



OHIO VALLEY ELECTRIC CORPORATION

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WRITER'S DIRECT DIAL NO:
740-289-7259

February 1, 2025

Submitted Electronically

Ms. Anne Vogel, Director
Ohio Environmental Protection Agency
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, OH 43216-1049

Dear Ms. Vogel:

**Re: Ohio Valley Electric Corporation
Kyger Creek Station's 2024 Annual CCR Landfill
Inspection Posting Notification**

As required by 40 CFR 257.106(g)(7) and 257.84(b), the Ohio Valley Electric Corporation (OVEC) is providing notification to the State Director of the Ohio Environmental Protection Agency that a qualified professional engineer has completed the 2024 Annual CCR Landfill Inspection for the OVEC's Kyger Creek Station. The inspection report has been placed in the facility's operating record as well as on the company's publicly accessible internet site, which can be viewed at <http://www.ovec.com/CCRCompliance.php>.

If you have any questions, or require any additional information, please call me at (740) 289-7259.

Sincerely,

A handwritten signature in black ink that reads "Jeremy Galloway". The signature is written in a cursive, flowing style.

Jeremy Galloway
Environmental Specialist

JDG:zsh



**2024 CCR Rule - Landfill
Kyger Creek Landfill Inspection**



Kyger Creek Generating Station
Cheshire, Ohio
Gallia County

January 19, 2025

Prepared for:


Ohio Valley Electric Corporation
Piketon, Ohio

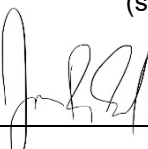
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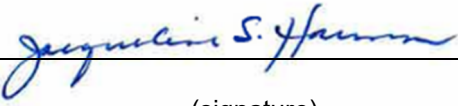
Stantec Consulting Services Inc.
Cincinnati, Ohio

Sign-off Sheet

This document entitled 2024 CCR Rule – Landfill, Kyger Creek Landfill Inspection was prepared by Stantec Consulting Services Inc. (“Stantec”) for the account of Ohio Valley Electric Corporation (OVEC) (the “Client”). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec’s professional judgment in light of the scope, schedule, and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use that a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by 
(signature)

Gokul Katri, E.I.T.
Reviewed by 
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James R. Swindler Jr., P.E.
Reviewed by 
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Jacqueline S. Harmon, P.E.



**2024 CCR RULE – LANDFILL
KYGER CREEK LANDFILL INSPECTION**

Overview
January 19, 2025

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**2024 CCR RULE – LANDFILL
KYGER CREEK LANDFILL INSPECTION**

Overview
January 19, 2025

1.0 OVERVIEW

Stantec Consulting Services Inc. (Stantec) performed the annual landfill inspection of the existing coal combustion residuals (CCR) landfill at the Kyger Creek Generating Station in Cheshire, Ohio on October 22, 2024.

This annual landfill inspection is intended to fulfill the requirements of 40 CFR 257.84(b) for the *Disposal of Coal Combustion Residuals from Electric Utilities* rule (CCR Rule) signed by the U.S. Environmental Protection Agency (EPA) Administrator on December 19, 2014, and published in the Federal Register on April 17, 2015.

The landfill is a residual solid waste facility (270834, RSWL018814) under the regulations of the Gallia County General Health District (GCGHD) – RW3L and the Ohio Environmental Protection Agency (Ohio EPA), Division of Materials and Waste Management (DMWM). Below is a summary of conditions for the day of the inspection:

Date performed:	October 22, 2024
Weather:	Mostly sunny, 61°F - 79°F
Rainfall over last 72 hours:	October 19, 2024 – 0.00 inch October 20, 2024 – 0.00 inch October 21, 2024 – 0.00 inch October 22, 2024 – 0.00 inch

Precipitation data was collected by the National Centers for Environmental Information, NOAA, for Gallipolis, Ohio US (USC00333029), approximately nine miles southwest of the landfill. Precipitation during the 72-hour period prior to the site visit was about 0.00 inches.

Stantec’s team that performed the fieldwork included:

- Jacqueline Harmon, P.E., Principal, Project Manager
29 years of experience in geotechnical engineering, including pump stations, levees, and CCR storage facility design, closure, and operation.
- Jim Swindler, P.E., Senior Geotechnical Engineer
19 years of experience in geotechnical engineering, including levees/dams, infrastructure, and CCR storage facility design, closure, and operation.

The estimated volume of CCRs contained in the landfill is 4,873,336 cubic yards as of the end of 2024. Inspections are being performed by plant personnel according to the CCR Rule at least once every seven days. Weekly reports performed between November 2, 2023 and October 24, 2024 were provided for review (OVEC, 2024). No quarterly GCGHD inspection reports were provided or available on the Ohio EPA eDocument website for review.

2024 CCR RULE – LANDFILL KYGER CREEK LANDFILL INSPECTION

Description of Kyger Creek Landfill
January 19, 2025

Fieldwork was coordinated with Paul Hutchins, Kyger Creek Station's Landfill Engineer and Dick Shouldis, Kyger Creek Station's Civil Coordinator. Mr. Hutchins tracks the maintenance needs and activities through the weekly and monthly inspections. Jeremy Galloway and Zachary Hammond of Ohio Valley Electric Corporation's (OVEC) Environmental Affairs group accompanied Stantec's personnel during the inspection. Observations were briefly discussed with onsite personnel during and after completion of the field activities.

2.0 DESCRIPTION OF KYGER CREEK LANDFILL

The Kyger Creek Generating Station, located in Cheshire, Gallia County, Ohio, is a coal combustion power plant owned and operated by the OVEC. Kyger Creek Station's five units began producing electricity in 1955 and have a total generating capacity of 1,085 megawatts (OVEC, 2016).

