2025 Annual Landfill Inspection Report

Amos FGD Landfill

John E. Amos Plant

Appalachian Power Company

Putnam County, West Virginia

December 2025

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2025 Annual Landfill Inspection Report

John E. Amos Plant: FGD Landfill

Inspection Date: November 12, 2025

Document Number: GERS-25-037

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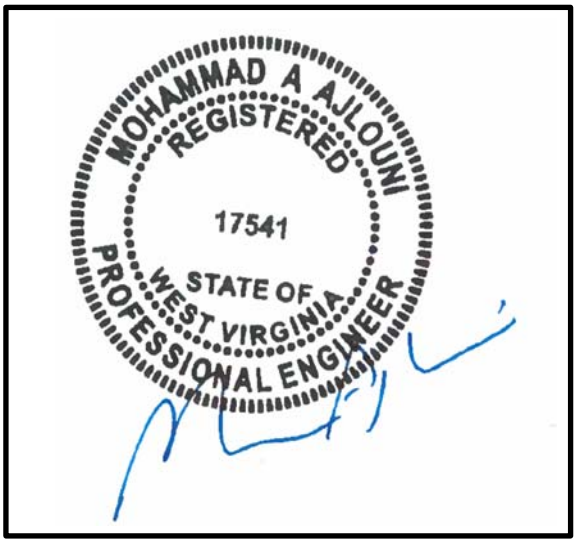

I certify to the best of my knowledge, information and belief the information contained in this report meets the requirements of 40 CFR § 257.84(b).

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1.0 INTRODUCTION

This report was prepared by AEPSC-Geotechnical Engineering Services (GES) section, in part, to fulfill requirements of 40 CFR 257.84 and to provide the John E. Amos Plant an evaluation of the facility.

Mr. Brian G. Palmer and Mr. Mohammad Ajlouni, P.E. performed the 2025 inspection of the FGD Landfill at the John E. Amos Plant. This report is a summary of the inspection and an assessment of the general condition of the facility. Mr. Derrick Brumfield and Jack Smith, both from the Amos landfill staff, were the contact for the inspection. The inspection was performed on November 12, 2025. Weather conditions were mostly sunny and the temperature ranging from the low 50°F to upper 60°F during the inspection. There was a total of 1.25 inches of precipitation within the preceding seven days. Including approximately 0.2 inches of precipitation that fell as approx. 0.5-in of snow the previous day.

2.0 DESCRIPTION OF LANDFILL

The Amos FGD Landfill is permitted with nine (9) construction and filling sequences. Currently only Sequences 1 through 4, consisting of approximately 100 acres have been developed and contain CCR material. Sequences 1 through 3 drain to the South Valley leachate /sedimentation basin complex.

Sequence 4 was completed construction in 2019 and was placed into service. Sequence 4 along with future sequences (5-9) will drain to the North Valley leachate/sedimentation basin complex.

Approximately 16.3 acres within the South Valley had final cover cap installed in 2018 to 2019. An additional 9 acres of the South Valley slopes had final cover installed in 2022.

The landfill utilizes sediment collection ponds and two leachate holding basins at the mouth of each drainage area (North and South Areas). The sediment collection ponds are used to collect watershed runoff that is not leachate or CCR contact water. The leachate holding basins collect and contain leachate and contact water generated from the landfill. An additional sediment collection pond is located on the east side of the landfill along

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

A review of available information regarding the status and condition of the Landfill which includes files available in the operating record, such as design and construction information, previous 7-day inspection reports, and previous annual inspections has been conducted.

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

4.1 Changes In Geometry Since Last Inspection (257.84(b)(2)(i))

There has been no changes to the geometry of the landfill since the 2024 inspection (07/29/2024) other than the placement of additional waste.

4.2 Volume (257.84(b)(2)(ii))

It is estimated that the approximate volume of CCR contained in the Landfill at the end of October 2025 to be approximately 11,906,000 CY.

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.

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, scraps, 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 Landfill 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, temporary and final covers, drainage features, leachate ponds, open cells, and appurtenances such as chimney drains.

