Stantec Consulting Services Inc.
11687 Lebanon Road, Cincinnati OH 45241-2012

January 15, 2016

File: 175534017

Ohio Valley Electric Corporation
Indiana-Kentucky Electric Corporation
Attention: Mr. Gabriel Coriell
3932 U.S. Route 23
P.O. Box 468
Piketon, Ohio 45661

Reference: 2015 CCR Rule Inspection
Initial Annual Landfill Inspection
Kyger Creek Generating Station
Cheshire, Ohio

Dear Mr. Coriell,

Attached is the 2015 initial annual landfill inspection for the Kyger Creek Generating Station's Class III Residual Solid Waste Landfill. The site visit was performed on December 2, 2015. Approximately 2.3 inches of rainfall were received by the site in the 72 hours prior to the visit and should be considered during the maintenance recommendations. As a summary:

- In general, the exterior slopes of the active coal combustion residual (CCR) landfill were uniform and well vegetated. Active waste slopes were uniform without signs of visual slope instability on the day of the site visit.
- The erosion and sediment control measures such as rock check dams and sediment traps were constructed and active during this wet season. Continue maintenance as needed for the best management practices. Address erosion features as part of the maintenance activities.
- Due to recent rainfall events, some culverts and pipes were inaccessible during the site visit due to high water and should be revisited during the weekly inspections. Those observed were actively flowing during the visit.
- Excessive ponding within the active cells was not noted during the site visit.
- Maintain the vegetation near the Interim Leachate Collection Pond and the termination of the Phase 1 underdrain system to allow visual observation of this area. Characterize and address the erosion and slope instability as part of operations. This area is contained within the waste footprint with surface water controls in place downstream.

Reference: 2015 CCR Rule Inspection
Initial Annual Landfill Inspection
Kyger Creek Generating Station
Cheshire, Ohio

- Development of an operations and maintenance manual is recommended if not in place to maintain consistency of landfill operations during its life cycle.

Observations and recommendations are detailed in the associated initial annual landfill inspection report. A figure is included with GPS location points to assist in addressing the observations. A photographic log is also provided.

Please contact us with any questions or concerns. We appreciate the opportunity to continue to work with the Kyger Creek Generating Station and the Ohio Valley Electric Corporation.

Regards,

Stantec Consulting Services Inc.

Jacqueline S. Harmon, P.E.
Senior Associate
Phone: (513) 842-8200 ext 8220
Fax: (513) 842-8250
Jacqueline.Harmon@stantec.com

Stan A. Harris, P.E.
Senior Principal
Phone: (513) 842-8200 ext 8211
Fax: (513) 842-8250
Stan.Harris@stantec.com

Attachment: 2015 Initial Annual Landfill Inspection Report

c. Don Fuller, Jim Swindler Jr.

jsh v:\1755\active\175534017\geotechnical\report\final submittal 20160115\175534017 let 20160115.docx

2015 CCR Rule Inspection
Kyger Creek Landfill

Kyger Creek Generating Station
Cheshire, Ohio
Gallia County

Prepared for:
Ohio Valley Electric Corporation
Indiana-Kentucky Electric Corporation
Pikeville, Ohio

Prepared by:
Stantec Consulting Services Inc.
Cincinnati, Ohio

January 15, 2016

Sign-off Sheet

This document entitled 2015 CCR Rule Inspection Kyger Creek Landfill 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)

James R. Swindler Jr., P.E.

Reviewed by _____ (signature)

Jacqueline S. Harmon, P.E.

Reviewed by _____ (Signature)

Stan A. Harris, P.E.

1/15/2016

Stantec

Table of Contents

LIST OF APPENDICES

1.0 OVERVIEW

Stantec Consulting Services Inc. (Stantec) performed the initial annual landfill inspection of the existing coal combustion residuals (CCRs) landfill at the Kyger Creek Generating Station in Cheshire, Ohio.

This initial 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 – RW3L and the Ohio Environmental Protection Agency (OEPA), Division of Materials and Waste Management. Below is a summary of conditions for the day of the inspection:

Date performed:	December 2, 2015
Weather:	Overcast, breezy, 47°F - 52°F
Rainfall over last 72 hours:	November 29, 2015 – 0.16 inches November 30, 2015 – 0.19 inches December 1, 2015 – 1.92 inches

Precipitation data was collected from the weather station at the Tri-State/Ferguson Airport in Huntington, West Virginia (KHTS), approximately 43.9 miles from the landfill.