The CCR produced by the Kyger Creek Generating Station are placed in the Kyger Creek restricted waste landfill. OVEC received its restricted waste permit and approval from the OHIO EPA to begin construction in April 2009. The landfill is a 98-acre Class III residual solid waste facility, divided into five phases, with a capacity of 20.4 million cubic yards (Hull & Associates, Inc., 2008a and 2008b) that includes:

- A composite liner system consisting of an 18-inch recompacted soil liner, 30-mil polyvinyl chloride (PVC) geomembrane in Phases 1, 3, 4, and 5 with a 40-mil linear low-density polyethylene (LLDPE) geomembrane in Phase 2.
- A leachate collection system, including two lined leachate collection ponds,
- Contact and non-contact surface water management systems, including four sedimentation ponds, multiple sediment traps, drainage channels, and chimney drains,
- A groundwater monitoring system, and
- A final closure cap design.

Operation of the landfill began in 2010 with placement of Class III residual waste, including flue-gas-desulfurization (FGD) sludge, chloride purge steam filter cake, fly ash, and boiler slag. The landfill's design lifespan was estimated as 20 years (Hull & Associates, Inc., 2008a).

CCR is transported by conveyor to a stacking pad southeast of the landfill and/or trucked to the Kyger Creek Landfill. Based on conversations with site personnel, the ash is placed in the landfill at approximately 30-percent moisture. The ash is placed in roughly one-foot lifts and then compacted. At times, the fly ash is mixed with other material, such as gypsum, with no segregation of the material during placement.

In July 2020, the Ohio EPA Southeast District Office (SEDO) approved an alteration to the landfill's bottom liner system to meet the federal EPA CCR Rule, adding a polymer-enhanced reinforced geosynthetic clay liner (GCL) between the geomembrane/flexible membrane liner and the recompacted soil liner (Ohio EPA, 2020). In April 2022, the Ohio EPA SEDO approved an alteration to the bottom liner design of the landfill. The recompacted soil liner was removed, and a geotextile cushion layer was added between the base flexible membrane liner and the aggregate leachate drainage layer (Ohio EPA, 2022).

Phase 1 of the landfill is constructed and receiving CCR. Multiple ponds, both temporary and permanent, are associated with the landfill. See the reference drawings provided in Appendix C for pond locations and general landfill phasing. The ponds include:

2024 CCR RULE – LANDFILL KYGER CREEK LANDFILL INSPECTION

Observations

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- East Sedimentation Pond – a permanent pond located east of the landfill footprint.
- West Sedimentation Pond – a permanent pond located at the toe of the west slope of Phase 1.
- North Sedimentation Pond – a permanent pond proposed at the former clay borrow/topsoil stockpile area north of Phase 2. This pond will be constructed during Phase 2 construction.
- Leachate Collection Pond – a permanent pond located east of the landfill and adjacent to the East Sedimentation Pond.
- Interim Leachate Collection Pond – a temporary pond located within Phase 3 at the east end of Phases 1 and 2.
- Sediment Pond #1 – a temporary pond used during Phase 1 construction lying within the Phase 4 footprint. This pond has been capped.
- Sediment Pond #2 – a temporary pond located within the Proposed Clay Borrow area south of Phase 1.
- Temporary Contact Pond – a temporary pond located at the southeast end of Phase 2.

Stormwater sedimentation traps are located around the landfill footprint and were noted when observed during the site visit. Sedimentation trap locations are shown on the as-built map provided in Appendix C.

2.1 KYGER CREEK LANDFILL – PHASE 1

Phase 1, the active waste cell, is in the southwestern landfill footprint. A series of chimney drains lie west to east near the center of the phase and outlet into the Interim Leachate Collection Pond (Photo 1, Appendix B). Temporary soil cover has been placed and vegetated on the exterior slopes of Phase 1 where it is nearing final CCR grades. No final cover has been placed.

2.2 KYGER CREEK LANDFILL – PHASES 2 THROUGH 5

Phases 2, 3, 4, and 5 have yet to be constructed. Phase 2 has been used as a borrow area and is vegetated and inactive (Photo 2, Appendix B). A stockpile is located on the northern side of Phase 2. It is graded and hydroseeded.

Preconstruction activities for Phase 2 began in July 2022 with materials testing, regulatory submittals, and rough grading for the North Sedimentation Pond. Construction activities within the Phase 2 cell are scheduled for 2025. Sedimentation Trap #5 was removed in 2023, and erosion and sedimentation control measures installed.

The Interim Leachate Collection Pond (ILCP) is in the Phase 3 footprint (Photo 3, Appendix B). Phase 4's footprint includes the capped Sediment Pond #1. The contractor trailer and laydown yard are in the Phase 5 footprint. See Appendix C for the landfill's general phasing plan.

3.0 OBSERVATIONS

The following sections present observations made during the site visit within the Phase 1 footprint and pertinent water management ponds. Observations identify maintenance items but also include photograph and slope locations and items of interest. Refer to Appendix A for figures and the observation points along

2024 CCR RULE – LANDFILL KYGER CREEK LANDFILL INSPECTION

Observations
January 19, 2025

with the photographs and descriptions in Appendix B. Slopes noted were estimated using a rangefinder on a handheld GPS unit.