1. The Final Cover Vegetation on the east slope of the South Valley fill area (Sequence 1 & 2) appeared to be in good condition (Photograph #1).
2. The temporary armoring and erosion controls on the Slope Drain (SD-1) on the east slope appeared in fair condition (Photograph #2).
3. The temporary cover vegetation on the east slope of the South Valley was visually in good condition (Photograph #3) and areas that were recently seeded had adequate erosion and sediment controls to minimize erosion while vegetation is established (Photograph #4).
4. The active area at the top of the South Valley fill appeared in good condition with the waste well compacted and graded to drain to the Chimney drains which showed no signs of standing water (Photograph #5).
5. The interim slope between the South Valley fill (Sequence 1 & 2) and the North Valley fill (Sequence 4) appear to be in good condition with material tracked in to minimize erosion, interim soil cover in place (Photograph #6).
6. The transition from the active fill to the temporary cover appeared good condition with the waste surface compacted and tracked in and the temporary cover soil creating drainage channel to convey stormwater (Photograph #7).
7. The erosion and sediment controls to minimize erosion in areas that were recently seeded appeared adequate while vegetation is established for temporary cover on the south slope of the South Valley (Photograph #8).
8. The vegetative cover on the temporary cover on the west slope of the South Valley appeared in good condition (Photographs #9 & #11).
9. The Slope Drain (SD-3) at the southwest corner of the South Valley has temporary vegetation and armoring for erosion controls were visually in fair condition (Photograph #10).
10. The vegetation on the final cover above the access road on the south slope appeared in good condition (Photograph #12).
11. The access road along the south slope appeared well graded and maintained as part of the final cover system (Photograph #13).
12. The access roads and perimeter drainage channels appeared in satisfactory condition (Photograph #14)
13. The final cover in the South Valley (Sequence 3) is well vegetated (Photographs #15 and #18) with the perimeter drainage channels in good condition (Photographs #16 & 17).
14. The South Valley Sedimentation Pond and discharge structure appeared to be in good condition (Photographs #19 & #20).
15. The liner and embankment of the South Valley Leachate Pond appeared to be in good condition (Photographs #21 & #22).
16. The Sequence 4 active fill area appeared to be in good condition with material compacted, graded to chimney drains and no signs of standing water (Photograph #23).
17. The interim slope of Sequence 4 with future North Valley expansions appeared well vegetated with no signs of erosion or movement observed (Photograph #24).
18. The Plateau Sedimentation Pond was visually in good condition (Photograph #25)
19. The lower embankment of Sequence 4 appeared well vegetated with no signs of erosion or movement (Photograph #26).
20. The visual observation of the North Valley Sediment Pond indicated that it was in good condition (Photographs #27 & 28).
21. The soil nail walls in the North Valley Pond Complex appeared to be in good condition with no signs of weathering or excessive cracks based on a visual observations observed from the ground (Photographs #29 & #30).
22. The North Leachate Pond liner and embankment appeared to be in good condition (Photographs #31 & #32).
23. The stormwater outfalls at both South Valley Pond Complex (Photograph #33) and the North Valley Pond Complex (Photograph #34) appeared in satisfactory condition.

Overall, the facility is in good condition. The landfill is functioning as intended with no signs of potential structural

weakness or conditions which are disrupting to the safe operation of the landfill. Inspection Photographs are included in Appendix A. Additional pictures taken during the inspection can be made available upon request. A map presenting the site as Figure 2.

4.5 Changes That Effect Stability or Operation (257.84(b)(2)(iv))

Based on interviews with plant personnel and field observations there are no changes that affect the stability and operation of the Landfill.

5.0 SUMMARY OF FINDINGS

5.1 General Observations

The following general observations were identified during the visual inspection:

1) In general, the landfill is functioning as intended with the active disposal area placing and compacting CCR material that is sloped to drain towards the bottom ash chimney drains that conveys the contact water to the leachate collection system.

