2019 Annual Landfill Inspection Report

FGD Stackout Area

H.W. Pirkey Plant
Southwestern Electric Power Company
Hallsville, Texas

October 8, 2019

Prepared for: Southwestern Electric Power Company – H.W. Pirkey Plant

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AMERICAN ELECTRIC POWER℠
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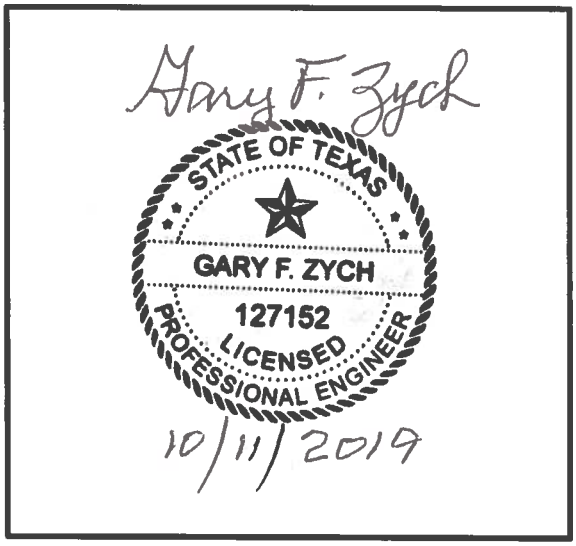

I certify to the best of my knowledge, information and belief the information contained in this report meets the requirements of 40 CFR § 257.84(b).

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1.0 INTRODUCTION

This report was prepared by AEP- Geotechnical Engineering Services (GES) section, in part, to fulfill requirements of 40 CFR 257.84 Inspection Requirements for CCR Landfills and to provide the H.W. Pirkey Plant an evaluation of the facility.

Mr. Brett Dreger, P.E. performed the 2019 inspection of the FGD Stackout Area at the H.W. Pirkey Plant. This report is a summary of the inspection and an assessment of the general condition of the facility. Mr. Ron Franklin was the facility contact. The inspection was performed on September 25, 2019. Weather conditions were mostly sunny and the temperature was in the low 90's (°F). There was 0.93 inches of rainfall over the seven days prior to the inspection.

2.0 DESCRIPTION OF LANDFILL

The FGD Stackout Area is a designated CCR Unit that is subject to 40 CFR 257.84 Inspection Requirements for CCR Landfills. The FGD Stackout Area is designed to temporarily hold a stockpile of Coal Combustion Residuals (CCR) material until it is hauled off by dump trucks for permanent disposal in a separate landfill. A radial arm stacker deposits the CCR material on the ground surface within the footprint of the FGD Stackout Area. A stone berm with a geomembrane cover exists around the perimeter of the FGD Stackout Area to contain any contact water. All contact water drains by gravity to the lower surge pond or auxiliary surge pond for circulation back to the plant. There is concrete pad used for washing the tires of dump trucks that drive into the FGD Stack-out Area.

These features, including the approximate limits of each area, are shown on the site map included as Attachment B. Selected photographs taken during the inspection and used to illustrate the visual observations presented in the report are presented in Attachment A. Additional inspection photos can be made available to the Plant upon request.

3.0 REVIEW OF AVAILABLE INFORMATION (257.84(b)(1)(i))

A review of available information regarding the status and condition of the FGD Stackout Area which include files available in the operating record, such as design and construction information, previous periodic structural stability assessments, previous 7 day inspection reports, and previous annual inspections has been conducted. Based on the review of the data there were no signs of actual or potential structural weakness or adverse conditions.

4.0 INSPECTION (257.84(b)(1)(ii))

4.1 CHANGES IN GEOMETRY SINCE LAST INSPECTION (257.84(b)(2)(i))

A gravel berm with a geomembrane cover has been constructed around the perimeter of the FGD Stackout Area since the 2016 Inspection. The purpose of the berm is to contain any runoff from the FGS Stackout Area. No other modifications have been made to the geometry of the FGD Stackout Area since the 2016 annual inspection. However, in order to repair erosion rills from concentrated runoff flows from the truck wash pad, the plant installed a concrete lined channel to the direct the runoff into the surge pond. The geometry of the FGD Stackout Area has remained essential unchanged.