3.1 KYGER CREEK LANDFILL – PHASE 1

Phase 1 is the active cell. The paved haul road ends at the Phase 5 boundary shown on Figure 2 in Appendix A. Trucks hauling CCR access the active placement area from this point. Access around the perimeter of Phases 1 and 2 is maintained by graded dirt roads around the western half of the landfill. The following observations were made for Phase 1:

- The northeast outer temporary slope is mowed, vegetated, and uniform. Slopes in this area are estimated at 2.8H:1V (horizontal to vertical) (Points 6, 9, and 10, Appendix A; Photo 4 Appendix B).
- The south and southwest outer temporary slopes are mowed, vegetated, and uniform. Slopes in these areas are estimated to be 2.8H to 3H:1V (Photos 5 and 6, Appendix B).
- The east outer temporary slope has been hydroseeded and is uniform. Shallow erosion gulleys are present throughout the slope (Photos 7, 8, and 9; Appendix B).
- Exposed earth and visible CCR at the ground surface were observed on the northeast slope at the Phase 1/Phase 2 interface (Point 5, Appendix A; Photos 10 and 11, Appendix B). It appears the cause is not from erosion but due to equipment rutting.
- Rutting was noted on the crest of the northeast slope of the landfill (Point 7, Appendix A; Photo 12, Appendix B). The depth of the rutting is surficial and has not caused erosion of the crest or slope.
- Sparse vegetation cover was observed on the west slope near the West Sedimentation Pond upslope of the access road. Erosion and/or rutting is not present within this bare area (Photo 13, Appendix B).
- Active placement of CCR was not occurring on the day of the inspection, but the stockpile was observed from the northeast and east rims of active placement. CCR placement is in progress and thus there is no vegetation cover and grading in the active areas (Point 8, Appendix A; Photos 14 and 15, Appendix B).
- CCR placement at the east side is in progress. The stockpile did not have a uniform slope and erosion gulleys were observed at the interface of the hydroseed and ash surfaces (Photo 16, Appendix B).

3.2 WEST SEDIMENTATION POND

The West Sedimentation Pond was constructed as part of the initial Phase 1 site activities. Phase 1 stormwater accesses the pond through a headwall and five culverts on the east side of the dirt access road. The outlet of the culverts is released beyond the road's western edge and flows down to the West Sedimentation Pond. Access to the pond is a grassed path from the south to the southeastern corner of the pond. The following observations were made:

**2024 CCR RULE – LANDFILL
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Observations

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- Tall, dense vegetation with saplings along the south and west slopes prohibited a thorough inspection of those slopes (Photos 17 and 18, Appendix B).
- Two holes, possible animal burrows, approximately 6 inches diameter were observed on the crest of the west embankment (Photos 19 and 20, Appendix B).
- Multiple trees have taken root on the west slope with trunks varying in diameter of 4 to 6 inches (Points 11, 12, 13, and 14, Appendix A; Photos 18, 21, and 22; Appendix B).
- Dense vegetation and sediment accumulation at the inlet of the headwall prohibits the flow of stormwater from the west side of Phase 1 to the south side of the West Sedimentation Pond (Photos 23 and 24; Appendix B).

3.3 EAST SEDIMENTATION POND

The East Sedimentation Pond (Photo 25, Appendix B) was constructed as part of the initial Phase 1 site activities. It manages stormwater from the eastern paved haul road and the closed Sediment Pond #1. See Appendices A and C for a plan view. The following observations were made at the East Sedimentation Pond:

- Dense, woody vegetation obscured the inner slopes of the pond, which prevented a thorough inspection of those areas (Photos 26 and 27, Appendix B).

3.4 NORTH SEDIMENTATION POND

The North Sedimentation Pond lies north of the planned Phase 2 landfill (Photo 28, Appendix B). It manages the stormwater from the area north of Phase 1 where the planned Phase 2 landfill will be constructed. Observations made at the North Sedimentation Pond include:

- An erosion gully was noted from the top of the slope to the toe of the access road west of the pond (Point 1, Appendix A; Photo 29, Appendix B).
- A wet area was observed on the slope on the west side of the pond, near the midslope bench (Point 2, Appendix A; Photo 30, Appendix B).
- An erosion gully, approximately 3 to 5 feet deep, was noted from the top of the slope to the midslope bench at the access road on the south side of the pond. (Point 3, Appendix A; Photo 31, Appendix B).
- A soil stockpile was documented on the west side of the pond. It is unclear when the stockpile was placed and for what purpose (Point 4, Appendix A; Photo 32, Appendix B).
- The slope on the south side of the pond is bare and sparsely vegetated, resulting in numerous small erosion gullies (Photos 33, Appendix B).

**2024 CCR RULE – LANDFILL
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Observations
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3.5 INTERIM LEACHATE COLLECTION POND

The Interim Leachate Collection Pond is part of Phase 1 construction activities (Photo 34, Appendix B). It manages leachate from the active CCR landfill. Observations made at the Interim Leachate Collection Pond include:

- The guardrail along the paved access road on the north side of the Interim Leachate Collection Pond has significant erosion at the base of the posts, resulting in the posts pulling away from the roadway (Point 15, Appendix A; Photo 35, Appendix B).
- The south and east interior slopes, approximately 8 feet from the centerline of the crest, appear to be separating from the crest and moving toward the pond. The movement is measured to be around 8 feet. Evidence of this movement starts at Points 16 and 17 (Appendix A; Photo 36, Appendix B) and ends at Points 18, 19, and 20 (Appendix A; Photo 37, Appendix B).
- Erosion along the bank on the north side of the pond. The erosion is surficial. (Point 21, Appendix A; Photo 38, Appendix B).
- Erosion of the interior and exterior slopes at the southwest corner of the pond was observed at the interface of the riprap and slope overlying the 12-inch reinforced concrete pipe (RCP) (Point 22, Appendix A; Photo 39, Appendix B). Geotextile fabric is also exposed because of the erosion within the riprap (Photo 40, Appendix B).
- Dense vegetation growth along the exterior slopes of the embankments surrounding the pond prohibited a thorough inspection of those slopes (Photo 41; Appendix B).
- Water traversing the overflow structure could be heard, but the overflow structure could not be seen due to vegetation growth around the structure.

