

January 13, 2023
Project No. 16222104.00

Mr. Charles Brown
Industrial and Hazardous Waste Permits Section, MC-130
Coal Combustion Residuals Program
Texas Commission on Environmental Quality
P. O. Box 13087
Austin, Texas 78711-3087

Re: Sandy Creek Energy Station Coal Combustion Residual Waste Management Facility
CCR Registration No. CCR107
CN604335455/RN105905657
2022 Annual Inspection Report Notification

Dear Mr. Brown:

On the behalf Sandy Creek Services, LLC (Owner and Operator), SCS Engineers is providing this letter of the availability of the 2022 Annual Inspection Report per 40 CFR §257.84(b)(2) for the Sandy Creek Energy Station (Plant) Coal Combustion Residual (CCR) Waste Management Facility (Landfill). This letter is being provided in accordance with 40 CFR §257.106(g)(7) (30 TAC §352.1311) to the Texas Commission on Environmental Quality (TCEQ). In accordance with 40 CFR §257.105(g)(9) and §257.107(g)(9) this report has been placed in the Site Operating Record and placed on the Landfill's publicly accessible website (<http://www.sandycreekpower.net/reports/inspection/>). This letter is being provided to TCEQ within 30 days of placing the annual inspection in the Site Operating Record.

If you have any questions related to the above described information, please feel free to contact Mr. Brett DeVries, Ph.D., P.E. at 817-358-6110.

Sincerely,



Brett DeVries, Ph.D., P.E.
Project Manager
SCS ENGINEERS
TBPE No. F-340



Ryan Kuntz, P.E.
Vice President / Satellite Office Manager
SCS ENGINEERS

cc: Darryl Sparks – Sandy Creek Energy Station
Dana Perry - Sandy Creek Services, LLC

January 13, 2023
SCS Project No. 16222104.00

Mr. Darryl Sparks
Compliance Manager
NAES Corporation
2161 Rattlesnake Road
Riesel, Texas 76682

Sent via email

Subject: Sandy Creek Energy Station
Coal Combustion Residual (CCR) Waste Management Facility
2022 Annual Inspection Report per 40 CFR §257.84(b)(2) (30 TAC §352.841)

Dear Mr. Sparks:

SCS Engineers (SCS) is pleased to provide this 2022 annual inspection report for compliance with Title 40, Code of Federal Regulation (CFR) §257.84(b)(2) (30 Texas Administrative Code (TAC) §352.841) related to the annual inspection of a coal combustion residual (CCR) Landfill by a qualified engineer.

The Sandy Creek Energy Station (Plant) CCR Waste Management Facility (Landfill) is located at 2161 Rattlesnake Road, Riesel, Texas 76682, and is currently registered with the Texas Commission on Environmental Quality (TCEQ) under CCR Registration No. CCR107.

BACKGROUND

The Landfill is currently comprised of three CCR disposal cells, inclusive of Cell 1, Cell 2, and a portion of Cell 3 (inclusive of Subcells 3A through 3D). Cells 1 and 2 are classified as a existing Landfill as defined under §257.53 since they were constructed and commenced operation in 2010 and 2014, respectively (prior to October 14, 2015). Cell 3, including the portion which was constructed in 2021, is considered a lateral expansion. The approximate areas of the currently constructed cells are 10.0 (Cell 1), 14.3 (Cell 2) and 10.3 (Cell 3) acres.

The primary wastes disposed in the Landfill are fly ash and bottom ash generated during the coal combustion process at the Plant. Additionally, other Class 2 and Class 3 nonhazardous industrial waste generated at the Plant are disposed of at the Landfill.

ANNUAL INSPECTION [§257.84(B)(1)]

An annual inspection of the Landfill was performed on December 15, 2022, by Brett DeVries, Ph.D., P.E., a Professional Engineer registered in the State of Texas. An annual inspection checklist was prepared during the inspection, and is attached to this report. At the time of the inspection, the Landfill was operational, and the Landfill was receiving waste.

