



OHIO VALLEY ELECTRIC CORPORATION

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WRITER'S DIRECT DIAL NO:

(740) 289-7259

January 31, 2025

Delivered 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
2024 Annual Groundwater Monitoring and Corrective Actions Report**

As required by 40 CFR 257.106(h)(1), the Ohio Valley Electric Corporation (OVEC) is providing notification to the State Director of the Ohio Environmental Protection Agency that the eighth Annual Groundwater and Corrective Actions Report has been completed in compliance with 40 CFR 257.90(e) for OVEC's Kyger Creek Station. The groundwater monitoring and corrective action report was prepared by AGES, Inc., the site's hydrogeologist, summarizing the findings in 2024. The report has been placed in the facility's operating record in accordance with 40 CFR 257.105(h)(1), as well as, on the company's publicly accessible internet site in accordance with 40 CFR 257.107(h)(1), which can be viewed at <http://www.ovec.com/CCRCompliance.php>.

If you have any questions, or require any additional information, please contact me at (740) 289-7259 or contact Gabe Coriell at (740)289-7267.

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



Stantec Consulting Services Inc.
10200 Alliance Road, Suite 300
Cincinnati OH 45242-4754

January 31, 2025

Project/File: 173410748

Mr. Jeremy Galloway

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

**Reference: 2024 Annual Groundwater Monitoring and Corrective Action Report
EPA Final Coal Combustion Residuals (CCR) Rule
Kyger Creek Generating Station
Cheshire, Ohio**

Dear Mr. Galloway,

The EPA Final CCR Rule requires owners or operators of existing CCR landfills and surface impoundments to prepare an annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by 40 CFR 257.90(e). For the Ohio Valley Electric Corporation (OVEC), this applies to the Kyger Creek Station's South Fly Ash Pond, Boiler Slag Pond, and CCR Landfill.

The annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:

1. A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;
2. Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;
3. In addition to all the monitoring data obtained under §§257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;
4. A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background level); and
5. Other information required to be included in the annual report as specified in §§257.90 through 257.98.

January 31, 2025
Mr. Jeremy Galloway
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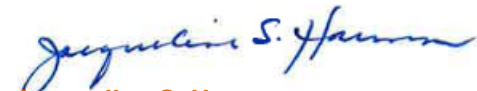
**Reference: 2024 Annual Groundwater Monitoring and Corrective Action Report
EPA Final Coal Combustion Residuals (CCR) Rule
Kyger Creek Generating Station
Cheshire, Ohio**

IKEC has retained Applied Geology and Environmental Science, Inc. of Clinton, Pennsylvania (AGES) to perform the Kyger Creek Station's groundwater monitoring and corrective action support under the EPA Final CCR Rule. The 2024 CCR Regulation Groundwater Monitoring and Corrective Action Report (GWCAR) was prepared by AGES to present the annual groundwater monitoring at the South Fly Ash Pond, Boiler Slag Pond, and CCR Landfill of the Clifty Creek Station. Stantec Consulting Services Inc. (Stantec) has reviewed AGES (2025), and it meets the requirements specified in 40 CFR 257.90(e).

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 PE
Project Manager
Phone: (513) 842-8200 EXT 8220
jacqueline.harmon@stantec.com

Attachment: AGES (2025). Coal Combustion Residuals Regulation, 2024 Groundwater Monitoring and Corrective Action Report, Ohio Valley Electric Corporation. Kyger Creek Station, Cheshire, Ohio, January.

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**COAL COMBUSTION RESIDUALS REGULATION
2024 GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT**

**OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK STATION
CHESHIRE, OHIO**

JANUARY 2025

Prepared for:

OHIO VALLEY ELECTRIC CORPORATION

Prepared by:

APPLIED GEOLOGY AND ENVIRONMENTAL SCIENCE, INC.

**COAL COMBUSTION RESIDUALS REGULATION
2024 GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT
OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK STATION
CHESHIRE, OHIO**

JANUARY 2025

Prepared for:

OHIO VALLEY ELECTRIC CORPORATION

Prepared by:

Applied Geology and Environmental Science, Inc.



Bethany Flaherty
Senior Scientist II



Robert W. King, P.G.
Chief Hydrogeologist

**COAL COMBUSTION RESIDUALS REGULATION
2024 GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT
OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK STATION
CHESHIRE, OHIO**

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CORRECTIVE ACTION REPORT
OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK STATION
CHESHIRE, OHIO**

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**COAL COMBUSTION RESIDUALS REGULATION
2024 GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT
OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK STATION
CHESHIRE, OHIO**

LIST OF ACRONYMS

AGES	Applied Geology and Environmental Science, Inc.
ASD	Alternate Source Demonstration
BSP	Boiler Slag Pond
CCR	Coal Combustion Residuals
GMPP	Groundwater Monitoring Program Plan
GWPS	Groundwater Protection Standard
Landfill	Class III Residual Waste Landfill
LCL	Lower Confidence Limit
MCL	Maximum Contaminant Level
OEPA	Ohio Environmental Protection Agency
OVEC	Ohio Valley Electric Corporation
RCRA	Resource Conservation and Recovery Act
StAP	Statistical Analysis Plan
SFAP	South Fly Ash Pond
Stantec	Stantec Consulting Services Inc.
SSI	Statistically Significant Increase
TDS	Total Dissolved Solids
ug/L	Micrograms per liter
U.S. EPA	United States Environmental Protection Agency

**COAL COMBUSTION RESIDUALS REGULATION
2024 GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT
OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK STATION
CHESHIRE, OHIO**

EXECUTIVE SUMMARY

The Kyger Creek Station, located in Cheshire, Ohio, is a 1.1 gigawatt coal-fired generating station operated by Ohio Valley Electric Corporation (OVEC). The Kyger Creek Station has five (5), 217-megawatt generating units and has been in operation since 1955. Beginning in 1955, Coal Combustion Residuals (CCRs) were sluiced to surface impoundments located in the plant site. During the course of plant operations, CCRs have been managed in various units at the station.

There are three (3) CCR units at the Kyger Creek Station:

- Class III Residual Waste Landfill (Landfill);
- Boiler Slag Pond (BSP); and
- South Fly Ash Pond (SFAP).

A brief overview of the current status of groundwater monitoring and corrective action programs for the CCR units is provided below:

Landfill

At the start of this 2024 reporting period, the Landfill was operating under the Detection Monitoring program in accordance with §257.94 of the CCR Rule. The 13th and 14th rounds of Detection Monitoring were conducted in March/April and October 2024, respectively. Based on the sampling results, it was determined that there were no confirmed Appendix III constituent SSIs over background for either Detection Monitoring Events. Therefore, the Landfill will remain operating under the Detection Monitoring program in accordance with §257.94 of the CCR Rule.

BSP

At the start of this 2024 reporting period, the BSP was operating under the Assessment Monitoring program in accordance with §257.95 of the CCR Rule. Based on exceedances of the Groundwater Protection Standard (GWPS) for an Appendix IV constituent (Arsenic at well KC-15-07), an assessment of corrective measures was initiated on May 15, 2019. An Assessment of Corrective Measures Report was completed on September 19, 2019 (Revision 1.0, November 2020); a public meeting was held on November 6, 2019.

The 12th and 13th rounds of Assessment Monitoring were conducted in April and October 2024, respectively. Based on the sampling results, it was determined that there were Appendix III SSIs over background. SSIs were confirmed in well KC-15-08 for Calcium, Sulfate, and Total Dissolved Solids [TDS] during the April 2024 Assessment Monitoring Event and for Boron, Calcium, Sulfate, and TDS during the October 2024 Assessment Monitoring Event.

Arsenic, an Appendix IV constituent, exceeded the GWPS in well KC-15-07 during both Assessment Monitoring Events. Arsenic did not exceed the GWPS in wells located at the property boundary downgradient of the BSP indicating that Arsenic exceedances are confined to the site. Based on these results, the BSP will remain operating under the Assessment Monitoring program in accordance with §257.95 of the CCR Rule.

To support the selection of a remedy, field monitoring activities, including the collection of water level measurements and ongoing groundwater sampling, were performed during 2024. Although a remedy was not selected pursuant to §257.97 of the CCR Rule during this current annual reporting period, the continued evaluation of remedial activities pursuant to §257.97 and §257.98 of the CCR Rule will continue during the 2025 annual reporting period.

SFAP

At the start of this 2024 reporting period, the SFAP was operating under the Assessment Monitoring program in accordance with §257.95 of the CCR Rule. The 12th and 13th rounds of Assessment Monitoring were conducted in March/April and October 2024, respectively. Based on the sampling results, it was determined that there were Appendix III SSIs over background. During the March/April 2024 Assessment Monitoring Event SSIs were confirmed in wells KC-15-20 (Calcium) and KC-15-21 (Calcium). During the October 2024 Assessment Monitoring Event SSIs were confirmed in wells KC-15-18 (Calcium), KC-15-20 (Calcium), and KC-15-21 (Calcium).