Stantec's team that performed the fieldwork included:

- Jacqueline S. Harmon, P.E., Senior Associate/Geotechnical Engineer
  18 years of experience in geotechnical engineering, including dams, levees, and CCR storage facility closure.

- James Swindler, Jr., P.E., Senior Project Engineer/Geotechnical Engineer
  8 years of geotechnical engineering experience for a variety of infrastructure projects including: dams, levees, and coal combustion byproduct storage facilities.

The estimated volume of CCRs contained in the landfill is 2,096,000 cubic yards. Weekly inspections are being performed by plant personnel according to the CCR Rule. The Gallia County General Health District performs quarterly inspections in accordance with OEPA guidelines.

Fieldwork was coordinated with Mr. Paul Hutchins, Kyger Creek Station's Landfill Engineer. 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 Ohio Valley Electric Corporation (OVEC). The Kyger Creek Station's five units were commissioned in 1954 and 1955 and have a total generating capacity of 1,063 megawatts (OVEC, 2015).

CCRs 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 OEPA to begin construction on the landfill in April 2009. The landfill is a 98-acre Class III residual solid waste landfill with a capacity of 20.4 million cubic yards (AGES, 2015) 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;
- 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;
- 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 anticipated lifespan is 20 years.

CCRs are 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.

The landfill is divided into five phases with Phase 1 currently receiving CCRs. As previously noted, there are multiple ponds, both temporary and permanent, associated with the landfill. See the 2014 As-Built Map provided in Appendix C, Reference Drawings. The ponds include:

- East Sedimentation Pond – a permanent pond located east of the landfill.
- West Sedimentation Pond – a permanent pond located at the toe of the west slope of Phase 1.
- Leachate Collection Pond – a permanent pond located east of the landfill and adjacent to the East Sedimentation Pond.
- Interim Leachate Collection Pond – temporary pond located at the east end of Phase 1.
- Sediment Pond #1 – a temporary pond located to the east of Phase 1. This pond has been capped.
- Sediment Pond #2 – a temporary pond located within the Proposed Clay Borrow area to the south of Phase 1.
- Temporary Contact Pond – a temporary pond located on the southwest end of Phase 2.

A number of sedimentation traps were observed during the site visit. However, some were obscured by water levels or sedimentation buildup potentially due to recent rainfall events.

An operations and maintenance manual was not available for review discussing the landfill or the ponds.

2.1 KYGER CREEK LANDFILL – PHASE 1

The active waste cell is Phase 1, located in the southwestern portion of the landfill footprint. Phase 1 is subdivided into three areas, each partially filled with temporary slopes soil covered and vegetated. A series of chimney drains lie in the center portion of the phase and outlet on the east end of Phase 1 into the Interim Leachate Collection Pond. Temporary soil cover has been placed and vegetated on the exterior slopes of Phase 1, Parts 1 and 2 where it is nearing final CCR grades (2014 As-Built Map, Appendix C).

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. The general phasing plan is included in Appendix C.

3.0 OBSERVATIONS

3.1 KYGER CREEK LANDFILL – PHASE 1

The following observations were made while walking within and around the Phase 1 footprint. The photographic log is provided in Appendix B.