3.6 LEACHATE COLLECTION POND

The Leachate Collection Pond (Photo 42, Appendix B) is concrete lined and was constructed as part of the initial Phase 1 site activities. It manages leachate from the active CCR landfill. Inflows are piped from the Interim Leachate Collection Pond. See Appendix A for a plan view of the pond. The following observations were made during the site visit.

- The earthen slopes above the concrete appear well vegetated and uniform near the Leachate Collection Pond (Photo 43, Appendix B).
- The riprap seepage blankets on the west and southwest grass slope appear in good condition (Photos 44 and 45, Appendix B).

**2024 CCR RULE – LANDFILL
KYGER CREEK LANDFILL INSPECTION**

RECOMMENDATIONS

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4.0 RECOMMENDATIONS

The following recommendations are offered for the Kyger Creek Landfill. The recommendations are not listed in order of priority.

Stability Issues:

- The areas of instability documented around the West Sedimentation Pond in the previous year's inspection were not accessible because of dense vegetation growth. The slopes around the West Sedimentation Pond should be mowed and maintained to allow for regular monitoring of possible instability in these areas.
- A possible separation of the crest on the south and east embankments of the Interim Leachate Collection Pond is occurring. These areas should be mowed, maintained, and routinely monitored to determine if a stability issue exists.

Operational Issues:

- Maintain the vegetation along the interior and exterior slopes of the Interim Leachate Collection Pond, West Sedimentation Pond, and the East Sedimentation Pond. Address the interior and exterior erosion as needed to maintain integrity of the ponds.
- Continue to conduct field surveys to measure current topography and compare to design geometry. Regrade surface to conform to design if needed. Areas near final completion grade are recommended to be capped, closed, and vegetated. Further engineering evaluation of slope stability may be warranted, if deformations, steepened slopes, or sloughing indicate potential for significant instabilities.

Maintenance Issues:

- Backfill and protect the stormwater culvert outlets near the West Sedimentation Pond to protect the access road for Phase 1. Clear vegetation near the culvert headwall to maintain flow into the culverts.
- Regrade and repair erosion gullies as noted.
- Backfill the documented animal burrows with compacted native soils or a mud-pack of soil and cement, ensuring all voids are filled and the entrance(s) are properly sealed.

5.0 REFERENCES

Hull & Associates, Inc. (2009). "Ohio Valley Electric Corporation. Kyger Creek Plant Landfill, Phase 1 Construction Plans. Class III Residual Waste Facility. Cheshire, Ohio." Prepared for American Electric Power, Columbus, Ohio. March 19. Toledo, Ohio.

Hull & Associates, Inc. (2008a). Volume I of IV. Class III Residual Waste Permit to Install Application. Ohio Valley Electric Corporation. Kyger Creek Plant. Residual Waste Landfill. Gallia County, Cheshire, Ohio. Revised December.

Hull & Associates, Inc. (2008b). "Ohio Valley Electric Corporation. Kyger Creek Plant Landfill, Permit to

**2024 CCR RULE – LANDFILL
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REFERENCES

January 19, 2025

Install Plans. Class III Residual Waste Facility. Cheshire, Ohio.” Prepared for American Electric Power, Columbus, Ohio. November 20. Toledo, Ohio.

Ohio Environmental Protection Agency (Ohio EPA) (2022). Alteration Request – Bottom Liner Design – Approval. Letter from Mark Mansfield (Ohio EPA) to Gabriel Coriell (OVEC). Ohio Valley Electric Corporation. Kyger Creek Station Landfill. PTI – Long Term Approval. Residual Solid Waste Landfills. Gallia County. RSWL018814. April 13.

Ohio Environmental Protection Agency (Ohio EPA) (2020). Alteration Request – Bottom Liner Design – Approval. Letter from Mark Mansfield (Ohio EPA) to Gabriel Coriell (OVEC). Ohio Valley Electric Corporation. Kyger Creek Station Landfill. PTI – Long Term Approval. Residual Solid Waste Landfills. Gallia County. RSWL018814. August 11.

Ohio Environmental Protection Agency (Ohio EPA) (2009). Ohio Environmental Protection Agency, Permit to Install. FINAL. Application Number 06-08283. Received March 15, 2007. Ohio Valley Electric Corporation Kyger Creek Plant Landfill. New Residual Solid Waste Landfill. Effective Date: *not listed*.

Ohio Valley Electric Corporation (OVEC) (2024). <https://www.ovec.com/CCRKyger.php>. Accessed October 2024.

Ohio Valley Electric Corporation (OVEC) (2024). “Kyger Creek Landfill End of 2023 Landfill Topographic Map.” Drawing No. KYG- 270834-1-R16, Revision date February 14, 2024. NAD83/NAVD88 Ohio South.

Ohio Valley Electric Corporation (OVEC) (2016). Closure Plan. CFR 257.102(b). CCR Landfill. Kyger Creek Station. Cheshire, Ohio. October.

Ohio Valley Electric Corporation (OVEC) (2024). 7-Day Inspection Checklist. Kyger Creek Plant Landfill. Weekly reports for November 2, 2023, through October 24, 2024.