As part of the Assessment Monitoring program, concentrations of the Appendix IV constituents are compared to the applicable GWPS. No exceedances were noted during the March and October 2024 Assessment Monitoring events for any well included in the approved monitoring program. The SFAP will remain operating under the Assessment Monitoring program in accordance with §257.95 of the CCR Rule.

**COAL COMBUSTION RESIDUALS REGULATION
2024 GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT
OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK STATION
CHESHIRE, OHIO**

1.0 INTRODUCTION

On December 19, 2014, the United States Environmental Protection Agency (U.S. EPA) issued their final Coal Combustion Residuals (CCR) regulation which regulates CCR as a non-hazardous waste under Subtitle D of Resource Conservation and Recovery Act (RCRA) and became effective six (6) months from the date of its publication (April 17, 2015) in the Federal Register, referred to as the “CCR Rule.” The rule applies to new and existing landfills, and surface impoundments used to dispose of or otherwise manage CCR generated by electric utilities and independent power producers. Because the rule was promulgated under Subtitle D of RCRA, it does not require regulated facilities to obtain permits, does not require state adoption, and cannot be enforced by U.S. EPA.

This Groundwater Monitoring and Corrective Action Report has been prepared in accordance with §257.90 (e) of the CCR Rule and documents the status of the groundwater monitoring and corrective action program for each CCR unit, summarizes the key actions completed during 2024, describes any problems encountered, discusses actions to resolve the problems, and projects key activities for the upcoming year.

2.0 BACKGROUND

The Kyger Creek Station, located in Cheshire, Ohio, is a 1.1 gigawatt coal-fired generating station operated by Ohio Valley Electric Corporation (OVEC). The Kyger Creek Station has five (5), 217-megawatt generating units and has been in operation since 1955. Beginning in 1955, CCRs were sluiced to surface impoundments located in the plant site. During the course of plant operations, CCRs have been managed in various units at the station.

There are three (3) CCR units at the Kyger Creek Station (Figure 1):

- Class III Residual Waste Landfill (Landfill);
- Boiler Slag Pond (BSP); and
- South Fly Ash Pond (SFAP).

A discussion of the status of the groundwater monitoring program for each CCR unit is presented in the following sections of this report.

3.0 CLASS III RESIDUAL WASTE LANDFILL

The Landfill is a residual solid waste landfill located approximately one-half mile south of the intersection of Little Kyger Creek Road and Shaver Road in Addison Township, Gallia County, Ohio (Figure 1). The Landfill is bordered on the east by Shaver Road, and on the west, north and south by vacant, forested land owned by OVEC. The proposed permitted footprint of the Landfill occupies approximately 98 acres and is capable of managing approximately 20.4 million cubic yards (approximately 4,000 tons per day) of Class III residual waste generated by the coal-powered Kyger Creek Station located approximately two (2) miles southeast of the Landfill.

3.1 Groundwater Monitoring Network

As detailed in the Monitoring Well Installation Report (Applied Geology and Environmental Science, Inc. [AGES] 2016), the CCR groundwater monitoring network for the Landfill consists of the following 13 wells:

- BuSW-1 (Downgradient);
- BuSW-2 (Upgradient);
- BuSW-3 (Variable: usually side or downgradient);
- BuSW-4 (Downgradient);
- BuSW-5a (Upgradient);
- IMW-1Bu (Upgradient);
- BuSW-8 (Upgradient);
- BuSW-10 (Downgradient);
- MW-3D (Upgradient);
- IMW-2Bu (Upgradient);
- MW-4D (Upgradient);
- CCR-1Bu (Downgradient); and
- CCR-2Bu (Downgradient).

The locations of all of the wells in the groundwater monitoring network are shown on Figure 2. As listed above and shown on Table 3-1, the CCR groundwater monitoring network for the Landfill includes seven (7) upgradient monitoring wells and six (6) downgradient monitoring wells, which satisfies the requirements of the CCR Rule.

Groundwater levels measured in 2024 are included in Table A-1 of Appendix A. Groundwater flow maps for the two (2) monitoring events completed in 2024 are included in Appendix B.

3.2 Groundwater Sampling

In accordance with §257.94 of the CCR Rule, OVEC completed two (2) rounds of groundwater monitoring in 2024 in accordance with the requirements of the Detection Monitoring Program at the Landfill. The 13th round of Detection Monitoring samples was collected in March/April 2024 and the 14th round of Detection Monitoring groundwater samples was collected in October 2024. In accordance with §257.90(e)(3), Table 3-2 presents a sampling summary, including the number of groundwater samples collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the Detection Monitoring program. Table 3-3 summarizes the measurements of field parameters collected at the completion of purging, immediately prior to collection of each sample. All samples were collected in accordance with the GMPP (AGES 2024) and shipped to an analytical laboratory to be analyzed for all of the constituents listed in Appendix III of the CCR Rule (Appendix C).

3.3 Analytical Results

Upon receipt of the March/April and October 2024 analytical results, the groundwater monitoring data were statistically evaluated in accordance with §257.93(h) of the CCR Rule and the Kyger Creek Station CCR Statistical Analysis Plan (StAP) (Stantec Consulting Services Inc. [Stantec] 2021). Appendix D summarizes the analytical results for groundwater samples collected in 2024. The statistical evaluation identified a potential SSI in well CCR-1Bu for Chloride (27,000 milligrams per liter [mg/L]) (Table 3-4). In accordance with the StAP, IKEC resampled the well on June 18, 2024. Based on the results of the resampling event, the SSI was not confirmed (Table 3-4). No potential SSIs were identified during the October 2024 Detection Monitoring Event. Therefore, the Landfill will remain in Detection Monitoring.

4.0 BOILER SLAG POND

The BSP is located at the south end of the Kyger Creek Station and is approximately 31 acres in size (Figure 3). The BSP was built in 1955 to serve as a process and disposal area for the coal combustion waste products generated at the station. All flow into the BSP was terminated in July 2023 as part of ongoing construction. Overflow from the BSP had been carried into a reinforced concrete intake structure at the south end of the Boiler Slag Complex. Water entering the intake structure was previously discharged into the Clearwater Pond. The Clearwater Pond was built in 1980, is approximately nine (9) acres in size and is located to the southwest end of the BSP. The Clearwater Pond is not a CCR unit and monitoring is not required.

In 2019, OVEC conducted additional groundwater sampling to characterize the nature and extent of the release and an Assessment of Corrective Measures (ACM) in accordance with §257.95(g). As part of this assessment, in April 2019, three (3) additional wells (KC-19-27, KC-19-28, and KC-19-29) were installed in the uppermost aquifer at the property boundary downgradient from the BSP (Figure 3). Details regarding the installation of these wells and potential corrective

measures are included in the ACM Report for the BSP (AGES 2020a). All details regarding the monitoring and corrective action associated with this unit in 2019 are provided in the 2019 Groundwater Monitoring and Corrective Action Report, Revision 1.0 (AGES 2020b).

4.1 Groundwater Monitoring Network

As detailed in the Monitoring Well Installation Report (AGES 2016) and 2019 Groundwater Monitoring and Corrective Action Report, Revision 1.0 (AGES 2020b), the CCR groundwater monitoring network for the BSP consists of the following eleven (11) wells:

- KC-15-01 (Upgradient);
- KC-15-02 (Upgradient);
- KC-15-03 (Upgradient);
- KC-15-04 (Downgradient);
- KC-15-05 (Downgradient);
- KC-15-06 (Downgradient);
- KC-15-07 (Downgradient);
- KC-15-08 (Downgradient);
- KC-19-27 (Downgradient/Boundary);
- KC-19-28 (Downgradient/Boundary); and
- KC-19-29 (Downgradient/Boundary).

The locations of all the wells in the groundwater monitoring network are shown on Figure 3. As listed above and shown on Table 4-1, the CCR groundwater monitoring network for the BSP includes three (3) upgradient wells and five (5) downgradient wells, which satisfies the requirements of the CCR Rule. Three (3) wells (KC-19-27, KC-19-28, and KC-19-29) are located at the property boundary downgradient from the BSP.

Due to ongoing construction and the lowering of the berm surrounding the BSP, the upper few feet of stick-up casing for three (3) wells on the berm (wells KC-15-01, KC-15-02 and KC-15-03) were removed by a driller, under the supervision of AGES in April 2023. Revised information for these wells is provided on Table 4-1.

