aes Indiana

Eagle Valley
Generating Station

Annual Inspection of CCR Surface Impoundments

Revision 0

January 10, 2025

Issue Purpose: Use

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CERTIFICATION PAGE

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

This report is released for use under the authority of Travis Constantine, Indiana PE # 12400991 on January 10, 2025.

Certified By: Digitally signed by Travis Constantine Date: 2025.01.10 07:59:07 -06'00'

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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 AES Indiana's (AESI) Eagle Valley Generating Station. The following applicable CCR units were visually inspected on December 10, 2024, by Mr. Travis Constantine, P.E. (Licensed in IN, IL, WI) and Mr. Haris Jasarevic, P.E. (Licensed in NC):

- Pond A,
- Pond B, and
- Pond C.

2 INSPECTION OF EXISTING CCR SURFACE IMPOUNDMENTS

Federal CCR Rule References: 40 CFR 257.83(b)(1)(i), 257.83(b)(1)(ii) & 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, publicly 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 bases of the CCR surface impoundments and passing through the dikes of the CCR surface impoundments for structural integrity and continued safe and reliable operation.

The following sections present the observations and findings from the visual inspection of the CCR surface impoundments.

2.1 CHANGES IN GEOMETRY

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

No noticeable changes in geometry were observed while performing the visual inspection of dike surfaces of the 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 last annual inspection (December 12, 2023) are reported in Section 2.3. It should be noted that the ponds have been observed to be dry and, as such, no water levels were indicated on the staff gauges.

In the summer of 2024, seven (7) piezometers were installed within Ponds A, B, and C. Installed piezometer IDs and Pond locations are included in Table 4. To date, there have been no water levels, or the water levels are insufficient for monitoring in the seven piezometers. Any water level data from these piezometers during the next annual reporting period will be reviewed and documented in the next annual inspection report.

2.3 IMPOUNDMENT PARAMETERS

Federal CCR Rule References: 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 in 2023 and at the time this visual inspection was performed. The estimated average depth and volume of ash stored in each impoundment was calculated using 2015 topographic data and bottom-of-ash elevations recorded in 73 soil borings advanced through Ponds A, B, and C in subsurface investigations conducted at the site in 2011, 2015, 2019, and 2023.

TABLE 1: APPROXIMATE DEPTH OF WATER 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)
Pond A	N/A[3]	N/A[3]	N/A[3]	N/A[3]	N/A[3]	N/A[3]
Pond B	N/A[3]	N/A[3]	N/A[3]	N/A[3]	N/A[3]	N/A[3]
Pond C	N/A[3]	N/A[3]	N/A[3]	N/A[3]	N/A[3]	N/A[3]

Notes:

1. Since the previous annual inspection on December 12, 2023.
2. At the time of visual inspection on December 10, 2024.
3. N/A – Pond did not impound significant water at the time of the annual inspection nor during the prior year.

TABLE 2: APPROXIMATE AVERAGE DEPTH OF CCR AND AVERAGE CCR SURFACE ELEVATION WITHIN CCR SURFACE IMPOUNDMENTS[1]

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)
Pond A	24	24	24	625	625	625
Pond B	13	13	13	616	616	616
Pond C	8	8	8	611	611	611

Notes:

1. Depths and elevations presented are averages over the aerial extent of each impoundment.
2. Since the previous annual inspection on December 12, 2023.
3. At the time of visual inspection on December 10, 2024.

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)
Pond A	550	Dry	480
Pond B	320	Dry	190
Pond C	140	Dry	60

TABLE 4: PONDS A, B, & C PIEZOMETER LOCATIONS

CCR Surface Impoundment	Piezometer ID
Pond A	PZ-A1
	PZ-A2
	PZ-A3
Pond B	PZ-B1
	PZ-B2
Pond C	PZ-C1
	PZ-C2

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, exterior toes of slopes, and crests of slopes for the applicable CCR surface impoundments. S&L 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.

S&L observed accessible pipes running through and below the dikes and ponds. S&L 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 CCR surface impoundments since the previous annual inspection.

3 CONCLUSION

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