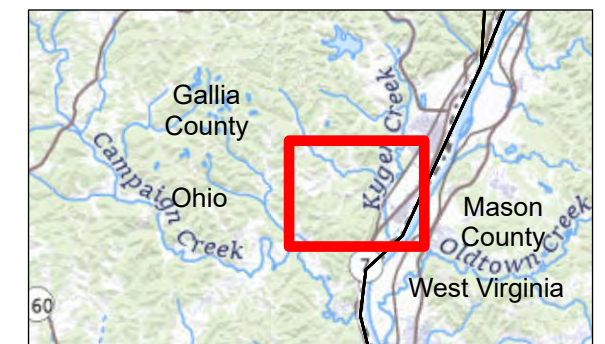
APPENDIX A

Figures



0 1,000 2,000 Feet
 1:14,400 (At original document size of 11x17)

- Notes**
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Base features - OSIP
 3. Ortho-imagery does not represent current conditions.



Project Location: 173410748
 Kyger Creek Station
 Gallia County, OH
 Prepared by ANP on 2025-01-14
 Technical Review by JS on 2025-01-14
 Independent Review by JSH on 2025-01-14

Client/Project:
 Ohio Valley Electric Corporation
 Kyger Creek Station

Figure No.
1

Title
**2024 Annual CCR Facility Inspections -
 Station Overview**

L:\173410748\2024\01\KygerCreek_2024_112425.mxd, Revised: 2025-01-14, KBV, A.P. Proder

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

**GPS Data Points
2024 Annual Inspection**

**Kyger Creek CCR Landfill
Gallia County, Ohio**

Point ID No.	Photo ID No(s).	Comment	Latitude	Longitude	Location
1	29	Access Road - Erosion Gulley	38.927619	-82.163974	North Sedimentation Pond
2	30	North Side - Wet Area	38.928370	-82.163420	North Sedimentation Pond
3	31	North Side - Erosion Gulley	38.928743	-82.162687	North Sedimentation Pond
4	32	West Side - Soil Stockpile	38.927997	-82.164512	North Sedimentation Pond
5	10,11	Visible CCR and Exposed Earth	38.926574	-82.167057	Phase 1/Phase 2
6	4	Northeast Slope - Slope Measurement	38.926356	-82.167140	Phase 1
7	12	Northeast Slope - Surface Rutting	38.926351	-82.166979	Phase 1
8	14,15	Phase Interface - New Vegetation Boundary	38.926336	-82.166887	Phase 1/Phase 2
9	N/A	Northeast Slope - Slope Measurement	38.925988	-82.166015	Phase 1
10	N/A	Northeast Slope - Slope Measurement	38.925366	-82.165383	Phase 1
11	18,21,22	West Slope - 5-inch Diameter Tree	38.925365	-82.170417	West Sedimentation Pond
12	18,21,22	West Crest - 6-inch Diameter Holes	38.925462	-82.170415	West Sedimentation Pond
13	18,21,22	West Slope - 4-inch Diameter Tree	38.925861	-82.170467	West Sedimentation Pond
14	18,21,22	West Slope - 4-inch Diameter Tree	38.926283	-82.170387	West Sedimentation Pond
15	35	Paved Access Road to Phase - South Side - Erosion at Guardrail	38.925921	-82.162378	Phase 2
16	36	South Internal Slope - Possible Slip	38.924878	-82.162438	Interim Leachate Collection Pond
17	36	South Internal Slope - Possible Slip	38.924843	-82.162505	Interim Leachate Collection Pond
18	37	East Internal Slope - Possible Slip	38.925012	-82.162313	Interim Leachate Collection Pond
19	37	East Internal Slope - Possible Slip	38.925181	-82.162290	Interim Leachate Collection Pond
20	37	East Internal Slope - Possible Slip	38.924990	-82.162317	Interim Leachate Collection Pond
21	33	North External Slope - Erosion Gulley	38.925409	-82.162393	Interim Leachate Collection Pond
22	33	South Side - Exposed Fabric	38.924730	-82.162850	Interim Leachate Collection Pond

APPENDIX B

Photographic Log



Photo 1
Phase 1 – Surface and chimney drains.



Photo 2
Phase 2 – Historic soil borrow area.



Photo 3
Interim Leachate Collection Pond



Photo 4, Point 6
Phase 1 – Northeast temporary
slope, looking southeast.



Photo 5
Phase 1 – South temporary
slope, typical.



Photo 6
Phase 1 – Southwest
temporary slope, typical.



Photo 7
Phase 1 – East outer temporary slope hydroseed cover, typical.



Photo 8
Phase 1 – East outer temporary slope, erosion gully in recently hydroseeded area.



Photo 9
Phase 1 – East outer temporary slope.



Photo 10, Point 5
Phase 1 northeast slope at the
Phase 2 interface, exposed ash
due to equipment rutting.



Photo 11, Point 5
Phase 1 northeast slope at the
Phase 2 interface, exposed ash
due to equipment rutting.



Photo 12, Point 7
Phase 1 northeast slope,
surficial rutting along the crest.



Photo 13

Phase 1 west slope at the West Sedimentation Pond, sparse vegetation cover with no rutting or erosion.



Photo 14, Point 8

Phase 1 surface conditions on northeast side, looking east.



Photo 15, Point 8

Phase 1 surface conditions on the northeast side at the edge of placement, looking south.



Photo 16

Phase 1 east slope edge of placement. An erosion gully is present at the interface of the new hydroseed placement.



Photo 17

West Sedimentation Pond – dense vegetation and saplings along west and south slopes.



Photo 18, Points 11, 12, 13, and 14

West Sedimentation Pond– dense vegetation and saplings along west and south slopes.



Photo 19
West Sedimentation Pond –
Possible animal burrow in the
crest of the west embankment.