At the time of the March 2022 sampling event, the sample team determined that well KC-15-05 had been destroyed. The well could not be sampled, and a replacement well (KC-15-05a) was installed in August 2022. Well KC-15-05a was installed approximately 10 feet north of original well KC-15-05 at the same depth and with the same construction as the original well. During the October 2022 sampling event, well KC-15-05a could not be safely accessed due to ongoing site construction activities. This replacement well will therefore be sampled during future events; the results of the sampling will be used to evaluate whether the well KC-15-05a is a representative replacement for original well KC-15-05.

Groundwater levels measured in 2024 are included in Table A-2 of Appendix A. Groundwater flow maps for the two (2) monitoring events completed 2024 are included in Appendix B.

Groundwater in the BSP flows from the northwest to the south and southeast toward the Ohio River. Because the BSP is located adjacent to the Ohio River, during periods when the water level in the Ohio River rises significantly and flooding occurs, groundwater flow in the uppermost aquifer may temporarily reverse and groundwater will flow toward the north and west beneath the BSP.

4.2 Groundwater Sampling

In accordance with §257.95 of the CCR Rule, the 12th and 13th rounds of Assessment Monitoring were conducted in April and October 2024, respectively.

All samples were collected in accordance with the GMPP (AGES 2024) and analyzed for all Appendix III and Appendix IV constituents, which are listed in Appendix C. In accordance with §257.90(e)(3), Table 4-2 presents a sampling summary, including the number of groundwater samples collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the Assessment Monitoring program. Table 4-3 summarizes the measurements of field parameters collected at the completion of purging, immediately prior to collection of each sample. All samples were shipped to an analytical laboratory to be analyzed.

4.3 Analytical Results

4.3.1 Analytical Results-Appendix III Constituents

Upon receipt, the groundwater monitoring data were statistically evaluated in accordance with §257.93(h) of the CCR Rule and the Kyger Creek Station CCR StAP (Stantec 2021). Appendix D summarizes the analytical results for groundwater samples collected in 2024.

The statistical evaluation of the data identified potential SSIs of one (1) or more Appendix III constituents in well KC-15-08 in both Assessment Monitoring Events (Table 4-4). In accordance with the StAP, OVEC resampled the well for those constituents with potential SSIs. Based on the results of the resampling events, the SSIs for Calcium, Sulfate, and Total Dissolved Solids (TDS) and Boron, Calcium, Sulfate, and TDS in well KC-15-08 were confirmed at the BSP for the April and October 2024 Assessment Monitoring Events, respectively (Table 4-4).

4.3.2 Analytical Results-Appendix IV Constituents

Based on previous detections of Appendix IV constituents in groundwater at the BSP, OVEC established a Groundwater Protection Standard (GWPS) for each detected Appendix IV constituent in accordance with the §257.95(h)(1) through §257.95(h)(3) as follows:

(1) For constituents for which the U.S. EPA has established a Maximum Contaminant Level (MCL), the GWPS shall be the MCL for that constituent.

(2) On July 30, 2018, the U.S. EPA published alternate limits to be used for several constituents that did not have previously established MCLs to be used as the GWPS for those constituents.

(3) For constituents for which the background level is higher than the MCL or the alternate limit, the background concentration shall be the GWPS for that constituent.

Table 4-5 presents the list of GWPSs for the Assessment Monitoring program at the BSP that were developed in accordance with the above requirements.

During the 12th (April 2024) and 13th (October 2024) Assessment Monitoring Events, it was confirmed that Arsenic in well KC-15-07 exceeded the GWPS of 10 micrograms per liter (ug/L) (Table 4-6).

Arsenic concentrations did not exceed the GWPS at the wells located at the property boundary downgradient from the BSP (wells KC-19-27, KC-19-28, and KC-19-29). These results indicate that Arsenic concentrations in the uppermost aquifer exceeding the GWPS are confined to the site and are not reaching the Ohio River.

5.0 SOUTH FLY ASH POND

The SFAP is located at the northwest end of the station (Figure 4). The SFAP was built in 1955 to serve as a process and disposal area for the coal combustion waste products generated at the station. This collection pond is approximately 67 acres in size and banked on all sides.

5.1 Groundwater Monitoring Network

As detailed in the Monitoring Well Installation Report (AGES 2016), the CCR groundwater monitoring network for the SFAP consists of the following 14 wells. The wells, along with revised location designations based on updated groundwater flow directions, are:

- KC-15-09 (Upgradient);
- KC-15-10 (Upgradient);
- KC-15-11 (Upgradient);
- KC-15-12 (Upgradient);
- KC-15-13 (Upgradient);
- KC-15-14 (Upgradient);
- KC-15-15 (Variable);
- KC-15-16 (Variable);

- KC-15-17 (Variable);
- KC-15-18 (Downgradient);
- KC-15-19 (Downgradient);
- KC-15-20 (Downgradient);
- KC-15-21 (Downgradient); and
- KC-15-22 (Downgradient).

The locations of the monitoring wells are shown on Figure 4. As listed above and shown on Table 5-1, the CCR groundwater monitoring network for the SFAP includes six (6) upgradient and five (5) downgradient wells, which satisfies the requirements of the CCR Rule.

At the time of the June 2022 resampling event, the sample team determined that well KC-15-19 had been destroyed. The well could not be sampled, and a replacement well (KC-15-19a) was installed in August 2022. Well KC-15-19a was installed approximately 10 feet north of the original well KC-15-19 at the same depth and with the same construction as the original well. Replacement well KC-15-19a was sampled in October 2022, March/April and September/October 2023, and April and October 2024. Results from the sampling event indicate that KC-15-19a may not be a representative replacement for KC-15-19, and the facility currently is evaluating whether the sampling results are the result of an error in accordance with 40 C.F.R. § 257.95(g)(3)(ii). The analytical results for well KC-15-19a are included in Appendix D.

As noted in the 2017 Annual Groundwater Monitoring and Corrective Action Report, due to fluctuations in the stage of the nearby Ohio River, well KC-15-17 was located upgradient of the northeast portion of the SFAP during five (5) of the nine (9) monitoring events conducted from October 2015 through September 2017 (prior to the Detection Monitoring period at the unit). Well KC-15-17 was downgradient of the area during three (3) events and sidegradient during one (1) event. Well KC-15-15 was located upgradient of the northeast portion of the SFAP during three (3) of the nine (9) events, downgradient of the area during five (5) events, and sidegradient during one (1) event. Because of this high degree of variability in flow direction, wells KC-15-15 and KC-15-17 (and well KC-15-16 which is located between the wells) could not be designated as either upgradient or downgradient. These wells are therefore not included in the statistical evaluations for the SFAP.

Groundwater levels measured during 2024 are included in Table A-3 of Appendix A. Groundwater flow maps for the two (2) monitoring events completed in 2024 are included in Appendix B. Based on the groundwater level measurements, groundwater in the central portion of the SFAP flows generally from the north/northwest to the south/southeast toward the Ohio River. However, due to the close proximity of the SFAP to the Ohio River, changes in the stage of the river have a significant impact on the direction of groundwater flow at the unit. However, during periods when the stage of the Ohio River rises, groundwater flow in the uppermost aquifer reverses direction and flows toward the north/northwest. When the Ohio River stage lowers, groundwater levels also begin to lower and return to a more typical flow pattern. With these fluctuations in groundwater

levels, the assignment of the upgradient and downgradient well designations above may fluctuate as well.

5.2 Groundwater Sampling

In accordance with §257.95 of the CCR Rule, the 12th and 13th rounds of Assessment Monitoring were conducted in March/April and October 2024, respectively.

All samples were collected in accordance with the GMPP (AGES 2024) and analyzed for all Appendix III and Appendix IV constituents, which are listed in Appendix C. In accordance with §257.90(e)(3), Table 5-2 presents a sampling summary, including the number of groundwater samples collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the Assessment Monitoring program. Table 5-3 summarizes the measurements of field parameters collected at the completion of purging, immediately prior to collection of each sample. All samples were shipped to an analytical laboratory to be analyzed.

5.3 Analytical Results

5.3.1 Analytical Results-Appendix III Constituents

Upon receipt, the groundwater monitoring data were statistically evaluated in accordance with §257.93(h) of the CCR Rule and the Kyger Creek Station CCR StAP (Stantec 2021). Appendix D summarizes the analytical results for groundwater samples collected in 2024. The statistical evaluation identified potential SSIs of one (1) or more Appendix III constituents in monitoring wells KC-15-18, KC-15-20, KC-15-21, and KC-15-22 at the SFAP. In accordance with the StAP, OVEC resampled the wells for those constituents with potential SSIs. Based on the results, the following Appendix III SSIs were confirmed at the SFAP (Table 5-4):

March/April 2024 Assessment Monitoring Event Appendix III SSIs

- KC-15-20: Calcium; and
- KC-15-21: Calcium.