Although the items described below and on the attached checklist were observed during the inspection, there were no existing conditions or changes from the previous annual inspection that appeared to have the potential to disrupt the operation, safety, or stability of the landfill

[§257.84(b)(2)(iv)]. Additionally, during the inspection, no appearance of actual or potential structural weakness was observed [§257.84(b)(2)(ii)].

During the inspection, as noted in the attached checklist, the following items were observed:

- Erosion was observed on the protective cover of the east slope of subcells 3A, 3B, 3C, 3D and intermediate cover on the southern corner of Cell 1. Exposure of the underlying geosynthetics in Subcells 3A, 3B, 3C, 3D and CCR waste in Cell 1 was not observed. Based on discussion with operation personnel, the minor erosion was repaired shortly after the inspection. It was evident that operation personnel has repaired minor erosion rills throughout the year as the erosion rills develop as site conditions allowed. In addition, site personnel is in the process of installing a stormwater diversion berm in potential high erosion areas in an effort to control erosion.
- Based on visual observation, additional freeboard was suggested on the contact water diversion berm (located in Subcell 2E) to prevent overtopping the berm. Based on the discussion with operation personnel, overtopping of the berm has not occurred in the past. However, operation personnel increased the berm height shortly after inspection as a preventative measure.
- Minor vegetation was observed surrounding the leachate evaporation pond underdrain system outlet; this did not impede the performance of the underdrain system. Based on the discussion with operation personnel, the vegetation will be removed in the near future.
- Excessive dust emissions were not observed during the inspection. Leachate evaporation pond, leachate evaporation pond underdrain system, and groundwater monitoring systems were observed to be functioning as designed.

During the inspection, SCS also reviewed the weekly inspection reports prepared by a qualified person in accordance with §257.84(a). All required weekly and monthly inspections have been completed for calendar year 2022. Consistent with §257.84(b)(i), SCS reviewed the 2022 weekly inspections and the prior 2021 annual inspection. Items noted during the 2022 weekly inspections were similar to the items noted in the 2021 annual inspection, which were primarily related to ongoing challenges with erosion. In addition, items observed during the 2022 annual inspection will be corrected by operation personnel in the near future (weather permitting). **Based on a review of these inspections, operation personnel have routinely corrected or maintained the landfill, as weather allowed, for items identified in the inspections and during landfill operation. Additionally, no deficiencies were observed during the weekly or annual inspections that could result in harm to human health, the environment, or had resulted in a release.**

Lastly, during the inspection, consistent with §257.84(b)(i), SCS also reviewed all other documents in the site operation record. All documents required to be in the Site Operating Record in accordance with §257.105 and §352.1301 were present during the inspection.

In summary, based on the above-described inspection and improvement plans (previously noted) and consistent with the previous annual inspection (dated 1/13/2022), in our opinion, the design, construction, operation, and maintenance of the landfill (inclusive of the items inspected in the attached checklist) is being performed consistent with recognized and generally accepted good engineering standards.

VOLUME OF IN-PLACE WASTE [§257.84(B)(2)(ii)]

The approximate volume of CCR contained in the Landfill at the time of the inspection was estimated in accordance with §257.84(b)(2)(ii). The Landfill has been operational since early 2013.

Ground surveys of the Landfill have been developed since April 2013, with the most recent two surveys being performed on October 2, 2022 and December 20, 2022. The estimated airspace consumed between the two surveys is 20,100 cubic yards (CY) for a period of 78 days (provided by facility personnel). Therefore, the airspace consumed was converted to an average daily volume of approximately 257.7 cy/day. Based on a comparison of the as-built top of liner grades and existing grades at the time of the surveys, the Landfill has approximately 1,349,817 cubic yards of CCR waste as of December 20, 2022 (provided by facility personnel). In addition, based on the average daily volume of 257.7 cy/day, it is estimated that an additional 1,289 cy of CCR waste was disposed of in the Landfill between December 15, 2022 and December 20, 2022. **Therefore, as of the date of the annual inspection (December 15, 2020), it is estimated that the Landfill contained approximately 1,348,528 cy of CCR waste.**

CLOSING

SCS appreciates the opportunity to perform the 2022 annual inspection of Sandy Creek Energy Station (Plant) Coal Combustion Residual (CCR) Waste Management Facility (Landfill). Should you have any questions or require additional information on this inspection, please feel free to contact Brett DeVries, Ph.D., P.E. at 817-571-2288.