- CCRs within the landfill are being placed at a 3H:1V (horizontal to vertical) slope (Photo Nos. 1 and 2).
- A series of chimney drains was observed on the interior of the phase (Photo No. 3).
- Approximately 3-inch or less diameter trees were observed on the temporary exterior slopes along the anchor trench on the south side (Photo No. 4; Point 1, Appendix A) and on the exterior temporary north slope (Photo No. 5; Point 9, Appendix A) of Phase 1, Parts 1 and 2.
- Approximately 6-inch or less diameter trees were observed on the temporary slope on the west side of the landfill, between Phase 1 and the West Sedimentation Pond (Photo No. 6).
- The temporary exterior slope on the west side of Phase 1 is at an approximate 2.5H:1V slope (Photo No. 7) and is vegetated with heights between 12 and 30 inches.
- The temporary exterior slope on the east side of Phase 1, near Phase 2, is at an approximate 2H:1V slope.
- Erosion gullies were observed on the western exterior slope of Phase 1 (Photo No. 8).
- Five 24-inch high-density polyethylene (HDPE) pipes were observed on the west side of Phase 1, underlying the access road on the exterior slope (Photo No. 9). The pipes outlet into a riprap-lined channel that leads to the West Sedimentation Pond.
- Plastic mesh was observed within the drainage channel along the perimeter road on the western side of the landfill between Phase 1 and the West Sedimentation Pond (Photo No. 10).
- A 4-inch outside diameter plastic pipe was observed on the exterior temporary west slope. The cap for the pipe was missing (Photo No. 11; Point 2, Appendix A).
- Sloughing and erosion around the outlet of the leachate collection pipe at the east end of the landfill was observed (Photo Nos. 12 and 13; Points 6, 7, and 8, Appendix A).

- Ash was observed on the surface of the Interim Leachate Collection Pond on the east end of the landfill (Photo No. 14; Point 8, Appendix A) and at Sediment Trap No. 21 (Photo No. 15).

- A steepened exterior slope, with sloughing, was observed at the perimeter road on the south side of the Interim Leachate Collection Pond (Photo No. 16; Point 11, Appendix A). The exterior slope was measured to be 1.5H:1V. Sloughing and erosion was also noted on the interior slopes (Point 10, Appendix A).

3.2 WEST SEDIMENTATION POND

The following observations were made during the site visit at the West Sedimentation Pond. The photographic log is provided in Appendix B

- The exterior slopes of the West Sedimentation Pond varied from 1.7H:1 to 2.5H:1. The steepest portion of the exterior slope occurs between the West Sedimentation Pond and Sediment Trap No. 13 (Photo No. 17).

- Dead vegetation was observed within Sediment Trap No. 13 at the toe of the exterior slope of the West Sedimentation Pond (Photo No. 18).

- Vegetation growth to a height of 18 to 36 inches was observed on the western exterior slope of the West Sedimentation Pond (Photo No. 19).

3.3 EAST SEDIMENTATION POND

The following observations were made during the site visit at the East Sedimentation Pond. The photographic log is provided in Appendix B.

- Several erosion gullies are located along the northwest slope of the pond connecting the East Sedimentation Pond to the paved haul road (Photo No. 20).

3.4 LEACHATE COLLECTION POND

The following observations were made during the site visit at the Leachate Collection Pond (Photo No. 21). The photographic log is provided in Appendix B.

- The outlet of a 12-inch outside diameter corrugated plastic pipe (CPP) was observed on the southeast side of the pond. The pipe empties into a riprap-lined channel that passes beneath the perimeter road via an 84-inch diameter concrete culvert (Photo No. 22).

- Sloughing was observed on the northwest interior slope above the concrete slope (Photo No. 23; Points 3, 4, and 5, Appendix A).

- Erosion gullies were observed on eastern interior grass-covered slopes of the pond (Photo No. 24).

- The vegetated interior slopes of the pond were approximately 2.5H:1V.

3.5 PERIMETER OF KYGER CREEK LANDFILL

The perimeter of the landfill was visited to observe surface water controls for the facility. The photographic log is provided in Appendix B. The following observations were made:

- A number of the sedimentation traps were clogged with sedimentation or not able to be observed due to high water potentially as a result of recent rainfall events (Photo Nos. 25 and 26).

- The inlet to a 36-inch CPP, located to the northwest of Sediment Trap No. 11, was not visible due to high water and vegetation.

- Material was observed at the inlet grate to a 36-inch CPP located to the east of Sediment Trap No. 20 (Photo No. 27).

- Sediment Pond No. 2 has been partially filled in with soil (Photo No. 28).

- Washout of the riprap-lined surface water channel on the east side of the perimeter road was observed east of Sediment Trap No. 26, potentially due to recent rainfall events (Photo No. 29).

- Erosion gullies, approximately 24 inches deep, were observed on the south side of the perimeter road, near the northeast corner of the East Sedimentation Pond (Photo No. 30).