October 2024 Assessment Monitoring Event Appendix III SSIs

- KC-15-18: Calcium;
- KC-15-20: Calcium; and
- KC-15-21: Calcium.

5.3.2 Analytical Results-Appendix IV Constituents

Table 5-5 presents the list of GWPSs for the Assessment Monitoring program at the SFAP that were developed in accordance with the requirements listed in Section 4.3.2. All Appendix IV

results were compared to the GWPSs. There were no GWPS exceedances during the March/April or October 2024 Assessment Monitoring Events for any well included in the approved monitoring program.

6.0 PROBLEMS ENCOUNTERED

There were no problems encountered during the 2024 groundwater monitoring program at Kyger Creek Station.

7.0 PROJECTED ACTIVITIES FOR 2025

The Landfill will remain in Detection Monitoring and continue to be sampled on a semi-annual basis.

The BSP will remain in Assessment Monitoring and continue to be sampled on a semi-annual basis. As described above, an ACM has been completed for this unit and the process of the selection of remedy for the BSP will continue in 2025.

The SFAP will remain in Assessment Monitoring and continue to be sampled on a semi-annual basis.

Replacement wells KC-15-05a and KC-15-19a will be sampled during future events; the results of the sampling will be used to evaluate whether the wells are representative replacements for the respective original wells.

8.0 REFERENCES

Applied Geology and Environmental Science, Inc. (AGES) 2024. Coal Combustion Residuals Regulation Groundwater Monitoring Program Plan, Ohio Valley Electric Corporation, Kyger Creek Station, Cheshire, Gallia County, Ohio, Revision 1.0. January 2024.

Applied Geology and Environmental Science, Inc. (AGES) 2020a. Coal Combustion Residuals Regulation Assessment of Corrective Measures Report Boiler Slag Pond, Ohio Valley Electric Corporation, Kyger Creek Station, Cheshire, Gallia County, Ohio. Revision 1.0. November 2020.

Applied Geology and Environmental Science, Inc. (AGES) 2020b. Coal Combustion Residuals Regulation 2019 Groundwater Monitoring and Corrective Action Report, Ohio Valley Electric Corporation, Kyger Creek Station, Cheshire, Gallia County, Ohio. Revision 1.0. October 2020.

Applied Geology and Environmental Science, Inc. (AGES) 2016. Coal Combustion Residuals Regulation Monitoring Well Installation Report, Ohio Valley Electric Corporation, Kyger Creek Station, Cheshire, Gallia County, Ohio. August 2016.

Stantec Consulting Services Inc. (Stantec) 2021. Coal Combustion Residuals Regulation Statistical Analysis Plan, Ohio Valley Electric Corporation, Kyger Creek Station, Cheshire, Gallia County, Ohio. July 2021.

TABLES

**TABLE 3-1
GROUNDWATER MONITORING NETWORK
CLASS III RESIDUAL WASTE LANDFILL
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO**

Monitoring Well ID	Designation	Date of Installation	Coordinates		Ground Elevation (ft) ²	Top of Casing Elevation (ft) ²	Top of Screen Elevation (ft)	Base of Screen Elevation (ft)	Total Depth From Top of Casing (ft)
			Northing	Easting					
CCR Unit Boundary Wells									
BuSW-1	Downgradient	6/20/2006	335756.52	2063859.43	781.46	784.21	521.21	508.10	276.11
BuSW-2	Upgradient	--	336285.22	2062985.02	792.19	794.98	526.69	506.69	288.56
BuSW-3	Variable	9/13/2007	336746.19	2062430.81	787.57	790.01	529.57	504.57	283.56
BuSW-4	Downgradient	5/17/2006	337738.57	2062566.35	780.99	783.46	535.76	525.76	257.70
BuSW-5	Upgradient	8/2/2007 (Repaired 4/4/2023)	338123.59	2063553.15	779.58	782.28	542.06	502.06	281.12
IMW-1Bu	Upgradient	9/6/2007	337177.94	2064160.50	699.89	702.29	519.39	499.39	202.97
CCR-1Bu	Downgradient	10/13/2015	337641.36	2063220.23	783.41	785.80	524.41	504.41	281.39
CCR-2Bu	Downgradient	10/21/2015	336302.19	2064286.87	742.28	744.69	514.78	494.78	249.91
Supplemental CCR Wells									
BuSW-8	Upgradient	4/17/2006	337692.04	2065706.88	630.59	633.48	498.12	498.12	145.36
BuSW-10	Downgradient	6/29/2007	336364.75	2065495.79	617.26	619.76	513.85	498.85	120.91
IMW-2Bu	Upgradient	9/10/2007	337417.23	2065170.91	609.77	612.44	508.96	493.96	118.48
MW-3D	Upgradient	5/1/2006	338184.68	2065077.38	741.11	743.53	515.58	505.58	237.95
MW-4D	Upgradient	5/10/2006	336365.51	2066044.36	576.87	579.51	504.94	494.94	84.57

Notes:

1. The well locations are referenced to the Ohio State Plane South, North American Datum (NAD83), east zone coordinate system.
2. Elevations are referenced to the North American Vertical Datum (NAVD) 1988.

TABLE 3-2
SAMPLES COLLECTED DURING 2024
CLASS III RESIDUAL WASTE LANDFILL
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

Well ID	Designation	Mar/Apr-24	Oct-24
BuSW-1	Downgradient	DM	DM
BuSW-2	Upgradient	DM	DM
BuSW-3	Variable	DM	DM
BuSW-4	Downgradient	DM	DM
BuSW-5	Upgradient	DM	DM
BuSW-8	Upgradient	DM	DM
BuSW-10	Downgradient	DM	DM
IMW-1Bu	Upgradient	DM	DM
IMW-2Bu	Upgradient	DM	DM
CCR-1Bu	Downgradient	DM	DM
CCR-2Bu	Downgradient	DM	DM
MW-3D	Upgradient	DM	DM
MW-4D	Upgradient	DM	DM

Notes:

1. DM: Detection Monitoring.

TABLE 3-3
SUMMARY OF MEASURED FIELD PARAMETERS DURING 2024
CLASS III RESIDUAL WASTE LANDFILL
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

Sample ID	Date	Temperature (°C)	Conductivity (µohms/cm)	pH (S.U.)	Oxidation Reduction Potential (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)
BuSW-1	Mar-24	12.08	650	7.60	-111	3.37	2.98
BuSW-2	Mar-24	16.8	1130	7.26	-74	2.84	3.06
BuSW-3	Mar-24	7.97	4350	7.06	-160	2.33	3.76
BuSW-4	Mar-24	16.73	1090	7.28	327	3.14	26.1
BuSW-5	Mar-24	10.21	1050	7.07	-35	3.4	4.12
BuSW-8	Apr-24	10.52	1010	7.16	347	2.34	2.61
BuSW-10	Apr-24	14.24	897	7.27	157	1.46	4.52
IMW-1Bu	Mar-24	10.19	1250	7.17	232	3.03	3.81
IMW-2Bu	Mar-24	11.34	1830	7.23	-93	2.25	3.48
MW-3D	Apr-24	10.31	1070	7.10	-62	1.7	3.3
MW-4D	Apr-24	14.18	1910	7.25	79	1.79	3.59
CCR-1Bu	Mar-24	8.95	3080	7.15	-71	3.25	3.12
CCR-2Bu	Mar-24	10.46	1190	7.66	-47	1.55	4.12
CCR-1Bu	Jun-24	18.61	3030	7.07	-68	2.65	4.58
BuSW-1	Oct-24	16.83	1130	7.05	766	0.73	2.71
BuSW-2	Oct-24	15.65	1130	7	187	0.78	3.58
BuSW-3	Oct-24	15.66	1030	7.12	677	0.98	4.32
BuSW-4	Oct-24	15.87	1210	6.87	163	2.52	19.1
BuSW-5	Oct-24	16.60	1060	7.15	265	0.81	3.85
BuSW-8	Oct-24	15.31	1050	7.09	320	0.81	3.75
BuSW-10	Oct-24	15.55	999	7	424	1.45	3.95
IMW-1Bu	Oct-24	16.23	1110	7.47	45	1.06	4.37
IMW-2Bu	Oct-24	15.41	1030	7.04	645	1.19	3.67
MW-3D	Oct-24	16.42	1420	6.95	253	1.37	4.61
MW-4D	Oct-24	15.4	1170	7.21	497	1.84	2.79
CCR-1Bu	Oct-24	15.38	1150	7.11	226	1.09	3.72
CCR-2Bu	Oct-24	17.56	1090	7.18	117	1.45	3.87

Notes:

1. °C: Degrees Celsius.
2. µohms/cm: Micro-ohms per centimeter.
3. S.U.: Standard Units.
4. mV: Millivolts.
5. mg/L: Milligrams per liter.
6. NTUs: Nephelometric Turbidity Units.