4.2 VOLUME (257.84(b)(2)(ii))

The total volume of ash that has passed through the FGD Stackout Area since November of 2018 estimated as 350,000 cubic yards. At the time of the inspection, it was estimated that about 300 cubic yards were stockpiled at the FGD Stackout Area.

4.3 DEFINITIONS OF VISUAL OBSERVATIONS AND DEFICIENCIES

This summary of the visual observations uses terms to describe the general appearance or condition of an observed item, activity or structure. The meaning of these terms is as follows:

Good:	A condition or activity that is generally better or slightly better than what is minimally expected or anticipated from a design or maintenance point of view.
Fair/Satisfactory:	A condition or activity that generally meets what is minimally expected or anticipated from a design or maintenance point of view.
Poor:	A condition or activity that is generally below what is minimally expected or anticipated from a design or maintenance point of view.
Minor:	A reference to an observed item (e.g., erosion, seepage, vegetation, etc.) where the current maintenance condition is below what is normal or desired, but which is not currently causing concern from a structure safety or stability point of view.
Significant:	A reference to an observed item (e.g. erosion, seepage, vegetation, etc.) where the current maintenance program has neglected to improve the condition. Usually conditions that have been identified in the previous inspections, but have not been corrected.
Excessive:	A reference to an observed item (e.g., erosion, seepage, vegetation, etc.) where the current maintenance condition is above or worse than what is normal or desired, and which may have affected the ability of the observer to properly evaluate the structure or particular area being observed or which may be a concern from a structure safety or stability point of view.

This document also uses the definition of a "deficiency" as referenced in the CCR rule section §257.84(b)(5) Inspection Requirements for CCR Landfills. This definition has been assembled using the CCR rule preamble as well as guidance from MSHA, "Qualifications for Impoundment Inspection" CI-31, 2004. These guidance documents further elaborate on the definition of deficiency. Items not defined by deficiency are considered maintenance or items to be monitored.

A "deficiency" is some evidence that a landfill has developed a problem that could impact the structural integrity of the landfill. There are four general categories of deficiencies. These four categories are described below:

1. Uncontrolled Seepage (Leachate Outbreak)
   Leachate outbreak is the uncontrolled release of leachate from the Landfill.

2. Displacement of the Embankment

   Displacement of the embankment is large scale movement of part of the landfill. Common signs of displacement are cracks, scarps, bulges, depressions, sinkholes and slides.

3. Blockage of Control Features

   Blockage of Control Features is the restriction of flow at spillways, decant or pipe spillways, or drains.

4. Erosion

   Erosion is the gradual movement of surface material by water, wind or ice. Erosion is considered a deficiency when it is more than a minor routine maintenance item.

4.4 VISUAL INSPECTION (257.84(b)(1)(ii))

A visual inspection of the FGD Stackout Area was conducted to identify any signs of distress or malfunction of the landfill and appurtenant structures. Specific items inspected included all structural elements of the landfill perimeter berms, ditches and drainage patterns.

Overall the facility is in good condition. The FGD Stackout Area is functioning as intended with no signs of potential structural weakness or conditions, which are disrupting to the safe operation of the landfill. Inspection photos are included in Attachment A. Additional pictures taken during the inspection can be made available upon request. A site map presenting locations of the inspection observations is included in Attachment B.

1. The gravel berm with a geomembrane cover appeared to be in good condition. There was no evidence of holes, air/water pockets, or other signs of distress noted on the geomembrane.