- Small tree growth, approximately 2 to 3 inches in diameter, was observed at the inlet of a 36-inch CPP, west of the East Sedimentation Pond on the perimeter road (Photo No. 31).

4.0 RECOMMENDATIONS

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

Stability Issues:

- Maintain the vegetation along the exterior slope of the Interim Leachate Collection Pond. Characterize the slough identified during the field visit, and address stability concerns of the existing slopes, if needed.

- Characterize and address the erosion occurring near the underdrain pipe at the east side of Phase 1. Take measures to control the flow, minimize sediment transport, and review the design to verify that it is performing as designed. Continue to monitor the toe of the active waste slope.

Operational Issues:

- An Operations and Maintenance Manual should be developed that includes provisions for the placement of materials within the landfill, the maintenance of the landfill, and the procedure to follow if issues arise during the operation of the landfill.

- Continue to conduct field surveys to measure current topography and compare to design geometry. Regrade surface to conform to design if needed. Areas near to 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:

- Conduct field inspections to limit CCR encroachment into noncontact areas. This includes in the vicinity of sediment traps and other areas where surficial flow of water occurs. Continue to maintain sediment traps and culverts to provide adequate drainage for stormwater and to alleviate excessive hydrostatic pressures at the toe of the slopes. Re-inspect pipes and sediment traps that could not be accessed. Replace the cover on the western cleanout pipe of Phase 1.

- Continue to maintain the vegetation along the exterior slopes and within the surface drainage channels to facilitate inspections by removing taller weeds and woody vegetation or reestablishing vegetation as needed.

- Continue to repair erosion gullies, reestablish grass vegetation, and continue to monitor in future inspections.

- Continue to monitor the surface water channel headwalls and culverts. Repair as needed.

5.0 REFERENCES

American Electric Power Service Corporation (AEPSC) (2015). "2015 Dam and Dike Inspection Report, GERS-15-020, Kyger Creek Station, Gallipolis, Ohio." Prepared by Geotechnical Engineering, Columbus, Ohio. November.

Applied Geology and Environmental Science, Inc. (2015). "Semi-Annual Groundwater Monitoring Report (April 2015 Sampling)." Ohio Valley Electric Corporation. Kyger Creek Plant Landfill. Gallia County, Cheshire, Ohio. June. Clinton, Pennsylvania.

Applied Geology and Environmental Science, Inc. (2014). "Semi-Annual Groundwater Monitoring Report (October 2014 Sampling)." Ohio Valley Electric Corporation. Kyger Creek Plant Landfill. Gallia County, Cheshire, Ohio. December. Clinton, Pennsylvania.

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). "Section B – Hydrogeologic and Subsurface Investigation Report." Ohio Valley Electric Corporation. Kyger Creek Plant Landfill. Revised December. Dublin, Ohio.

Hull & Associates, Inc. (2008b). "Ohio Valley Electric Corporation. Kyger Creek Plant Landfill, Permit to Install Plans. Class III Residual Waste Facility. Cheshire, Ohio." Prepared for American Electric Power, Columbus, Ohio. November 20. Toledo, Ohio.

Ohio Environmental Protection Agency (OEPA) (2011). Letter from OEPA to OVEC. Gallia County Fac – Kyger Creek Plant Landfill Eng. Acknowledging substantial compliance with Ohio Administrative Code Rule 3745-30-07. Area 1, Phase 1. January 11.