TABLE 3-4
SUMMARY OF POTENTIAL APPENDIX III SSIs
LANDFILL
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

Well ID	Potential SSI Parameter (Units)	13th Detection Monitoring Sampling Event March/April 2024		13th Detection Monitoring Resampling Event June 2024	
		Potential SSI Result	UPL	Potential SSI Result	Confirmed SSI (Yes/No)
CCR-1Bu	Chloride (mg/L)	27000	23439	17000	No

Notes:

1. SSI: Statistically Significant Increase
2. UPL: Upper Prediction Limit (Maximum Interwell UPL)
3. mg/L: Milligrams per liter

**TABLE 4-1
GROUNDWATER MONITORING NETWORK
BOILER SLAG POND
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO**

Monitoring Well ID	Designation	Date of Installation	Coordinates		Ground Elevation (ft) ²	Top of Casing Elevation (ft) ²	Top of Screen Elevation (ft)	Base of Screen Elevation (ft)	Total Depth From Top of Casing (ft)
			Northing	Easting					
KC-15-01	Upgradient	8/5/2015 (Modified 4/5/2023)	332114.55	2072393.84	573.81	576.42	519.77	509.77	69.43
KC-15-02	Upgradient	8/7/2012 (Modified 4/5/2023)	332500.654	2072569.222	574.17	576.68	520.79	510.79	69.46
KC-15-03	Upgradient	8/12/2015 (Modified 4/5/2023)	332546.402	2073001.342	573.91	576.76	520.03	510.03	71.52
KC-15-04	Downgradient	8/12/2015	331782.439	2073755.607	579.89	579.37	519.89	509.89	69.48
KC-15-05	Downgradient	8/19/2015	331569.994	2073574.832	580.52	580.07	520.52	510.52	69.55
KC-15-06	Downgradient	8/18/2015	331218.52	2073210.42	579.98	579.48	519.98	509.98	69.50
KC-15-07	Downgradient	8/11/2015	331291.75	2072957.79	578.54	578.04	508.54	498.54	79.50
KC-15-08	Downgradient	8/10/2015	331460.59	2072675.87	579.41	578.75	509.41	499.41	79.34
KC-19-27	Downgradient	4/5/2019	331507.38	2073611.94	558.22	561.13	530.22	520.22	38.00
KC-19-28	Downgradient	4/4/2019	331064.43	2073270.03	558.41	561.10	526.41	516.41	42.00
KC-19-29	Downgradient	4/3/2019	330558.94	2072840.95	561.13	564.17	530.13	520.13	41.00

Notes:

1. The well locations are referenced to the Ohio State Plane South, North American Datum (NAD83), east zone coordinate system.
2. Elevations are referenced to the North American Vertical Datum (NAVD) 1988.

TABLE 4-2
SAMPLES COLLECTED DURING 2024
BOILER SLAG POND
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

Well ID	Designation	Mar/Apr-24	Jun-24	Oct-24	Dec-24
KC-15-01	Upgradient	AM	NS	AM	NS
KC-15-02	Upgradient	AM	NS	AM	NS
KC-15-03	Upgradient	AM	NS	AM	NS
KC-15-04	Downgradient	AM	NS	AM	AM
KC-15-05a	Downgradient	AM	AM	AM	NS
KC-15-06	Downgradient	AM	NS	AM	NS
KC-15-07	Downgradient	AM	AM	AM	AM
KC-15-08	Downgradient	AM	AM	AM	AM
KC-19-27	Downgradient	AM	NS	AM	AM
KC-19-28	Downgradient	AM	NS	AM	NS
KC-19-29	Downgradient	AM	NS	AM	NS

Notes:

1. AM: Assessment Monitoring.
2. NS: Not Sampled.
3. Well KC-15-05a was sampled and is being evaluated to determine if it is representative of the original well.

TABLE 4-3
SUMMARY OF MEASURED FIELD PARAMETERS DURING 2024
BOILER SLAG POND
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

Sample ID	Date	Temperature (°C)	Conductivity (µohms/cm)	pH (S.U.)	Oxidation Reduction Potential (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)
KC-15-01	Apr-24	13.43	810	6.52	69	11.89	4.21
KC-15-02	Apr-24	12.2	933	6.56	74	10.51	3.98
KC-15-03	Apr-24	15.01	909	6.11	187	9.22	9.53
KC-15-04	Apr-24	12.28	804	7.08	56	2.94	24.30
KC-15-05a	Apr-24	13.91	965	6.99	168	2.67	4.33
KC-15-06	Apr-24	18.22	746	7.05	62	2.35	4.12
KC-15-07	Apr-24	12.15	932	6.35	21	6.57	54.4
KC-15-08	Apr-24	15.8	1190	6.4	76	3.27	41.7
KC-19-27	Apr-24	14.83	1800	6.96	18	2.21	4.63
KC-19-28	Apr-24	16.76	463	7.10	296	2.88	3.96
KC-19-29	Apr-24	14.1	900	6.11	291	11.68	5.56
KC-15-05a	Jun-24	24.62	853	6.95	38	0.45	4.51
KC-15-07	Jun-24	19.63	1790	6.66	-112	0.58	0.5
KC-15-08	Jun-24	24.3	1340	6.89	-83	0.27	4.58
KC-15-01	Sep-24	21.46	723	6.18	135	4.95	4.6
KC-15-02	Oct-24	16.34	849	6.26	157	1.91	4.59
KC-15-03	Oct-24	19.26	824	6.15	127	1.04	8.38
KC-15-04	Oct-24	16.32	1230	7.17	303	0.88	4.51
KC-15-05a	Oct-24	15.23	1060	7.06	108	1.17	4.65
KC-15-06	Oct-24	18.25	739	6.36	119	5.54	14.8
KC-15-07	Oct-24	15.66	840	7.17	-46	1.48	3.71
KC-15-08	Oct-24	20.62	1220	6.51	61	5.54	11.9
KC-19-27	Oct-24	15.72	1070	7.07	377	0.74	4.63
KC-19-28	Oct-24	16.73	971	7.07	283	1.46	3.61
KC-19-29	Oct-24	15.75	1080	7.15	438	1.69	3.95
KC-15-04	Dec-24	14.41	759	6.24	142	1.64	38.1
KC-15-07	Dec-24	13.24	954	6.63	-22	2.88	30.4
KC-15-08	Dec-24	9.75	1540	6.74	-17	0	2.14
KC-19-27	Dec-24	15.19	920	6.68	-48	1.94	2.78

Notes:

1. °C: Degrees Celsius.
2. µohms/cm: Micro-ohms per centimeter.
3. S.U.: Standard Units.
4. mV: Millivolts.
5. mg/L: Milligrams per liter.
6. NTUs: Nephelometric Turbidity Units.
7. Well KC-15-05a was sampled and is being evaluated to determine if it is representative of the original well.

TABLE 4-4
SUMMARY OF POTENTIAL AND CONFIRMED APPENDIX III SSIs
BOILER SLAG POND
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

Well ID	Potential SSI Parameter (Units)	12th Assessment Monitoring Sampling Event April 2024		12th Assessment Monitoring Resampling Event June 2024		13th Assessment Monitoring Sampling Event October 2024		13th Assessment Monitoring Resampling Event December 2024	
		Potential SSI Result	UTL	Potential SSI Result	Confirmed SSI (Yes/No)	Potential SSI Result	UTL	Potential SSI Result	Confirmed SSI (Yes/No)
KC-15-08	Boron (mg/L)	NA	NA	NA	NA	0.73	0.72	0.75	Yes
	Calcium (mg/L)	160	137	240	Yes	190	137	230	Yes
	Sulfate (mg/L)	380	306	660	Yes	500	304	590	Yes
	TDS (mg/L)	830	590	1200	Yes	940	592	690	Yes

Notes:

1. SSI: Statistically Significant Increase.
2. UTL: Upper Tolerance Limit (Pooled Interwell UTL).
3. mg/L: Milligrams per liter.
4. NA: Not Applicable—no SSI.