Photo 20
West Sedimentation Pond –
Possible animal burrow in the
crest of the west embankment.



**Photo 21, Points 11, 12, 13,
and 14**
West Sedimentation Pond –
Approximately 6-inch
diameter tree growing in west
exterior slope.



**Photo 22, Points 11, 12, 13,
and 14**
West Sedimentation Pond –
Approximately 5-inch
diameter tree growing in west
exterior slope.



Photo 23
Phase 1 – West Slope at West
Sedimentation Pond –
Vegetation growth and
sediment buildup at outlet of
drain structure.



Photo 24
Phase 1 – West Slope at West
Sedimentation Pond –
Vegetation growth and
sediment buildup at inlet of
drain structure.



Photo 25
East Sedimentation Pond –
looking east to west.



Photo 26
East Sedimentation Pond –
dense vegetation growth along
the perimeter of the pond
along the east and north sides.



Photo 27
East Sedimentation Pond –
dense vegetation growth along
the perimeter of the pond
along the east and north sides.



Photo 28
North Sedimentation Pond –
looking south to north.



Photo 29, Point 1
North Sedimentation Pond –
erosion gulley on access road
from the top of the slope to its
toe.



Photo 30, Point 2
North Sedimentation Pond –
wet area on the east side of
the pond.



Photo 31, Point 3
North Sedimentation Pond –
erosion gullies from the top of
the slope to the bench at the
midslope on the south side of
the pond.



Photo 32, Point 4
North Sedimentation Pond –
soil stockpile on the west side
of the pond.



Photo 33, Points 21 and 22
North Sedimentation Pond –
south slope of pond is bare –
sparsely vegetated with
multiple erosion gullies.



Photo 34
Interim Leachate Collection
Pond – south looking north.



Photo 35, Point 15
Interim Leachate Collection
Pond – guardrail along the
paved access road on the north
side of the pond has pulled
away from the roadway.



Photo 36, Points 16 and 17
Interim Leachate Collection
Pond – Separation at crest in
the south embankment.



Photo 37, Points 18, 19, and 20

Interim Leachate Collection Pond – Separation at crest in the east embankment.



Photo 38

Interim Leachate Collection Pond – Erosion on north side of the pond.



Photo 39

Interim Leachate Collection Pond – Erosion of the interior/exterior slope at the crest/riprap interface.



Photo 40
Interim Leachate Collection
Pond – Exposed geotextile
fabric exposed at exterior
riprap.



Photo 41
Interim Leachate Collection
Pond – Dense vegetation
growth on exterior slopes.



Photo 42
Leachate Collection Pond –
Northwest looking southeast.



Photo 43
Leachate Collection Pond –
Earthen slopes.



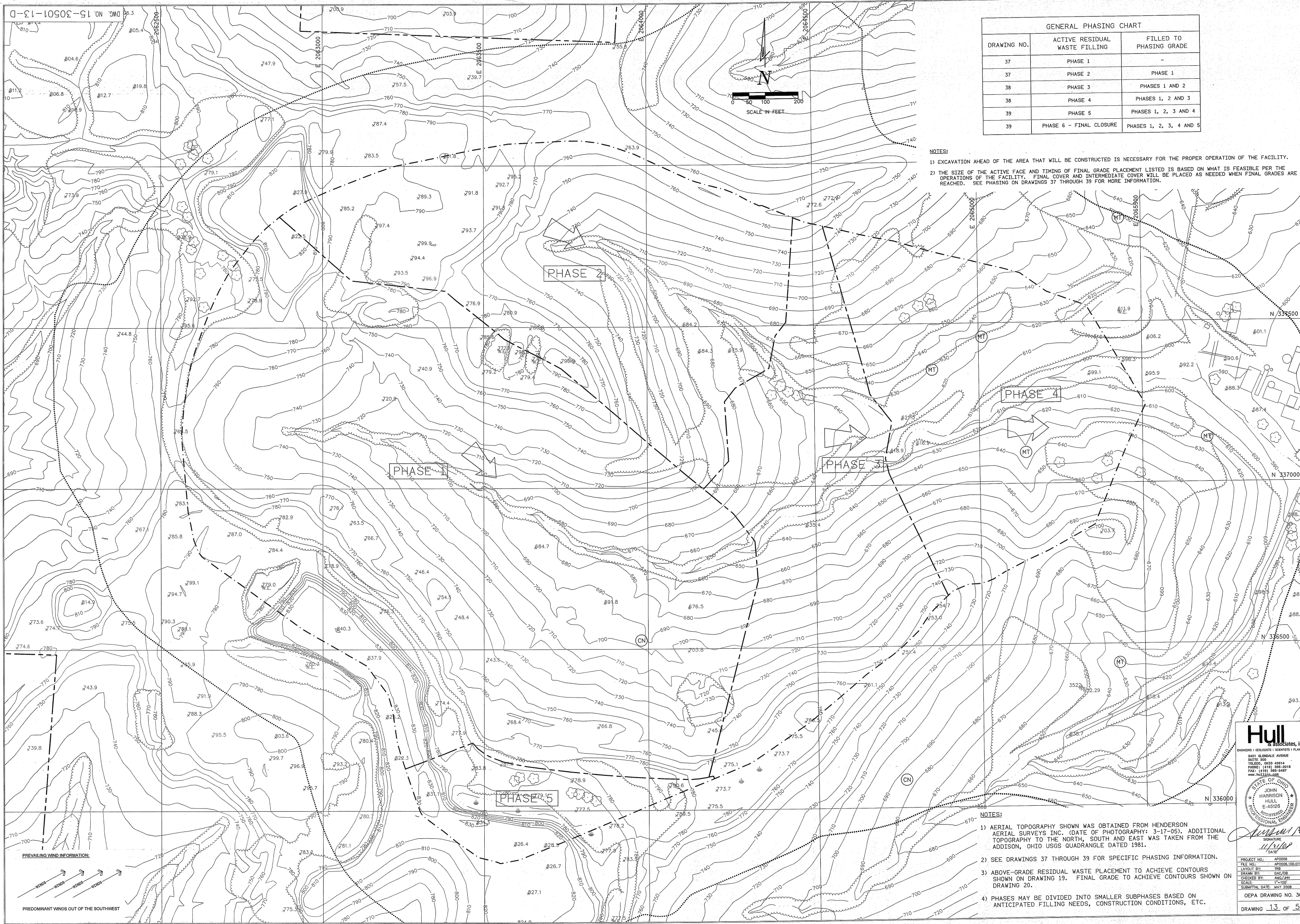
Photo 44
Leachate Collection Pond –
Riprap coverage on the west
slope.



