



NRG Texas Power LLC
Limestone Generating Station, Units 1 & 2

Annual Inspection of CCR Surface Impoundments

Prepared by



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CERTIFICATION PAGE

**ANNUAL INSPECTION OF
CCR SURFACE IMPOUNDMENTS**

**AT THE
LIMESTONE GENERATING STATION**

NRG TEXAS POWER LLC

I certify that this Report was prepared by me or under my direct supervision and that I am a registered professional engineer under the laws of the State of Texas.

This Report is released for client use under the authority of Vasudev Patel, Texas PE # 117708 on January 12, 2018. Sargent & Lundy LLC Texas Registered Engineering Firm # F-2202.

Certified by: _____

Date: 1/12/18

Seal:

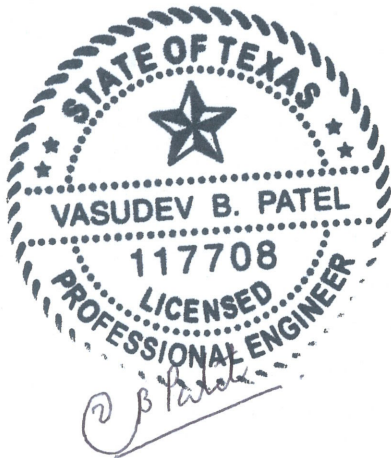




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1 PURPOSE

Pursuant to 40 CFR 257.83(b)(2), this document provides the annual inspection report for the applicable existing coal combustion residual (CCR) surface impoundments at NRG Texas Power LLC's (NRG) Limestone Generating Station. On November 8, 2017, by Mr. Vasudev Patel, P.E. (Licensed in TX and WI) and Mr. David Nielson, P.E. (Licensed in IN, IL, MI, NV, and WA) visually inspected the following applicable CCR units:

- Unit ST-18,
- Unit 003 Secondary E Pond, and
- Unit 019 E Pond.

2 INSPECTION OF EXISTING CCR SURFACE IMPOUNDMENTS

Federal CCR Rule Reference: 40 CFR 257.83(b)(1)(i), 257.83(b)(1)(ii), and 257.83(b)(1)(iii)

This annual inspection of the CCR surface impoundments included:

- 1) Review of previously generated information regarding the status and condition of each CCR surface impoundment, including, but not limited to, operating records, publically accessible Internet site entries, design and construction drawings, and other documents and reports,
- 2) A visual inspection of the applicable CCR surface impoundments and appurtenant structures to identify signs of any distress or malfunction, and
- 3) A visual inspection of the accessible portions of known hydraulic structures underlying the base of the CCR surface impoundments and passing through the dike of the CCR surface impoundments for structural integrity and continued safe and reliable operation.

The following sections present the CCR surface impoundment inspection observations and findings.

2.1 CHANGES IN GEOMETRY

Federal CCR Rule Reference: 40 CFR 257.83(b)(2)(i)

Other than maintenance and solids removal from select impoundments, no noticeable changes in geometry were observed while performing the visual inspection of dikes and CCR surface impoundments.

2.2 REVIEW OF EXISTING INSTRUMENTATION

Federal CCR Rule Reference: 40 CFR 257.83(b)(2)(ii)

Each CCR surface impoundment outlet structure is equipped with a staff gauge. Maximum staff gauge readings, since the previous annual inspection, are reported in Section 2.3.



2.3 IMPOUNDMENT PARAMETERS

Federal CCR Rule Reference: 40 CFR 257.83(b)(2)(iii), 257.83(b)(2)(iv), 257.83(b)(2)(v)

Tables 1, 2 and 3 provide various measurable impoundment parameters required by 40 CFR 257.83(b)(2)(iii) through (v) that have been recorded since the last annual inspection (November 15, 2016) and at the time this annual inspection was performed (November 8, 2017).

TABLE 1: APPROXIMATE WATER DEPTH AND WATER SURFACE ELEVATION OF CCR SURFACE IMPOUNDMENTS

CCR Surface Impoundment	Minimum Depth ¹ (ft)	Maximum Depth ¹ (ft)	Present Depth ² (ft)	Minimum Elevation ¹ (ft)	Maximum Elevation ¹ (ft)	Present Elevation ² (ft)
Unit 019 E Pond	3.0	15.3	4.5	434.0	446.3	435.5
Unit ST-18	3.1	8.0	5.5	427.1	432.0	429.5
Unit 003 Secondary E Pond	0.5	7.7	2.0	472.5	479.7	474.0

Notes:

- 1) Since the previous annual inspection on November 15, 2016.
- 2) At time of inspection on November 8, 2017.

TABLE 2: APPROXIMATE AVERAGE CCR DEPTH AND AVERAGE CCR SURFACE ELEVATION WITHIN CCR SURFACE IMPOUNDMENTS¹

CCR Surface Impoundment	Minimum Depth ² (ft)	Maximum Depth ² (ft)	Present Depth ³ (ft)	Minimum Elevation ² (ft)	Maximum Elevation ² (ft)	Present Elevation ³ (ft)
Unit 019 E Pond	2.3	3.3	3.3	433.3	434.3	434.3
Unit ST-18	1.0	7.3	2.0	425.0	431.3	426.0
Unit 003 Secondary E Pond	5.6	5.6	5.6	477.6	477.6	477.6

Notes:

- 3) Depths and elevations presented are averages over the aerial extent of each impoundment.
- 4) Since the previous annual inspection on November 15, 2016.
- 5) At time of inspection on November 8, 2017.



**TABLE 3: APPROXIMATE STORAGE CAPACITY AND VOLUME
OF IMPOUNDED WATER AND CCR AT TIME OF INSPECTION**

CCR Surface Impoundment	Approximate Total Available Storage Capacity (ac-ft)	Approximate Actual Volume of Impounded Water (ac-ft)	Approximate Actual Volume of Impounded CCR (ac-ft)
Unit 019 E Pond	40.4	6	3
Unit ST-18	14.6	7	1
Unit 003 Secondary E Pond	38.7	5	15

Note The capacities utilized herein, consider 1 ft of freeboard.

2.4 VISUAL INDICATION OF ACTUAL OR POTENTIAL STRUCTURAL WEAKNESSES

Federal CCR Rule Reference: 40 CFR 257.83(b)(2)(vi)

S&L observed the exposed interior and exterior slopes, toes of slopes and crests of slopes for the applicable CCR surface impoundments and did not observe any evidence of existing conditions that are disrupting or could plausibly have the potential to disrupt the operation and safety of the applicable CCR surface impoundments.

2.5 OTHER CHANGES

Federal CCR Rule Reference: 40 CFR 257.83(b)(2)(vii)

No other changes were observed which may have affected the stability or operation of the applicable CCR Impoundments since the prior annual inspection.

3 CONCLUSION

This annual inspection confirmed that the design, construction, operation, and maintenance of the applicable existing CCR surface impoundments at NRG's Limestone Generating Station are consistent with recognized and generally accepted good engineering standards.