**TABLE 4-5
GROUNDWATER PROTECTION STANDARDS
BOILER SLAG POND
CCR ASSESSMENT MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO**

Appendix IV Constituents			
Constituent (Units)	Background	MCL/SMCL	GWPS
Antimony, Sb (µg/L)	1	6	6
Arsenic, As (µg/L)	6.6	10	10
Barium, Ba (µg/L)	125	2000	2000
Beryllium, Be (µg/L)	0.5	4	4
Cadmium, Cd (µg/L)	0.5	5	5
Chromium, Cr (µg/L)	3.9	100	100
Cobalt, Co (µg/L)	9.1	6*	9.1
Fluoride, F (mg/L)	0.2	4	4
Lead, Pb (µg/L)	0.9	15*	15
Lithium, Li (µg/L)	0.01	40*	40
Mercury, Hg (µg/L)	0.25	2	2
Molybdenum, Mo (µg/L)	5.1	100*	100
Radium 226 & 228 (combined) (pCi/L)	2.5	5	5
Selenium, Se (µg/L)	2.5	50	50
Thallium, Tl (µg/L)	0.9	2	2

Notes:

1. MCL: Maximum Contaminant Level.
2. SMCL: Secondary Maximum Contaminant Level.
3. *: Established by U.S. EPA as part of 2018 decision.
4. GWPS: Groundwater Protection Standard.
5. µg/L: Micrograms per liter.
6. mg/L: Milligrams per liter.
7. pCi/L: Picocuries per liter.

TABLE 4-6
SUMMARY OF POTENTIAL AND CONFIRMED GWPS EXCEEDANCES
BOILER SLAG POND
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

Well ID	Potential Exceedance Parameter (Units)	12th Assessment Monitoring Sampling Event March/April 2024		12th Assessment Monitoring Resampling Event June 2024		13th Assessment Monitoring Sampling Event September/October 2024		13th Assessment Monitoring Resampling Event December 2024	
		Potential Exceedance Result	GWPS	Potential Exceedance Result	Confirmed Exceedance (Yes/No)	Potential Exceedance Result	GWPS	Potential Exceedance Result	Confirmed Exceedance (Yes/No)
KC-15-04	Arsenic (µg/L)	NA	NA	NA	NA	14	10	2.4	No
KC-15-07		68	10	160	Yes	120		67	Yes
KC-19-27		NA	NA	NA	NA	25		9.1	No
KC-15-08	Cobalt (ug/L)	11	9.2	5.6	No	NA	NA	NA	NA

Notes:

1. GWPS: Groundwater Protection Standard.
2. µg/L: Micrograms per liter.
3. NA: Not Applicable—no potential exceedance.

**TABLE 5-1
GROUNDWATER MONITORING NETWORK
SOUTH FLY ASH POND
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK PLANT
CHESHIRE, OHIO**

Monitoring Well ID	Designation	Date of Installation	Coordinates		Ground Elevation (ft) ²	Top of Casing Elevation (ft) ²	Top of Screen Elevation (ft)	Base of Screen Elevation (ft)	Total Depth From Top of Casing (ft)
			Northing	Easting					
KC-15-09	Upgradient	9/15/2015	334631.959	2072494.446	587.85	587.47	516.85	506.85	80.62
KC-15-10	Upgradient	9/16/2015	335018.949	2072695.744	587.75	587.45	523.75	513.75	73.70
KC-15-11	Upgradient	8/20/2015	335426.144	2072970.304	588.07	587.71	524.07	514.07	73.64
KC-15-12	Upgradient	9/17/2015	335867.034	2073268.666	588.40	587.94	524.40	514.40	73.54
KC-15-13	Upgradient	9/1/2015	336047.047	2073665.155	588.23	587.86	521.23	511.23	76.73
KC-15-14	Upgradient	8/20/2015	335808.537	2074057.138	588.85	587.80	524.85	513.85	72.95
KC-15-15	Variable	9/2/2015	335558.54	2074472.666	587.95	587.63	523.95	513.95	73.68
KC-15-16	Variable	9/3/2015	335223.916	2074799.53	588.82	588.38	524.82	514.82	73.50
KC-15-17	Variable	9/3/2015	334881.253	2074480.308	588.68	588.13	524.68	514.68	73.45
KC-15-18	Downgradient	8/25/2015	334507.455	2074126.888	588.27	587.72	524.27	514.27	73.45
KC-15-19	Downgradient	9/9/2015	334132.454	2073771.27	588.47	588.18	524.47	514.47	73.71
KC-15-20	Downgradient	8/27/2015	333841.393	2073452.842	589.45	588.72	525.45	515.45	73.26
KC-15-21	Downgradient	8/27/2015	334089.953	2073009.526	588.28	587.84	518.28	508.28	79.56
KC-15-22	Downgradient	9/10/2015	334307.567	2072647.434	587.51	587.27	518.51	508.51	78.76

Notes:

1. The well locations are referenced to the Ohio State Plane South, North American Datum (NAD83), east zone coordinate system.
2. Elevations are referenced to the North American Vertical Datum (NAVD) 1988.

TABLE 5-2
SAMPLES COLLECTED DURING 2024
SOUTH FLY ASH POND
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

Well ID	Designation	Mar/Apr-24	Jun-24	Oct-24	Dec-24
KC-15-09	Upgradient	AM	NS	AM	NS
KC-15-10	Upgradient	AM	NS	AM	NS
KC-15-11	Upgradient	AM	NS	AM	NS
KC-15-12	Upgradient	AM	NS	AM	NS
KC-15-13	Upgradient	AM	NS	AM	NS
KC-15-14	Upgradient	AM	NS	AM	NS
KC-15-15	Variable	AM	NS	AM	NS
KC-15-16	Variable	AM	NS	AM	NS
KC-15-17	Variable	AM	NS	AM	NS
KC-15-18	Downgradient	AM	AM	AM	AM
KC-15-19a	Downgradient	AM	NS	AM	AM
KC-15-20	Downgradient	AM	AM	AM	AM
KC-15-21	Downgradient	AM	AM	AM	AM
KC-15-22	Downgradient	AM	AM	AM	NS

Notes:

1. AM: Assessment Monitoring.
2. NS: Not Sampled.
3. Well KC-15-19a was sampled and is being evaluated to determine if it is representative of the original well.

TABLE 5-3
SUMMARY OF MEASURED FIELD PARAMETERS DURING 2024
SOUTH FLY ASH POND
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OH

Sample ID	Date	Temperature (°C)	Conductivity (µohms/cm)	pH (S.U.)	Oxidation Reduction Potential (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)
KC-15-09	Mar-24	13.51	558	6.16	93	6.19	3.15
KC-15-10	Mar-24	14.44	482	6.88	104	4.61	3.68
KC-15-11	Mar-24	13.38	525	6.06	185	8.21	4.22
KC-15-12	Mar-24	12.84	822	6.35	72	2.51	4.49
KC-15-13	Mar-24	11.99	978	7.02	157	11.89	37.10
KC-15-14	Mar-24	17.49	746	7.04	95	13.49	3.98
KC-15-15	Mar-24	14.91	748	6.34	186	6.37	2.26
KC-15-16	Apr-24	18.57	1870	6.22	210	7.78	17.40
KC-15-17	Apr-24	17.42	1140	7.83	32	15.85	OR
KC-15-18	Apr-24	16.85	538	7.48	78	8.46	99.20
KC-15-19a	Apr-24	14.68	1120	7.17	219	2.13	4.12
KC-15-20	Apr-24	13.96	1130	6.50	316	1.81	4.48
KC-15-21	Apr-24	20.01	1700	6.77	228	1.87	4.49
KC-15-22	Apr-24	17.09	727	7.18	-82	2.39	2.33
KC-15-18	Jun-24	22.25	1330	7.05	116	1.54	4.73
KC-15-19a	Jun-24	20.35	1040	6.57	235	0.77	4.21
KC-15-20	Jun-24	21.87	1080	6.63	337	0.33	4.58
KC-15-21	Jun-24	19.52	1030	7.09	86	0.28	4.45
KC-15-22	Jun-24	17.79	664	6.30	-58	0.57	3.91
KC-15-09	Oct-24	19.47	492	7.35	-39	0.3	3.60
KC-15-10	Oct-24	17.68	427	7.14	80	0.59	2.70
KC-15-11	Oct-24	14.58	492	7.17	39	0.33	3.44
KC-15-12	Oct-24	19.58	6080	7.65	17	0.41	3.12
KC-15-13	Oct-24	16.35	1060	6.71	3	0.58	3.88
KC-15-14	Oct-24	20.72	702	7.09	-6	0.6	3.95
KC-15-15	Oct-24	16.31	695	6.59	58	0.25	4.84
KC-15-16	Oct-24	20.79	1930	6.29	30	0.4	4.45
KC-15-17	Oct-24	20.21	1360	7.10	18	1.51	46.30
KC-15-18	Oct-24	19.62	1500	6.72	47	0.41	4.91
KC-15-20	Oct-24	19.38	1140	6.63	94	0.38	4.49
KC-15-19a	Oct-24	19.88	1150	6.32	77	0.47	4.11
KC-15-21	Oct-24	19.79	925	7.41	-21	0.27	4.79
KC-15-22	Oct-24	15.83	735	7.36	-104	0.48	4.38
KC-15-18	Dec-24	10.62	1190	7.08	150	1.95	5.90
KC-15-19a	Dec-24	13.38	1070	7.05	212	1.4	3.85
KC-15-20	Dec-24	12.75	1090	6.85	184	1.47	4.51
KC-15-21	Dec-24	14.23	872	6.94	271	2.06	4.23

Notes:

1. °C: Degrees Celsius.
2. µohms/cm: Micro-ohms per centimeter.
3. S.U.: Standard Units.
4. mV: Millivolts.
5. mg/L: Milligrams per liter.
6. NTUs: Nephelometric Turbidity Units.
7. Well KC-15-19a was sampled and is being evaluated to determine if it is representative of the original well.