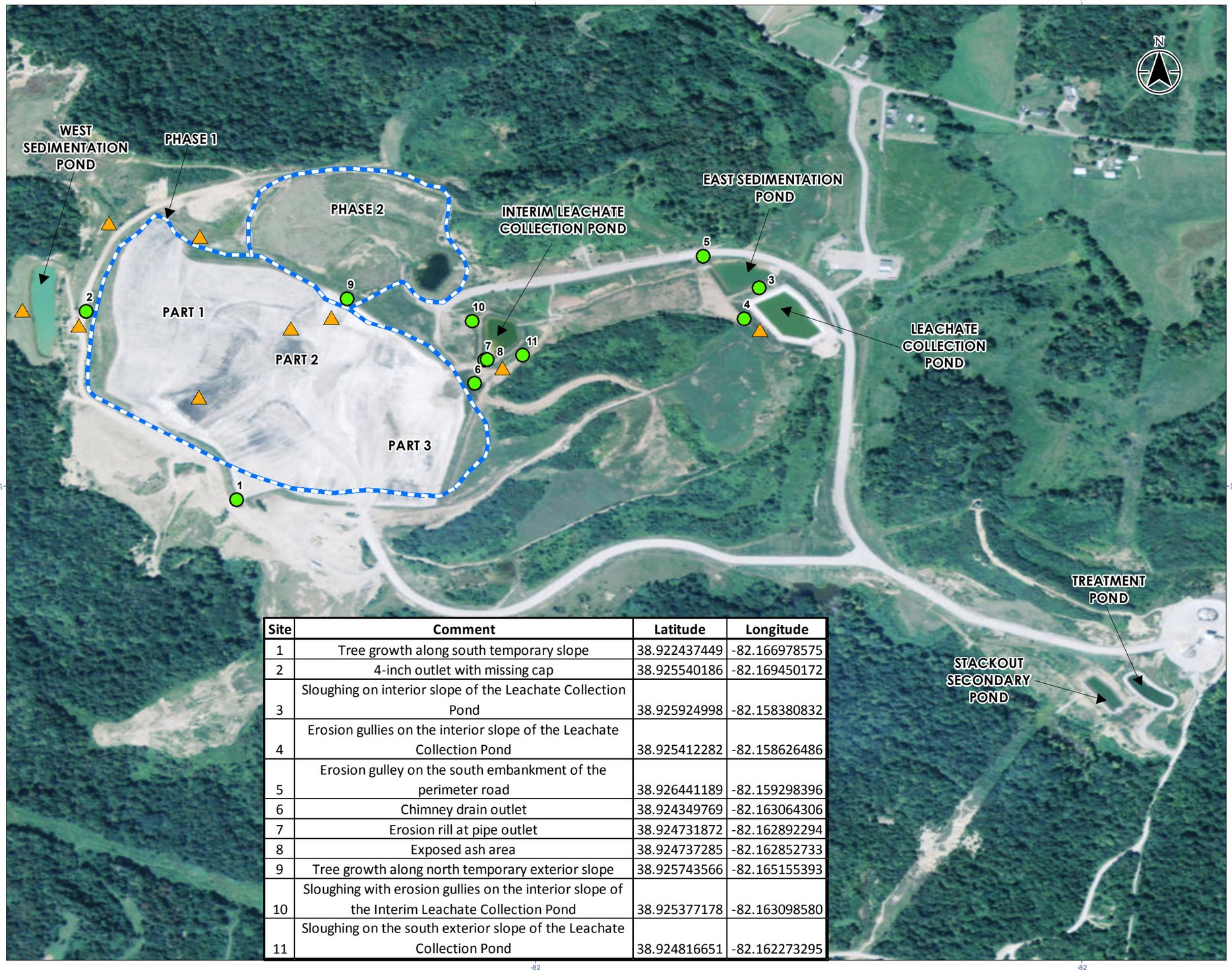
Ohio Environmental Protection Agency (OEPA) (2009). "Ohio Environmental Protection Agency, Permit to Install." FINAL. Application Number 06-08283. Received March 15, 2007. Ohio Valley Electric Corporation Kyger Creek Plant Landfill. New Residual Solid Waste Landfill. Effective Date: *not listed*.

Ohio Valley Electric Corporation (2015). www.ovec.com, accessed December 2015.

Ohio Valley Electric Corporation (2014). "Kyger Creek Landfill 2014 As-Built Map." Drawing No. KYG-270834-1-R4, Revision date December 31. NAD83/NAVD88 Ohio South. Kclandfill2014-Model.pdf.

Professional Service Industries, Inc. (PSI) (2010). "Construction Certification Report. Area 1 Part 1, Kyger Creek Plant Landfill, 212 Shaver Road, Cheshire, Ohio 45620." PSI Report 114-80062-1531. November 30. Columbus, Ohio.