2) The Plant is performing regular maintenance and inspections as required. Vegetation is well established for the embankments comprising the leachate holding basins, sediment collection ponds and temporary soil cover slopes. Other erosion and sedimentation controls are in place and being actively maintained.

5.2 Maintenance Items

No specific maintenance items were observed as part of the inspection, but the following maintenance items are recommended as part of regular operations:

3) Continue routine mowing of final and temporary covers to ensure proper vegetative growth.

4) Continue to address issues like animal burrows and erosion rills as they are found.

Contact GES for specific recommendations regarding any repairs.

5.3 Items To Monitor

The following items were identified during the visual inspection as items to be monitored, see inspection map for locations:

5) Continue to monitor the flowrate and appearance of flow from the leachate collection pipes and underdrain pipes entering the respective ponds for any unusual changes.

5.4 Deficiencies (257.84(b)(2)(iii))

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.

No deficiencies were found during the 2025 visual landfill annual inspection.

Figures

DRAWING NUMBER:

FIGURE 1

APPALACHIAN POWER CO.

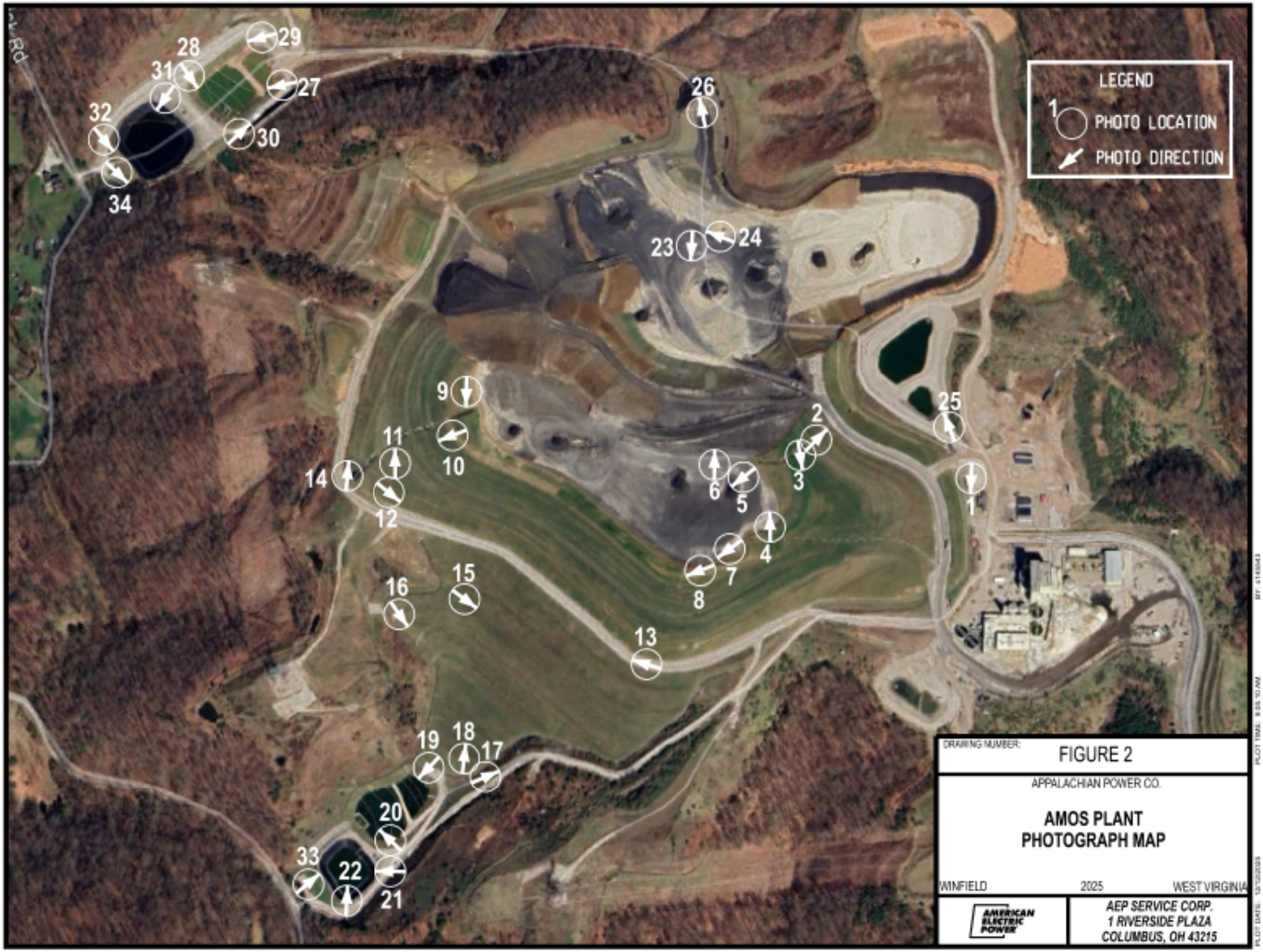
AMOS PLANT
SITE MAP

WINFIELD 2025 WEST VIRGINIA