Sincerely,



Brett DeVries, Ph.D., P.E.
Project Manager
SCS ENGINEERS
TBPE Registration No. F-3407

Ryan Kuntz, P.E.
Vice President / Satellite Office Manager
SCS ENGINEERS

Attachment: Coal Combustion Residual Landfill Annual Inspection Checklist

cc: Dana Perry - Sandy Creek Services, LLC

Sandy Creek Energy Station

Coal Combustion Residual Waste Management Facility Annual Inspection Checklist

40 CFR §257.84(b) - Requires inspections on an annual basis by a Qualified Professional Engineer

Date and Time of Inspection: December 15, 2022 at 9:30 a.m.

Professional Engineer's Name: Brett DeVries, Ph.D., P.E.

Weather Summary at time of Inspection: 55°F, sunny

Precipitation for the previous 7 days: 0.1 inches

1. Landfill Structure and Slope

Sloughing, Slumping, Sliding		Surface Cracking		Excessive Slope		Toe of Slope Moving		Inadequate Compaction	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
	X		X		X		X		X

Inappropriate Vegetative Growth		Animal Burrows		Erosion Damage		Vehicle Damage	
Yes	No	Yes	No	Yes	No	Yes	No
	X		X	X ¹			X

Additional Observations: 1. Erosion was observed on the intermediate cover of the east slope of Subcells 3A, 3B, 3C, 3D, and intermediate cover in the southern corner of Cell 1.

2. Landfill Cover

Qualifier	Intermediate Soil Cover		Final Soil Cover		Bottom Ash Cover		Alternative Cover	
	Yes	No	Yes	No	Yes	No	Yes	No
Installed	X		N/A		N/A		N/A	
Erosion	X ¹							
Location	See Note 1							

Additional Observations: 1. Erosion was observed on the intermediate cover in the southern corner of Cell 1.

3A. Run-on and Run-off Control System

Uncontaminated Surface Water Management System

Qualifier	Diversion Berms		Downchutes		Perimeter Drainage Channels		Culverts		Detention Basins	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Inspection	X		X		X		X		X	
Damage		X		X		X		X		X
Type										
Location										

Additional Observations:

3B. Run-on and Run-off Control System

Contact Water Management System

Qualifier	Diversion Berms		Drainage at Perimeter Berm		Drainage at Separation Berm		Culvert		Ponding of Contact Water		Release of Contact Water	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Inspection	X		X		N/A		X		X		X	
Damage	X ¹			X			X		X		X ²	
Type	See Note 1										See Note 2	
Location	Subcell 2E										Subcell 2E	

Additional Observations: 1.Erosion was observed on the protective cover of the east slope of subcells 3A, 3B, 3C, 3D

2. Based on visual observation, additional freeboard was suggested on the contact water diversion berm (located in Subcell 2E) to prevent overtopping of the berm.

4. Exposed Liner and Leachate Collection and Removal System

Qualifier	Intercell Berm Sacrificial Plastic		LCRS Riser Pipes		Leachate Sump Pump/Controls		Leachate Evaporation Pond		
	Yes	No	Yes	No	Yes	No	Yes	No	Freeboard (ft)
Inspection	X		X		X		X		7
Damage		X		X		X ¹		X	N/A
Type									N/A
Location									N/A

Qualifier	LCRS Ball Valve		Protective Cover		Exposed Geosynthetics	
	Yes	No	Yes	No	Yes	No
Inspection	X		X		X	
Damage		X		X ¹		X
Type			See Note 1			
Location			Subcells 3A, 3B, 3C, and 3D			

