

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

INTRODUCTION

Coal combustion residue (CCR) ponds are required to be inspected annually by a qualified professional engineer in accordance with 40 CFR §257.83(b). This inspection occurred on December 6, 2017. The previous inspection report on file is dated October 10, 2016. Annual inspections and reporting is being performed by the end of each calendar year. CCR ponds at the Gibbons Creek Steam Electric Station (GCSES) include ash ponds A, B and C and the scrubber sludge pond. An inspection was performed on December 6, 2017 and it discussed in this report.

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 GCSES include ash ponds A, B and C and the scrubber sludge pond. A review of available information is limited to a review of the initial inspection report from last year, the initial structural stability assessment from last year and the initial hazard assessment from last year and available weekly inspection reports from January, 2017 through December, 2017. 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. The annual inspection was performed on December 6, 2017.

(ii) Visual Inspection of CCR Units

Ash Ponds

General: An inspection was performed on December 6, 2017 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 to 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. No new problems were observed since last year's inspection.

Scrubber Sludge Pond

General: An inspection of the scrubber sludge pond was also performed on December 6, 2017. The pond and embankment also appears to be in overall good condition. Most of the water has been pumped out of the pond and will continue to be pumped out. Vegetation needs to be mowed and kept at 6 inches height or less. Additional holes and tears in the poly liner are

visible with the lower water level. Some brush and vegetation is growing through the holes in the liner. No new problems were observed since last year's inspection other than additional holes and tears in the poly liner being visible due to the lower water level. Plant personnel indicated that the pond will continue to be pumped out on a regular basis.

(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 ponds and pump station complex. According to plant personnel, this seepage is not new and is being monitored during routine inspections.

(2) Inspection Report

The inspection was performed on December 6, 2017 by Wayne B. Godsey, P.E.. 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.

<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	9.33	9.33	9.33	269.33	269.33	269.33
Ash Pond A	17.5	19.5	18.65	267.5	269.5	268.65
Ash Pond B	17.5	19.5	18.65	267.5	269.5	268.65
Ash Pond C	17.5	19.5	18.65	267.5	269.5	268.65

(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	62
Ash Pond A	137
Ash Pond B	137
Ash Pond C	140

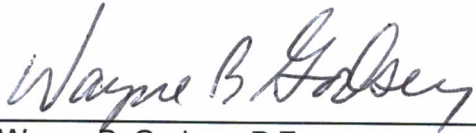
(vi) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit and appurtenant structures.

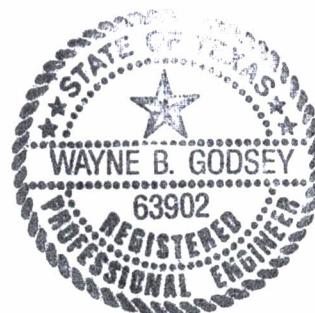
There were no appearances of structural weakness conditions of the CCR units at the time of inspection other than the liner issues noted on the sludge pond and minor seepage noted on the ash ponds. These conditions will continue to be monitored during all inspections.

(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 except that the scrubber sludge pond has had most of the water pumped out and will continue to stay pumped out.

This inspection report was prepared by:


Wayne B. Godsey, P.E.
Godsey Engineering
Texas Firm Registration No. F-5593
12/19/17



Seal