AMERICAN ELECTRIC POWER

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

PLOT DATE: 12/12/2025
CROSS REFS:
PLOT TIME: 9:07:12 AM
BY: a145843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DRAWING NUMBER:
FIGURE 2
APPALACHIAN POWER CO.
AMOS PLANT
PHOTOGRAPH MAP
WINFIELD
2025
WEST VIRGINIA
AMERICAN ELECTRIC POWER
AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

Appendix A
Inspection Photographs

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 1

Notes: General condition of final cover along toe on east side landfill. Looking south

N38 28.975 W81 51.004

Photo #: 2

Notes: General condition slope drain (SD-1) on temporary cover draining to double culverts under haul road.

N38 28.988 W81 51.129

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 3

Notes: General condition of cover soil on bench and slope on east side of landfill looking south

N38 28.977 W81 51.139

Photo #: 4

Notes: General condition of recently seeded temporary cover on east side of landfill looking north

N38 28.929 W81 51.166

AEP GES Dam Inspection

Plant Name: Amos

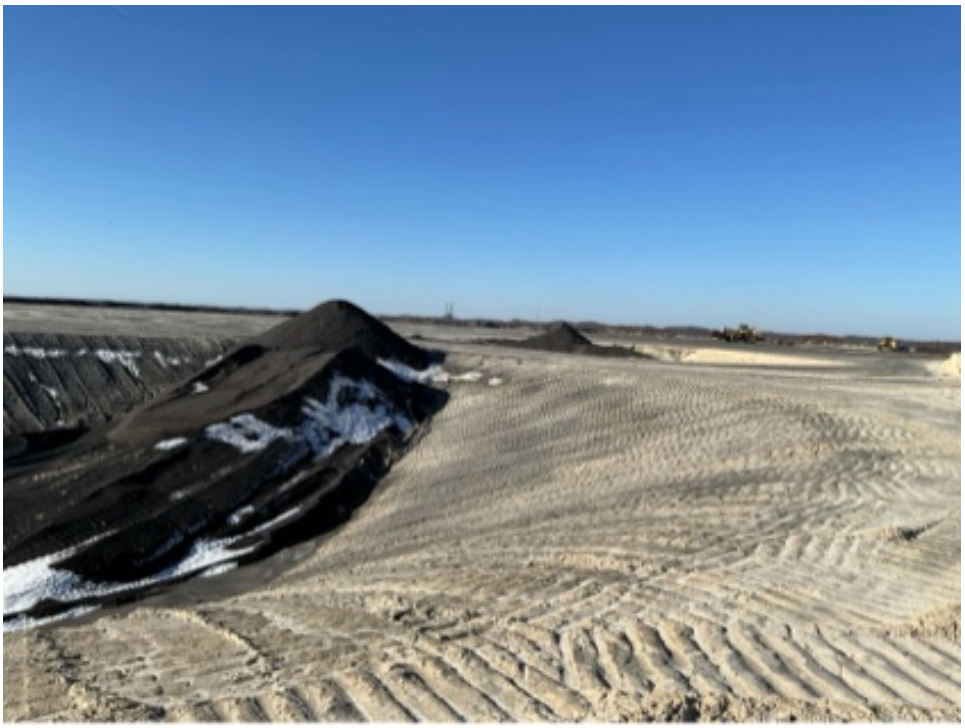
Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 5

Notes: General condition of working face in South Valley area looking west



N38 28.962 W81 51.194

Photo #: 6

Notes: General condition of interim slope from South Vally to Sequence 4 working face. Looking north.

