attendance were Wayne Godsey, P.E. and Morriss Barney. In accordance with §257.83(b)(2), the following items are addressed:

(i) Any changes in geometry of the impounding structure since the previous annual inspection.

No significant changes in the geometry of ash ponds A, B or C are noted since their original construction with the exception of a rail spur loop that was constructed around the ponds in the mid 1990's. The sludge pond geometry also appears to be the same as originally constructed except that a liner was installed over the clay liner in 1983.

The top of the perimeter and interior berms/dikes of each pond should be re-surveyed to verify that the top of berm elevations are still at the proper elevations and providing adequate freeboard.

(ii) The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection.

Instrumentation consists of staff gage's to measure the water levels.

(iii) The approximate minimum, maximum and present depth and elevation of the impounded water and CCR since the previous annual inspection.

The following depths and elevations are based on measurements obtained from the weekly inspection reports from October, 2015 through January, 2016.

<u>Pond</u>	<u>Minimum Depth (ft)</u>	<u>Maximum Depth (ft)</u>	<u>Current Depth (ft)</u>	<u>Minimum Elevation</u>	<u>Maximum Elevation</u>	<u>Current Elevation</u>
Sludge Pond	0	16.0	15.0	260	276	275
Ash Pond A	18.5	19.0	18.8	268.5	269.0	268.8
Ash Pond B	18.5	18.9	18.7	268.5	268.9	268.7
Ash Pond C	18.3	19.1	18.6	268.3	269.1	268.6

(iv) The storage capacity of the impounding structure at the time of the inspection.

The capacities shown are to the top of the perimeter berm elevations. Top of berm elevations are 270.0 for the ash ponds and 280.0 for the sludge pond. The approximate storage capacity of the ash ponds is 150 ac-ft per cell and 115 ac-ft for the sludge pond.

(v) The approximate volume of the impounded water and CCR at the time of the inspection.

<u>Pond</u>	<u>Approx. Volume (acre-feet)</u>
Sludge Pond	81
Ash Pond A	138
Ash Pond B	137
Ash Pond C	136

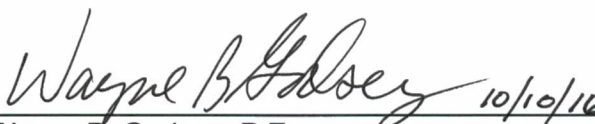
(vi) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit and appurtenant structures.

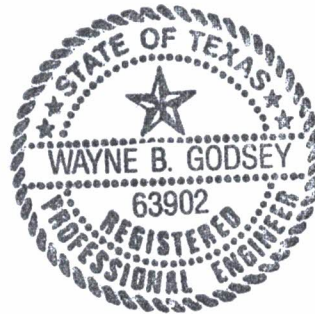
There were no appearances of structural weakness conditions of the CCR units at the time of inspection other than the liner issues noted on the sludge pond and minor seepage noted on the ash ponds.

(vii) Any other changes which may have affected the stability or operation of the impounding structure since the previous annual inspection.

To my knowledge, there were no recent changes noted or observed that have affected the stability or operation of the CCR units.

This inspection report was prepared by:


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