TABLE 5-4
SUMMARY OF POTENTIAL AND CONFIRMED APPENDIX III SSIs
SOUTH FLY ASH POND
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

Well ID	Potential SSI Parameter (Units)	12th Assessment Monitoring Sampling Event March/April 2024		12th Assessment Monitoring Resampling Event June 2024		13th Assessment Monitoring Sampling Event October 2024		13th Assessment Monitoring Resampling Event December 2024	
		Potential SSI Result	UTL	Potential SSI Result	Confirmed SSI (Yes/No)	Potential SSI Result	UTL	Potential SSI Result	Confirmed SSI (Yes/No)
KC-15-18	Fluoride (mg/L)	0.33	0	0.15 J	No	NA	NA	NA	NA
	Calcium (mg/L)	NA	NA	NA	NA	190	111	170	Yes
	Chloride (mg/L)	NA	NA	NA	NA	110	65	60	No
	Sulfate (mg/L)	NA	NA	NA	NA	600	508	480	No
	TDS (mg/L)	NA	NA	NA	NA	1200	890	870	No
KC-15-20	Calcium (mg/L)	200	112	190	Yes	180	111	230	Yes
	TDS (mg/L)	910	890	880	No	NA	NA	NA	NA
KC-15-21	Calcium (mg/L)	360	112	200	Yes	160	111	170	Yes
	Sulfate (mg/L)	860	508	450	No	NA	NA	NA	NA
	TDS (mg/L)	1300	890	780	No	NA	NA	NA	NA
	Fluoride (mg/L)	NA	NA	NA	NA	0.62	0	0.28	No
KC-15-22	Calcium (mg/L)	120	112	110	No	NA	NA	NA	NA

Notes:

1. SSI: Statistically Significant Increase.
2. UTL: Upper Tolerance Limit (Pooled Interwell UTL).
3. mg/L: Milligrams per liter.
4. NA: Not Applicable.

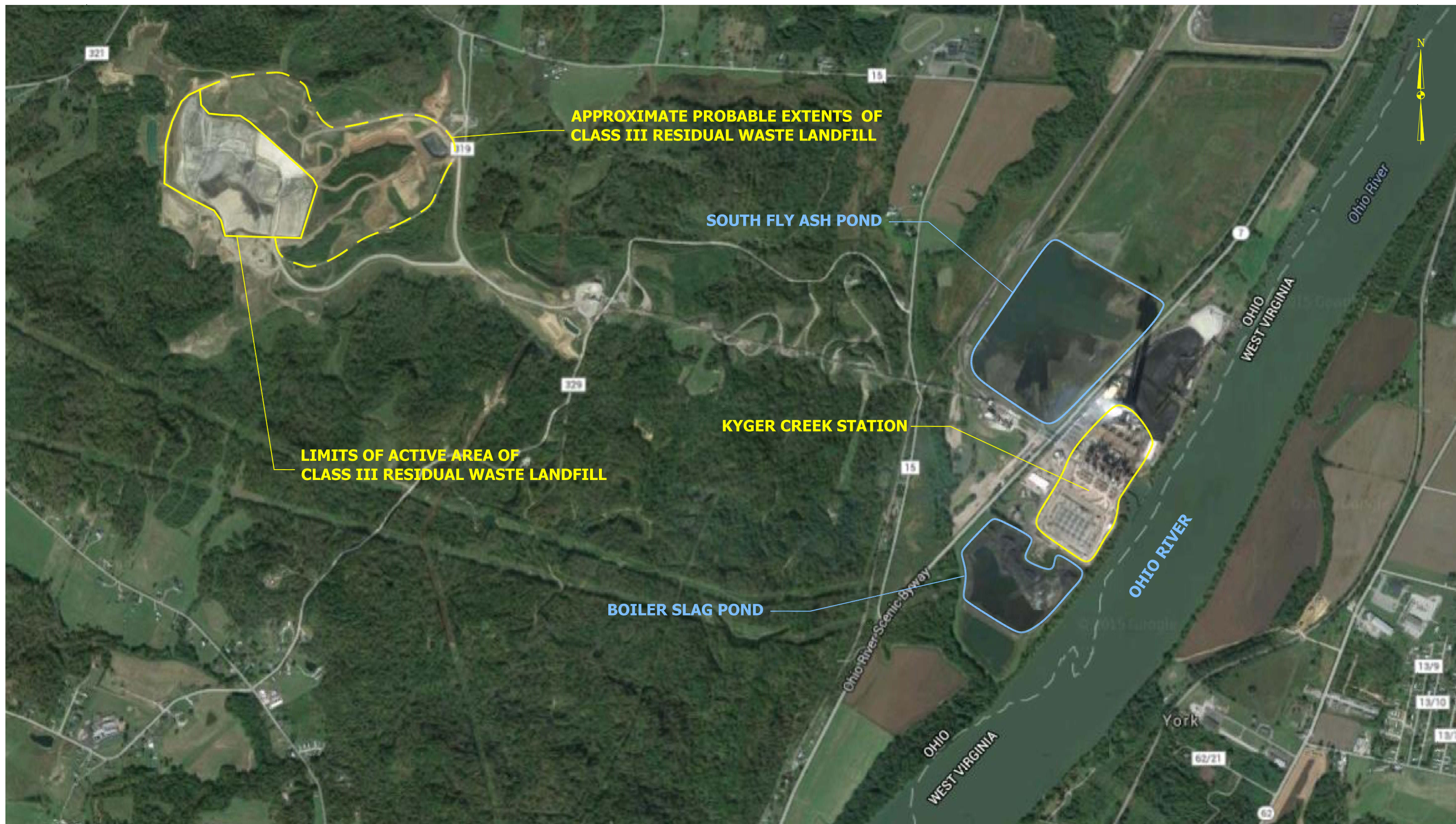
TABLE 5-5
GROUNDWATER PROTECTION STANDARDS
SOUTH FLY ASH POND
CCR ASSESSMENT MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

Appendix IV Constituents			
Constituent (Units)	Background	MCL/SMCL	GWPS
Antimony, Sb (µg/L)	1	6	6
Arsenic, As (µg/L)	4.612	10	10
Barium, Ba (µg/L)	179	2000	2000
Beryllium, Be (µg/L)	0.6	4	4
Cadmium, Cd (µg/L)	1.2	5	5
Chromium, Cr (µg/L)	5.3	100	100
Cobalt, Co (µg/L)	15	6*	15
Fluoride, F (mg/L)	0.32	4	4
Lead, Pb (µg/L)	1.2	15*	15
Lithium, Li (µg/L)	0.03	40*	40
Mercury, Hg (µg/L)	0.25	2	2
Molybdenum, Mo (µg/L)	7	100*	100
Radium 226 & 228 (combined) (pCi/L)	2.5	5	5
Selenium, Se (µg/L)	2.5	50	50
Thallium, Tl (µg/L)	0.7	2	2

Notes:

1. MCL: Maximum Contaminant Level.
2. SMCL: Secondary Maximum Contaminant Level.
3. *: Established by U.S. EPA as part of 2018 decision.
4. GWPS: Groundwater Protection Standard.
5. µg/L: Micrograms per liter.
6. mg/L: Milligrams per liter.
7. pCi/L: Picocuries per liter.