N38 28.967 W81 51.198

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 7

Notes: General condition of edge of temporary cover with placed CCR forming stormwater control channel

N38 28.912 W81 51.199

Photo #: 8

Notes: General condition of bench on temporary cover looking west.

N38 28.898 W81 51.228

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 9

Notes: General condition of temporary cover with established vegetation to the right and recent seeding to the left

N38 29.029 W81 51.427

Photo #: 10

Notes: General condition slope drain (SD-3) on temporary cover draining west side.

N38 29.001 W81 51.441

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 11

Notes: General condition of temporary cover soil in South Valley looking north.

N38 28.974 W81 51.489

Photo #: 12

Notes: General condition of vegetation on area with final cover. Looking southeast.

N38 28.963 W81 51.494

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 13

Notes: General condition of vegetation and roadway with final cover. Looking northwest.

N38 28.842 W81 51.278

Photo #: 14

Notes: General condition of west access road and drainage channel. Final cover vegetated slope on right. Looking north.

N38 28.973 W81 51.529

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 15

Notes: General condition of slope and vegetation of final cover on South Valley Slope.

N38 28.889 W81 51.430

Photo #: 16

Notes: General condition north perimeter drainage channel along final cover looking down slope.

N38 28.878 W81 51.489

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 17

Notes: General condition south perimeter drainage channel along final cover looking down slope.

N38 28.769 W81 51.422

Photo #: 18

Notes: General condition of vegetation on final cover in South Valley Area.

N38 28.775 W81 51.428

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 19

Notes: General condition of the South Valley Sedimentation Pond.

N38 28.774 W81 51.463

Photo #: 20

Notes: General condition of the South Valley Sedimentation Pond discharge structure.

N38 28.720 W81 51.497

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 21

Notes: General condition of the South Valley Leachate Pond

N38 28.707 W81 51.497

Photo #: 22

Notes: General condition of downstream embankment below the South Valley Leachate Pond.

N38 28.681 W81 51.536

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 23

Notes: General condition of working face in Sequence 4. South Valley fill in the background.

N38 29.124 W81 51.237

Photo #: 24

Notes: General condition of interim slope of Sequence 4.

N38 29.128 W81 51.211

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 25

Notes: General condition of Plateau Sediment Pond.

N38 29.005 W81 51.023

Photo #: 26

Notes: General condition of Sequence 4 embankment slope with leachate line.

N38 29.229 W81 51.233

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 27

Notes: General condition of North Valley Sedimentation Pond.

N38 29.247 W81 51.594

Photo #: 28

Notes: General condition of North Valley Sedimentation Pond discharge structure.

N38 29.246 W81 51.675

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 29

Notes: General condition of the north soil nail wall at theNorth Valley Pond Complex.

N38 29.276 W81 51.609

Photo #: 30

Notes: General condition of the south soil nail wall at theNorth Valley Pond Complex.

N38 29.207 W81 51.637

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 31

Notes: General condition of North Valley Leachate Pond.

N38 29.232 W81 51.694

Photo #: 32

Notes: General condition of downstream embankment of the North Valley Leachate Pond.

N38 29.194 W81 51.745

AEP GES Dam Inspection

Plant Name: Amos

Inspector: M. Ajlouni/B. Palmer

Unit: FGD Landfill

Date: 12 November 2025

Photo #: 33

Notes: General condition of the stormwater outfall at the South Valley Pond Complex.

N38 28.689 W81 51.571

Photo #: 34

Notes: General condition of the stormwater outfall at the North Valley Pond Complex.

N38 29.167 W81 51.730