Photo 45
Leachate Collection Pond –
Riprap coverage on the
southwest slope.

APPENDIX C

Reference Drawings



GENERAL PHASING CHART		
DRAWING NO.	ACTIVE RESIDUAL WASTE FILLING	FILLED TO PHASING GRADE
37	PHASE 1	-
37	PHASE 2	PHASE 1
38	PHASE 3	PHASES 1 AND 2
38	PHASE 4	PHASES 1, 2 AND 3
39	PHASE 5	PHASES 1, 2, 3 AND 4
39	PHASE 6 - FINAL CLOSURE	PHASES 1, 2, 3, 4 AND 5

NOTES:
 1) EXCAVATION AHEAD OF THE AREA THAT WILL BE CONSTRUCTED IS NECESSARY FOR THE PROPER OPERATION OF THE FACILITY.
 2) THE SIZE OF THE ACTIVE FACE AND TIMING OF FINAL GRADE PLACEMENT LISTED IS BASED ON WHAT IS FEASIBLE PER THE OPERATIONS OF THE FACILITY. FINAL COVER AND INTERMEDIATE COVER WILL BE PLACED AS NEEDED WHEN FINAL GRADES ARE REACHED. SEE PHASING ON DRAWINGS 37 THROUGH 39 FOR MORE INFORMATION.

LEGEND - EXISTING

- PROPERTY LINE
- 10-FOOT CONTOUR INTERVAL
- 745.6 SPOT ELEVATION
- TREE LINE
- BUILDING
- (MT) MORGANTOWN SANDSTONE SPRING
- (CN) CONNELLSVILLE SANDSTONE SPRING

LEGEND - PROPOSED

- WASTE LIMIT
- FILL PROGRESSION
- PREVAILING WIND DIRECTION
- PHASE DIVISION LINE
- FACILITY BOUNDARY / AREA OF DISTURBANCE

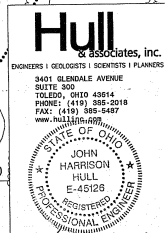
REFERENCE DRAWINGS

DATE	NO.	DESCRIPTION	APPD.
11/29/08	D	NOD 3 RESPONSE	JHH
11/29/08	C	NOD 2 RESPONSE	JHH
11/29/07	B	NOD 1 RESPONSE	JHH
8/29/07	A	ISSUED FOR PERMIT	JHH

REVISIONS

NO.	DATE	DESCRIPTION
1	11/29/08	ISSUED FOR PERMIT

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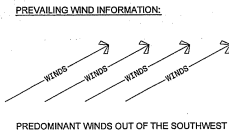
PROJECT NO. APO008
 FILE NO. APO008.002.016
 DRAWN BY: GAC/208
 CHECKED BY: AMH/208
 SCALE: 1"=100'
 SUBMITTAL DATE: MAY 2008
 OSPA DRAWING NO. 3G
 DRAWING 13 OF 56