APPENDIX A
FIGURE 1 – PLAN VIEW



Site	Comment	Latitude	Longitude
1	Tree growth along south temporary slope	38.922437449	-82.166978575
2	4-inch outlet with missing cap	38.925540186	-82.169450172
3	Sloughing on interior slope of the Leachate Collection Pond	38.925924998	-82.158380832
4	Erosion gullies on the interior slope of the Leachate Collection Pond	38.925412282	-82.158626486
5	Erosion gulley on the south embankment of the perimeter road	38.926441189	-82.159298396
6	Chimney drain outlet	38.924349769	-82.163064306
7	Erosion rill at pipe outlet	38.924731872	-82.162892294
8	Exposed ash area	38.924737285	-82.162852733
9	Tree growth along north temporary exterior slope	38.925743566	-82.165155393
10	Sloughing with erosion gullies on the interior slope of the Interim Leachate Collection Pond	38.925377178	-82.163098580
11	Sloughing on the south exterior slope of the Leachate Collection Pond	38.924816651	-82.162273295

OVEC/IKEC
Ohio Valley Electric Corporation / Indiana-Kentucky Electric Corporation

Stantec

- Inspection Location
- Estimated Slope Measurement
- Phases

0 600 1,200 Feet
1:7,200 (At original document size of 11x17)

Notes
1. Coordinate System: GCS WGS 1984
2. Base features - ESRI
3. Ortho-Imagery does not represent current conditions.

Project Location
Kyger Fossil Plant
Gallia County, OH

175534017
Prepared by ANP on 2016-1-13
Technical Review by JS on 2015-12-18
Independent Review by JH on 2016-1-13

Client/Project
Ohio Valley Electric Corporation
Kyger Creek Landfill

Figure No.
1

Title
2015 Initial CCR Inspection

Figure 1

APPENDIX B
PHOTOGRAPHIC LOG

Photo 1

CCRs (3H:1V slopes) on interior of the landfill on eastern active face of Area 1, Part 1.

Photo 2

CCRs (3H:1V slopes) on interior of the landfill on eastern active face of Area 1, Part 3.

Photo 3

Series of chimney drains within the active area of Phase 1.

Photo 4

Approximately 3-inch or less diameter tress on temporary exterior slopes along the anchor trench on the south side.

Photo 5

Tree growth on the exterior temporary north slope.

Photo 6

Trees six-inches in diameter or less on the temporary slope on east side of the landfill.

Photo 7

Temporary exterior slope on the west side of Phase 1 is approximately 2.5:1V with dense vegetation.

Photo 8

Erosion gullies on the west exterior slope of Phase 1.

Photo 9

Five 24-inch HDPE pipes west of Phase 1, flowing towards the West Sedimentation Pond.

Photo 10

Plastic mesh visible in drainage channel along access road to West Sedimentation Pond.

Photo 11

Uncapped four-inch diameter plastic pipe along western exterior slope of Phase 1.

Photo 12

Sloughing and erosion around the outlet of the booted underdrain pipe at east end of Phase 1.

Photo 13

Sloughing and erosion around the outlet of the booted underdrain pipe at east end of Phase 1.

Photo 14

CCRs observed on the surface of the Interim Leachate Collection Pond.

Photo 15

CCRs observed on the surface of Sediment Trap No. 21.

Photo 16

A slough was noted along the southern exterior slope of the Interim Leachate Collection Pond.

Photo 17

The exterior slope of the West Sedimentation Pond, overlooking Sediment Trap No. 13.

Photo 18

Dead vegetation within Sediment Trap No. 13 at the exterior toe of the West Sedimentation Pond.

Photo 19

Vegetation growth to a height of 18 to 36 inches was observed on the western exterior slope of the West Sedimentation Pond.

Photo 20

Erosion gullies from the paved haul road into the northwest corner of the East Sedimentation Pond.

Photo 21

Leachate Collection Pond, looking northwest. Note the 12-inch outer-diameter CPP at the left edge of the riprap-lined channel.

Photo 22

The 84-inch diameter concrete culvert connecting Sediment Trap No. 6 under the paved haul road to Sediment Trap No. 7 at the northeastern corner of the landfill site.

Photo 23

Sloughing was observed on the northwest interior slope of the Leachate Collection Pond.

Photo 24

Erosion rills were observed on the northwest interior slope of the Leachate Collection Pond.