Additional Observations: 1.Erosion was observed on the protective cover of the east slope of subcells 3A, 3B, 3C, 3D

5. Fugitive Dust

Landfill		Haul Trucks		Ash Silo	
Yes	No	Yes	No	Yes	No
	X		X		X

Additional Observations:

6. Leachate Evaporation Pond Underdrain System

Sediment		Vegetation		Debris		Water Flow	
Yes	No	Yes	No	Yes	No	Yes	No
	X	X ¹			X	X	

Additional Observations: 1. Minor vegetation was observed surrounding the leachate evaporation pond underdrain system outlet.

7. Groundwater Monitoring System

Damage		Excess Vegetation		Lock Working		Housing Lid Functional		Insects in Housing		Housing Paint Peeling		Label Adequate	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
	X		X	X		X			X		X	X	

Additional Observations:

8. Document Review

Description	Yes	No
Weekly Inspection Checklists Reviewed:	X	
All Weekly Inspections Completed:	X	
Site Operating Record Reviewed:	X	
All necessary documents maintained in Site Operating Record: (see attached Site Operating Record Checklist)	X	

Additional Observations:

Additional Comments/Observations/Recommendations:



Professional Engineer's Signature and Seal

1/13/2023

Date

**SANDY CREEK ENERGY STATION
CCR WASTE MANAGEMENT FACILITY
ANNUAL SITE OPERATING RECORD REVIEW**

Primary Citation	Description	Deadline	Date Completed	Maintained in Operating Record		
				Yes	No	NA
§257.60(a) and §352.601	Documentation of compliance with location restrictions: aquifer	No later than date of initial receipt of CCR in any lateral expansion (e.g. Cell 3)	6/7/21 (Cell 3)	X		
§257.61(a) and §352.611	Documentation of compliance with location restrictions: wetland	No later than date of initial receipt of CCR in any lateral expansion (e.g. Cell 3)	6/7/21 (Cell 3)	X		
§256.63(a) and §352.631	Documentation of compliance with location restrictions: damage seismic impact zone	No later than date of initial receipt of CCR in any lateral expansion (e.g. Cell 3)	6/7/21 (Cell 3)	X		
§256.62(a) and §352.621	Documentation of compliance with location restrictions: damage zone near fault lines	No later than date of initial receipt of CCR in any lateral expansion (e.g. Cell 3)	6/7/21 (Cell 3)	X		
§257.64(a) and §352.641	Documentation of compliance with location restrictions: unstable areas	10/17/2018	10/1/2018 (Cells 1 & 2), 6/7/21 (Cell 3)	X		
§257.70(e) and §352.701	Liner Design Certification	60 days prior to construction of any lateral expansion (e.g. Cell 3)	6/7/21 (Cell 3)	X		
§257.70(f) and §352.701	Liner Construction Certification	No later than date of initial receipt of waste in any new waste unit	12/1/22 (Cell 3)	X		
§257.80(b) and §352.801	Fugitive Dust Control Plan	10/19/2015	10/18/2015, rev. 5/6/22	X		
§257.80(c) and §352.801	Fugitive Dust Control Plan Annual Report	1 year after previous report completion	12/16/16, 11/30/17, 12/18/18, 12/19, 12/20, 12/21	X		
§257.81(c) and §352.811	Initial and Periodic run-on and run-off control system plan	10/17/2016, and every 5 years after initial plan	10/14/2016, rev. 10/14/21 (Rev. 6/7/22)	X		
§257.84(a) and §352.841	Weekly Inspection Reports	Weekly in 2016, 2017, 2018, 2019, 2020, 2021 and 2022	Weekly in 2016, 2017, 2018, 2019, 2020, 2021, and 2022	X		
§257.84(b) and §352.841	Annual Inspections Report	Due 1/19/2016 and 1 year after previous report completion	1/13/16, 1/13/17, 1/13/18, 1/13/19, 1/13/21, 1/13/22	X		
§257.84(b)(5) and §352.841(b)	Documentation of corrective measures for deficiency or release (based on annual report)	As soon as feasible	NA			X
§257.90(e) and §352.901	Annual groundwater monitoring and corrective action report	1/31/2018, and Annual Report due 1 year after previous report completion	1/30/18, 1/30/19, 1/30/20 and 1/29/21, 3/4/2022	X		
§257.91(e)(1) and §352.911	Documentation of design, installation, development, and decommissioning of GW Wells	10/17/2017	3/11/2016	X		
§257.91(f) and §352.911	Groundwater Monitoring System certification	10/17/2017	3/11/2016	X		
§257.93(f) and §352.931	Certification of selected statistical method for evaluating GW monitoring data	10/17/2017	3/2/2016, rev. 10/6/22	X		
§257.94(e)(3) and §352.941	GW Assessment Monitoring Program establishment notification	30 days after plan establishment	NA			X
§257.95(d)(1) and §352.951	GW Assessment monitoring program sampling and results	90 days after results, and on at least semiannual basis thereafter	NA			X