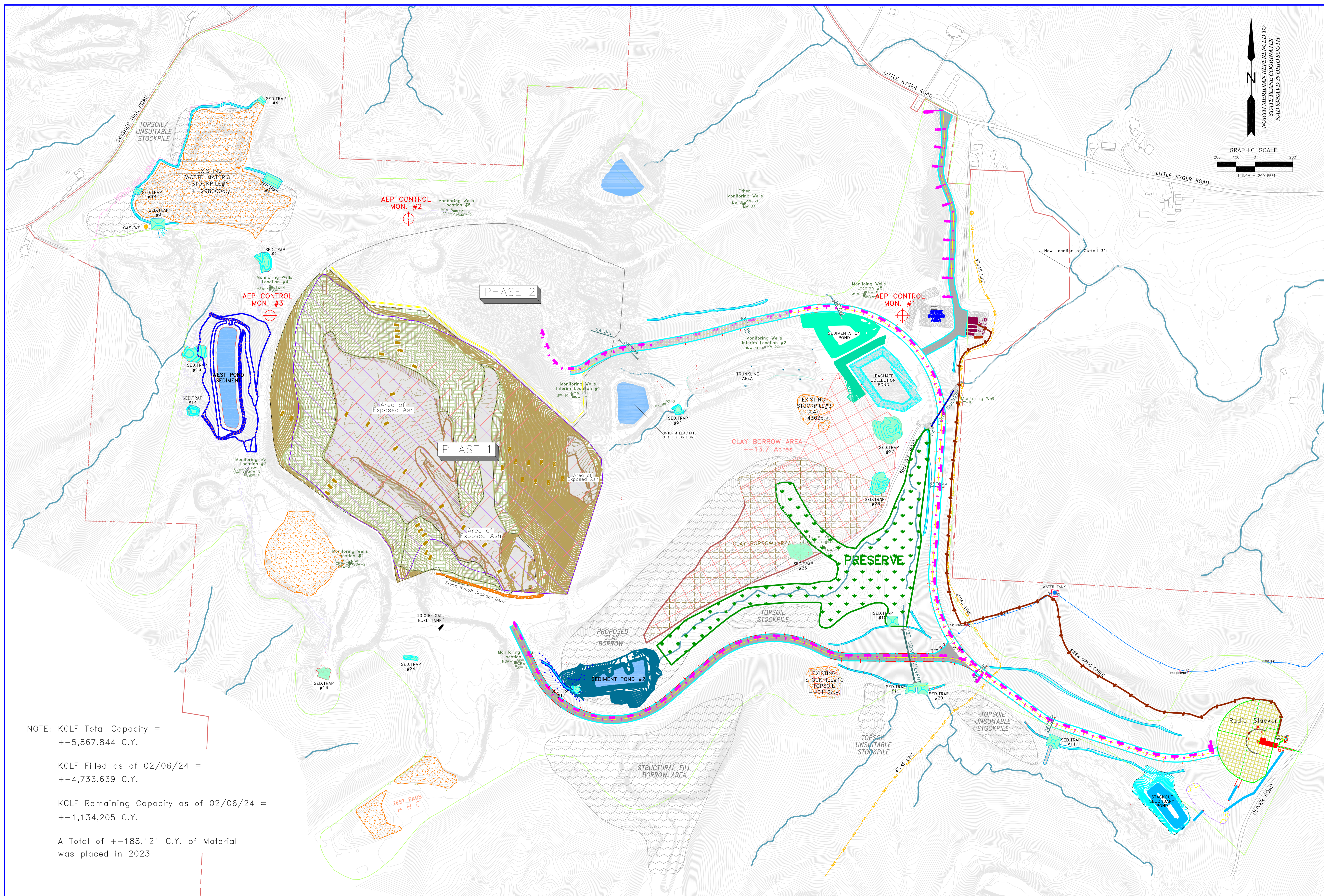
OHIO VALLEY ELECTRIC CORP.
 KYGER CREEK PLANT
 CHESHIRE OHIO
 KYGER CREEK PLANT LANDFILL
GENERAL PHASING PLAN

DWG. NO. 15-30501-13-D
 SCALE: 1"=100'
 CIVIL ENGINEERING DIVISION

DATE: 11/29/08
 APPROVED BY: [Signature]
 1 RIVERSIDE PLAZA
 COLUMBUS, OH 43215

- NOTES:
- 1) AERIAL TOPOGRAPHY SHOWN WAS OBTAINED FROM HENDERSON AERIAL SURVEYS INC. (DATE OF PHOTOGRAPHY: 3-17-05). ADDITIONAL AERIAL TOPOGRAPHY TO THE NORTH, SOUTH AND EAST WAS TAKEN FROM THE ADDISON, OHIO USGS QUADRANGLE DATED 1981.
 - 2) SEE DRAWINGS 37 THROUGH 39 FOR SPECIFIC PHASING INFORMATION.
 - 3) ABOVE-GRADE RESIDUAL WASTE PLACEMENT TO ACHIEVE CONTOURS SHOWN ON DRAWING 19. FINAL GRADE TO ACHIEVE CONTOURS SHOWN ON DRAWING 20.
 - 4) PHASES MAY BE DIVIDED INTO SMALLER SUBPHASES BASED ON ANTICIPATED FILLING NEEDS, CONSTRUCTION CONDITIONS, ETC.





- LEGEND**
- Denotes O.V.E.C. Boundary Line
 - Denotes Permit Limits
 - Denotes Super Silt Fence
 - Denotes Diversion Ditch
 - Denotes Gas Line
 - Denotes Water Line
 - Denotes Fiberoptic Line
 - Denotes Culverts
 - Denotes Creeks/Drains
 - Denotes Woven Wire Fence
 - Denotes Guardrail 2008
 - Denotes Guardrail 2009
 - Denotes Waste Limits
 - Denotes Sediment Traps
 - Denotes Sediment Pond
 - Denotes Preserve Area
 - Denotes Actual Clay Borrow Area
 - Denotes Rip Rap
 - Denotes Pavement
 - Denotes Gravel
 - Denotes Concrete
 - Denotes Phase 1 Limits of Waste
 - Denotes End of 2023 Contours
 - Denotes 2024 Work Phase
 - Denotes 2023 Work Phase
 - Denotes Transitional or Protective Cover
 - Denotes Storm Drainage Berm

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NOTE: KCLF Total Capacity = +-5,867,844 C.Y.
 KCLF Filled as of 02/06/24 = +-4,733,639 C.Y.
 KCLF Remaining Capacity as of 02/06/24 = +-1,134,205 C.Y.
 A Total of +-188,121 C.Y. of Material was placed in 2023

OHIO VALLEY ELECTRIC COMPANY
KYGER CREEK LANDFILL
 CHESHIRE OHIO
 KYGER CREEK LANDFILL
 END OF 2023
 LANDFILL TOPOGRAPHIC MAP
 NAD 83 / NAVD 88 OHIO SOUTH
 CONTOUR INTERVAL = 2 Feet
 Drawing Name: KYGER CREEK LANDFILL TOPOGRAPHIC MAP 2023
 Drawing Number: KYG - 270834-1-R16
 SCALE: 1" = 200'
 Drawing Date: 02-14-2024
 Drawn By: R. A. Shoultis