Photo 25

Sediment traps were obscured by high waters due to recent rainfall events.

Photo 26

Sediment traps were obscured by high waters due to recent rainfall events (Sediment Trap Nos. 19 and 20).

Photo 27

Potential CCRs observed at the inlet grate east of Sediment Trap No. 20.

Photo 28

Sediment Pond No. 2.

Photo 29

Washout of riprap-lined surface water channel on east side of the perimeter road east of Sediment Trap No. 26.

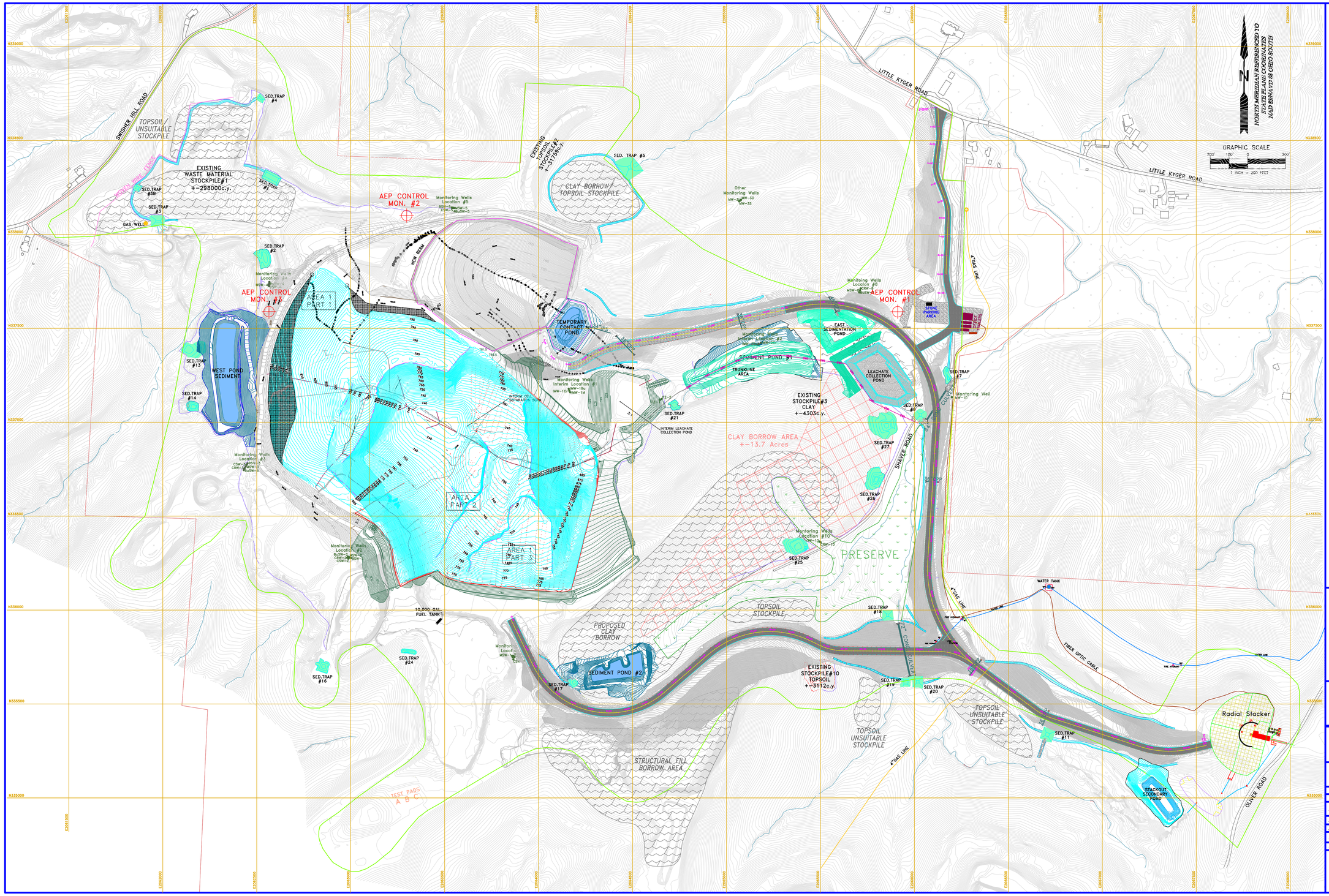
Photo 30

Erosion gullies approximately 24 inches deep were observed on the south side of the perimeter road near the northeast corner of the East Sedimentation Pond.