2. A notch (low area) has formed at the northern end of the western gravel berm with a geomembrane cover. This has created a pathway for non-contact water which drains along the railroad spur and the gravel berm with a geomembrane cover to enter the FGD Stackout Area and eventually end up in the surge pond. The surrounding grades and railroad spur in this area would not allow any contact water to escape through this notch and discharge off site.

3. There is no vegetal cover on the FGD Stackout Area due to material constantly being stockpile and removed.

4. Surface water runoff from along the eastern gravel berm with a geomembrane cover is conveyed underneath an access road via a steel pipe culvert. This culvert outlets onto a concrete slab with curb walls underneath the supports for the conveyor belt, which feeds the radial arm stacker. A section of these curb walls have been notched out to allow surface water runoff to drain to the auxiliary surge pond.

5. Vehicle traffic enters the site from the south end. A gravel access road ramps over the top of the gravel berm covered with a geomembrane material.

4.5 CHANGES THAT EFFECT STABILITY OR OPERATION (257.84(b)(2)(iv))

Based on interviews with plant personnel and field observations there were no changes to the FGD Stackout Area since the last annual inspection that would affect the stability of the facility.

5.0 SUMMARY OF FINDINGS

5.1 GENERAL OBSERVATIONS

The following general observations were identified during the visual inspection:

1) In general, the FGD Stackout Area is functioning as intended and is in good condition. The Plant is performing regular maintenance and inspections as required. One maintenance item has been noted and is described in Section 5.2.

5.2 MAINTENANCE ITEMS

The following maintenance items were identified during the visual inspection, see site map for locations. Contact GES for specific recommendations regarding repairs:

1) Repair the erosion rills, which have formed from concentrated water flowing from the radial arm stacker pad and the truck wash station pad areas to the lower surge pond. The concentrated water flows can be conveyed to the lower surge pond by conduit or the area can be periodical graded to control the erosion damage. This erosion is considered a minor maintenance item.

5.3 ITEMS TO MONITOR

There are no items to monitor as a result of observations made during this visual inspection:

5.4 DEFICIENCIES (257.84(b)(2)(iii))

There were no signs of structural weakness or disruptive conditions that were observed at the time of the inspection that would require additional investigation or remedial action. There were no deficiencies noted during this inspection or during any of the periodic 7-day inspections. A deficiency is defined as either:

1) Uncontrolled seepage (leachate outbreak),
2) Displacement of the embankment,
3) Blockage of control features, or
4) Erosion, more than minor maintenance.

If any of these conditions occur before the next annual inspection contact AEP Geotechnical Engineering immediately.

ATTACHMENT A

Photos

Photo # 1	
View of the FGD Stackout Area.	
Photo # 2	
View of the FGD Stackout Area.	
Photo # 3	
View of the western perimeter ditch just north of berm with a geomembrane cover, facing north.	

Photo # 4	
View of the western gravel berm with a geomembrane cover, facing south.	

