

**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 11, 2018. The previous inspection report on file is dated December 19, 2017. 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. In addition, Site F Landfill ponds 1 and 3 were inspected. It should be noted that the power plant is not operating at this time.

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 last annual inspection report from last year and available weekly inspection reports from January, 2018 through December, 2018. 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 11, 2018.

(ii) Visual Inspection of CCR Units

Ash Ponds

General: An inspection was performed on December 11, 2018 of Ash Ponds A, B and C. The ponds and embankments appear to be in overall good condition. Water levels in the ash ponds 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 11, 2018. The pond and embankment also appears to be in overall good condition. The water level was higher than normal due to heavier than normal rainfalls this past fall. Vegetation needs to be mowed and kept at 6 inches height or less. Some brush and vegetation is growing through

the holes in the liner. No new problems were observed since last year's inspection. 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 11, 2018 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	1.0	15.0	15.0	261.0	275.0	275.0
Ash Pond A	17.38	19.25	18.25	267.38	269.25	268.25
Ash Pond B	17.38	19.25	18.25	267.38	269.25	268.25
Ash Pond C	17.38	19.25	18.25	267.38	269.25	268.25

Water surface elevations for 2018 were provided by plant personal as reported in the regular inspection reports.

(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 279.0 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	132
Ash Pond B	132
Ash Pond C	132

(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.

Site F Landfill Ponds

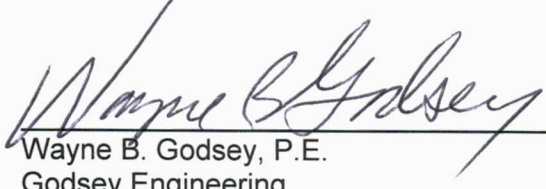
A site visit was made on December 11, 2018 to perform an inspection of the ponds located at the Site F Landfill. The hot water canal was not inspected during this inspection. A discussion of observations made during the inspection of each pond is listed below. The last inspection of these ponds was April 11, 2018. To my knowledge, these ponds are not classified as CCR ponds.

SFL Pond 1. Pond 1 receives storm water runoff (clean water) from the upper portion of the landfill. The dam has areas of erosion, cattle trails and weak vegetation. The pond has an emergency and principal spillway. At the time of the inspection, the water level in the pond was at the principal spillway crest but not discharging. The overall condition of the embankment was good with decent vegetative cover. There are small areas of erosion around the inside perimeter of the embankment and some cattle trails that should be monitored. No problems were observed on the day of the inspection that require immediate attention.

SFL Pond 3. Pond 3 receives some storm water runoff from the landfill and hauled in ash from the power plant. It is not apparent if the pond receives any leachate from the landfill. The existing embankment provides a considerable amount of freeboard from the current water level

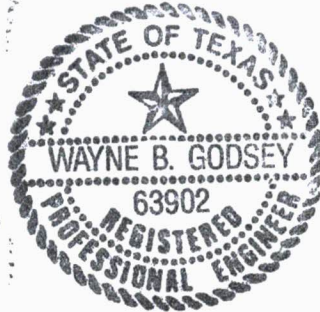
in the pond. The water level in the pond at the time of the inspection was higher than normal due to recent rainfalls. TMPA normally keeps the water level low by keeping it pumping out. The inside face of the embankment has some areas of erosion but they don't seem to be a problem at this time. There are several brush and trees that need to be removed. Numerous cattle trails exist that should be controlled and repaired as needed. There is one fairly large erosion area on the downstream bench that still needs to be repaired. There were no signs of seepage noticed during the inspection.

This inspection report was prepared by:



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1/21/19



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