**SANDY CREEK ENERGY STATION
CCR WASTE MANAGEMENT FACILITY
ANNUAL SITE OPERATING RECORD REVIEW**

Primary Citation	Description	Deadline	Date Completed	Maintained in Operating Record		
				Yes	No	NA
§257.95(g) and §352.951(e)	Notification of GW constituent(s) being above protection standards	30 days after detection	NA			X
§257.96(d) and §352.961	Assessment of GW corrective measures	90 days after detection	NA			X
§257.96(e) and §352.961(c)	Documentation recording public meeting for GW corrective measures assessment	After meeting	NA			X
§257.97(a) and §352.971	Progress reports (Semiannually) for selecting and design remedy for GW corrective action	6 months after selection and design completion	NA			X
§257.98(e) and §352.981	Notification and certification of GW remedy completion	After 30 days of completion	NA			X
§257.102(b) and §352.1221	Closure Plan	10/17/2016	10/14/2016, rev 10/6/22	X		
§257.102(f)(2) and §352.1221	Closure time extension certification	After 30 days of certification	NA			X
§257.102(g) and §352.1221	Initial of closure notification	After 30 days of notification	NA			X
§257.102(h) and §352.1221	Closure completion notification	After 30 days of notification	NA			X
§257.102(i) and §352.1221	Closure notation on the deed	After 30 days of completion	NA			X
§257.104(d) and §352.1241	Post-Closure Plan	Initial Registration and any subsequent modification	10/14/2016, rev 10/6/22	X		
§257.104(e) and §352.1241	Post-closure care completion notification	After 30 days of notification	NA			X
§335.9(a)	Records of waste disposed onsite or sent offsite	Texas waste code will be recorded prior to disposal in the Landfill, volume of waste disposed in the Landfill will be conducted during the annual inspection in accordance with Section 3 of the SOP, and information for waste sent offsite will be recorded following removal from site.	Texas waste code: 1/19/22 (Initial TCEQ Registration), Volume of waste: 1/13/16, 1/13/17, 1/13/18, 1/13/19, 1/13/21, 1/13/22. Waste sent offsite: Ongoing	X		
§257.105(h) and §352.1301(b)	Groundwater monitoring and associated groundwater surface elevations	30 days after of completion	1/30/18, 1/30/19, 1/30/20 and 1/29/21, 3/4/2022	X		
§352.1321(c)	Post issued effective registration; all applications and revisions; registration public notice(s); TCEQ draft registration; TCEQ compliance summary; other documents regarding and/or summarizing the TCEQ's review of or initial decision on the Registration Application on publicly accessible website	Initial Registration and any subsequent modification	1/19/22 (Initial TCEQ Registration), 5/6/22 (NOD1 Response), 10/20/22 (NOD2 Response)	X		