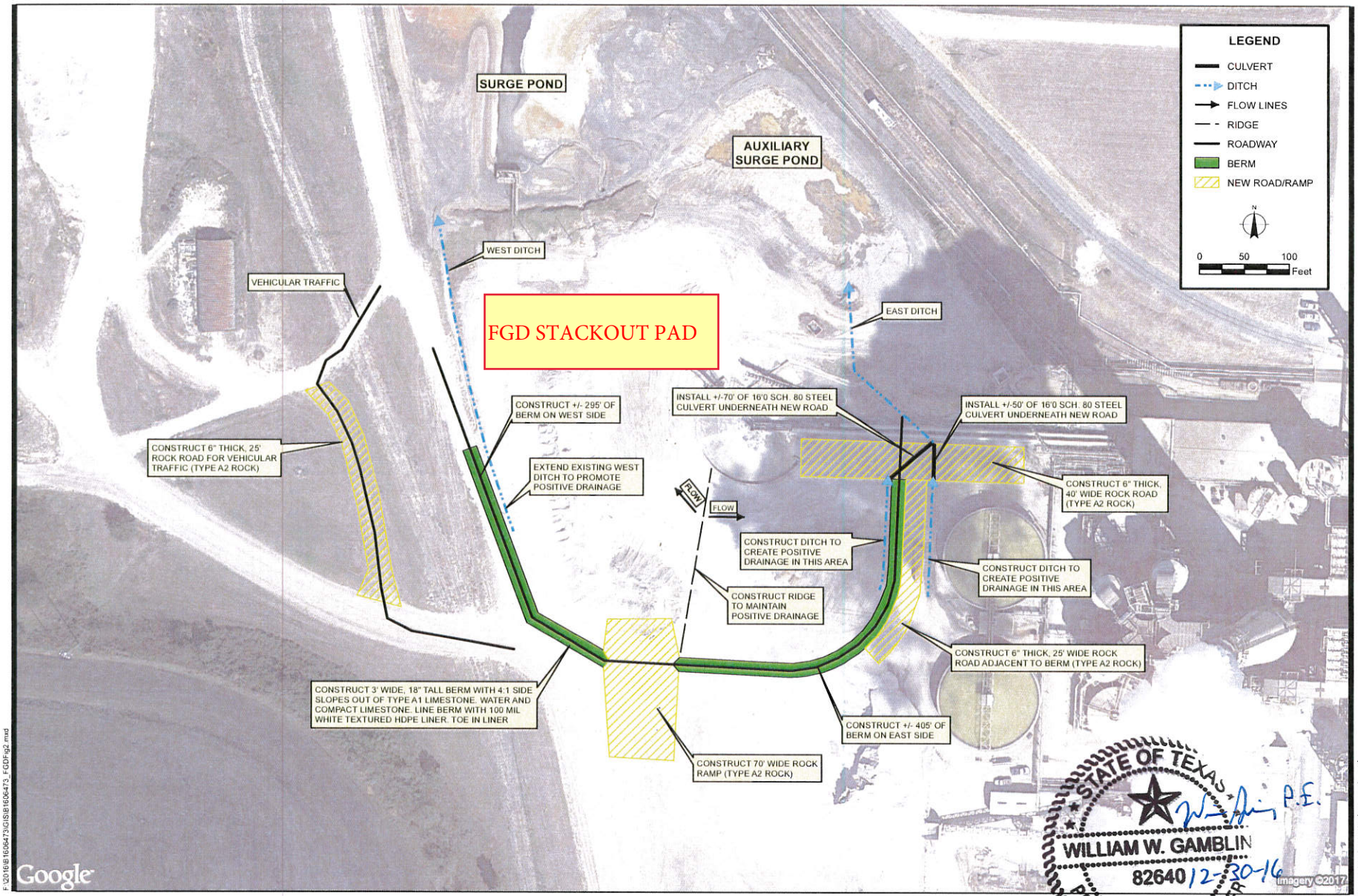
Photo # 5	
View of the southern gravel berm with a geomembrane cover, facing east.	

Photo # 6	
View of the eastern gravel berm with a geomembrane cover, facing south.	

Photo # 7	
View of the inlet culvert pipe that lets water from the stackout area into the drainage ditch under the conveyor system.	
Photo # 8	
View of the outlet area of the steel culverts under the conveyor system which feeds the radial arm stacker.	
Photo # 9	
View of the drainage ditch and culvert which directs runoff into the auxiliary surge pond. This culvert is downstream of the notch in the curb shown in Photo #8	

ATTACHMENT B

Site Map



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CONTAINMENT BERM PLAN
ANNUAL CCR INSPECTION
PIRKEY POWER PLANT FGD STACKOUT AREA
2400 FARM TO MARKET 3251
HALLSVILLE, TEXAS

Project No:	B1606473
Drawing No:	B1606473_FGDFig2
Scale:	1 in = 100 ft
Drawn By:	CMF
Date Drawn:	12/29/2016
Checked By:	WG
Last Modified:	1/4/17
Sheet:	1 of 1
Fig.	2

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