Photo 31

Small tree growth, 2- to 3-inches in diameter, were observed at inlet for the 36-inch CPP west of the East Sedimentation Pond.

APPENDIX C
REFERENCE DRAWINGS



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 G.W.I. w/ 4"HDPE SDR7
- Denotes G.W.I. w/ No Pipe
- Denotes Toe Drain w/ 4" Schedule7
- Denotes Collection Trunk Piping 12"HDPE SDR7
- 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 Completed Earth Work
- Denotes 2011 Work
- Denotes Temporaty Cover
- Denotes Waste
- Denotes Protective Cover
- Dumpster Areas

NOTE: One area has final or transitional cover.

NOTE: Projected fill for 2013 will be above 2012 fill, and in phase one areas two and three.

NOTE: +- 3936' @ +- 4' depth of

NOTE: +- 9486' of installed guardrail

NOTE: Gas Line is at +- 2.5' depth

OHIO VALLEY ELECTRIC COMPANY

KYGER CREEK LANDFILL

GALLIA OHIO

KYGER CREEK LANDFILL
2014 ASBUILT MAP

NAD 83/NAVD 88 OHIO SOUTH

CONTOUR INTERVAL = 1' FOOT

Drawing Name: KYGER CREEK LANDFILL ASBUILT MAP

Drawing Number: KYG - 27/834 -1 -R4

SCALE: 1" = 200'

Revision Date: 31 DECEMBER 2014

Drawn By: R. A. Shouldis and Paul R. Hutchins

OVEC IKEC

DWG. NO. 15-30501-13-D

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.

0 50 100 200
SCALE IN FEET

PHASE 1
PHASE 2
PHASE 3
PHASE 4
PHASE 5

E 2062500
E 2063000
E 2063500
E 2064000
E 2064500
E 2065000
E 2065500
N 337500
N 337000
N 336500
N 336000

PREVAILING WIND INFORMATION:

WINDS WINDS WINDS WINDS

PREDOMINANT WINDS OUT OF THE SOUTHWEST

NOTES:

1) AERIAL TOPOGRAPHY SHOWN WAS OBTAINED FROM HENDERSON AERIAL SURVEYS INC. (DATE OF PHOTOGRAPHY: 3-17-05). ADDITIONAL 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 – EXISTING

- PROPERTY LINE
- 730 — 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
- WINDS — PREVAILING WIND DIRECTION
- PHASE DIVISION LINE
- FACILITY BOUNDARY/ AREA OF DISTURBANCE

REFERENCE DRAWINGS

DATE	NO.	DESCRIPTION	APPD.
11/20/08	D	NOD 3 RESPONSE	
5/28/08	C	NOD 2 RESPONSE	JHH
9/26/07	B	NOD 1 RESPONSE	JHH
3/28/07	A	ISSUED FOR PERMIT	JHH

REVISIONS

s:/mt/15/geo_hydro_site/vendor/hull/15-30501-09

Hull & Associates, Inc.
ENGINEERS | GEOLOGISTS | SCIENTISTS | PLANNERS
3401 GLENDALE AVENUE
SUITE 500
TOLEDO, OHIO 43614
PHONE: (419) 865-6018
FAX: (419) 865-5497
www.hullinc.com

STATE OF OHIO
JOHN HARRISON HULL
E-45126
REGISTERED PROFESSIONAL ENGINEER

SIGNATURE
11/21/08
DATE

PROJECT NO.:	AP0008
FILE NO.:	AP0008.100.0116
LAYOUT BY:	TRB
DRAWN BY:	GAC/DB
CHECKED BY:	AMG/JHH
SCALE:	1"=100'
SUBMITTAL DATE:	MAY 2008

OEPA 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

DR:	
CH:	
ENGR:	
PROJ:	
ENGR:	
DATE:	11/7/08

APPROVED BY

AEP AMERICAN ELECTRIC POWER

1 RIVERSIDE PLAZA
COLUMBUS, OH 43215