FIGURES



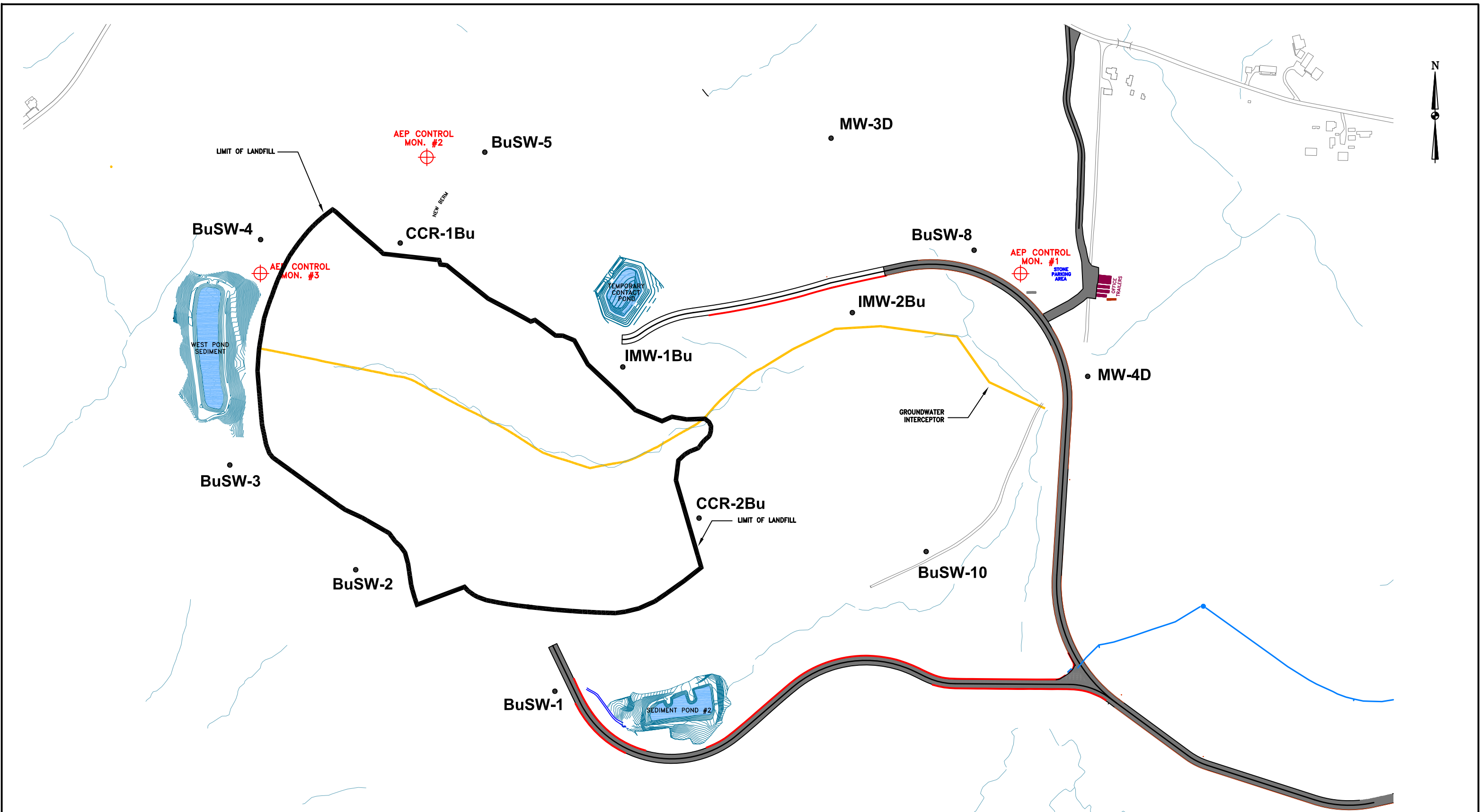
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CHECKED BY	
JOB NO.	2019018-KYG
DWG FILE	KYGER_CCR_2019 Annual GW Rpt_Aerial Site b01.dwg
DRAWING SCALE	NOT TO SCALE

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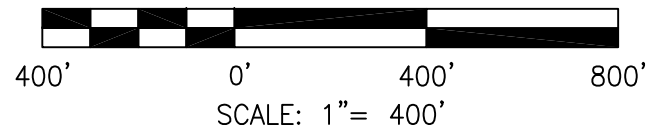
OHIO VALLEY ELECTRIC COMPANY

KYGER CREEK STATION
CHESHIRE, GALLIA COUNTY, OHIO
SITE LOCATION MAP

DRAWING NAME	FIGURE 1	REV.	0
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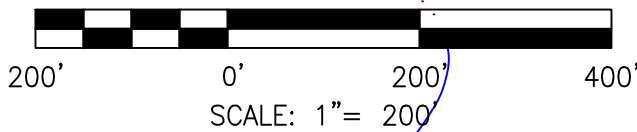
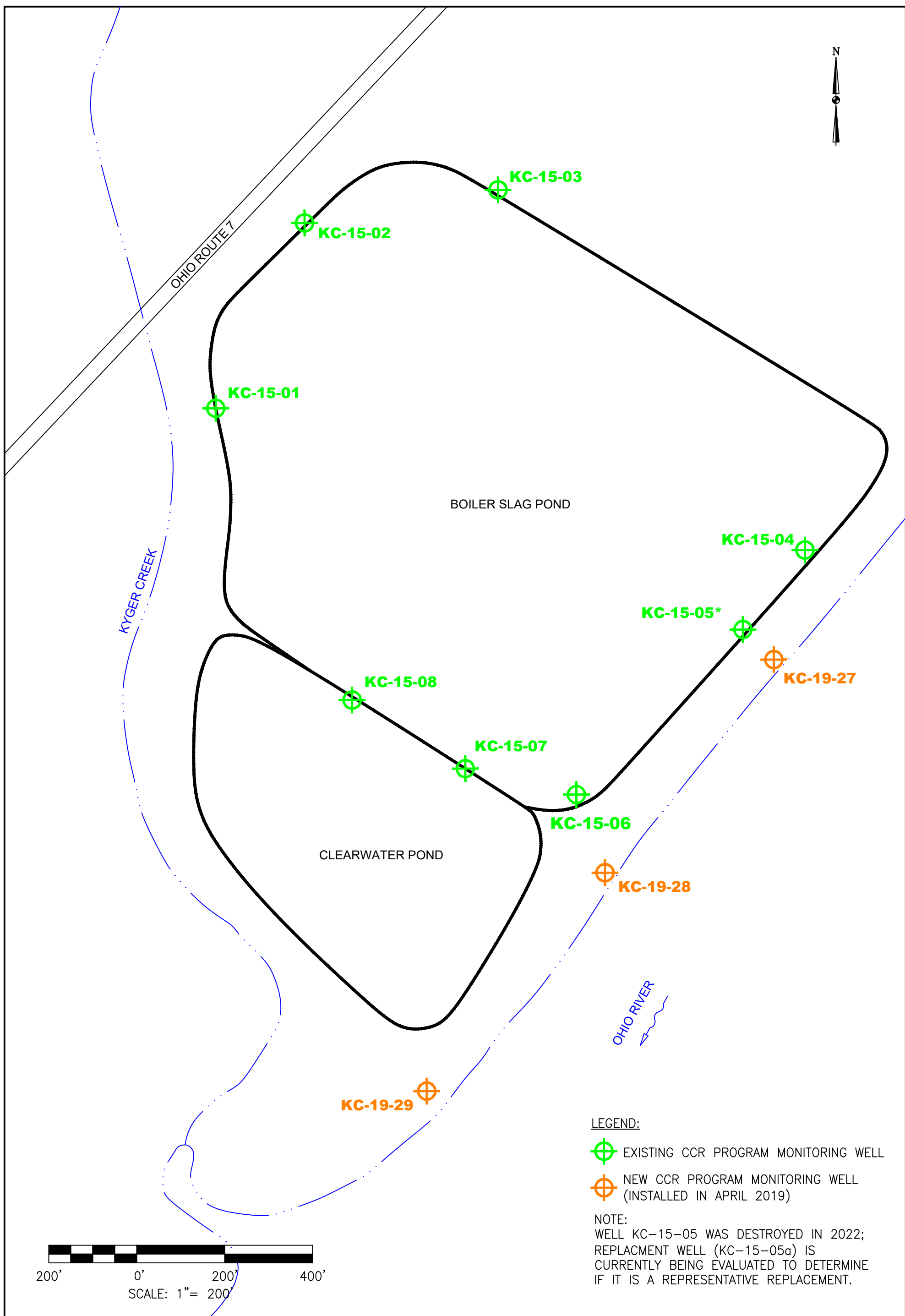
LEGEND:
 ● BuSW-1 BUFFALO SANDSTONE WELL





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CHECKED BY	
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DRAWING SCALE	AS SHOWN

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OHIO VALLEY ELECTRIC COMPANY	
KYGER CREEK STATION CHESHIRE, GALLIA COUNTY, OHIO CLASS III RESIDUAL WASTE LANDFILL GROUNDWATER MONITORING WELL LOCATIONS	
DRAWING NAME	FIGURE 2
REV.	0




LEGEND:

-  EXISTING CCR PROGRAM MONITORING WELL
-  NEW CCR PROGRAM MONITORING WELL (INSTALLED IN APRIL 2019)

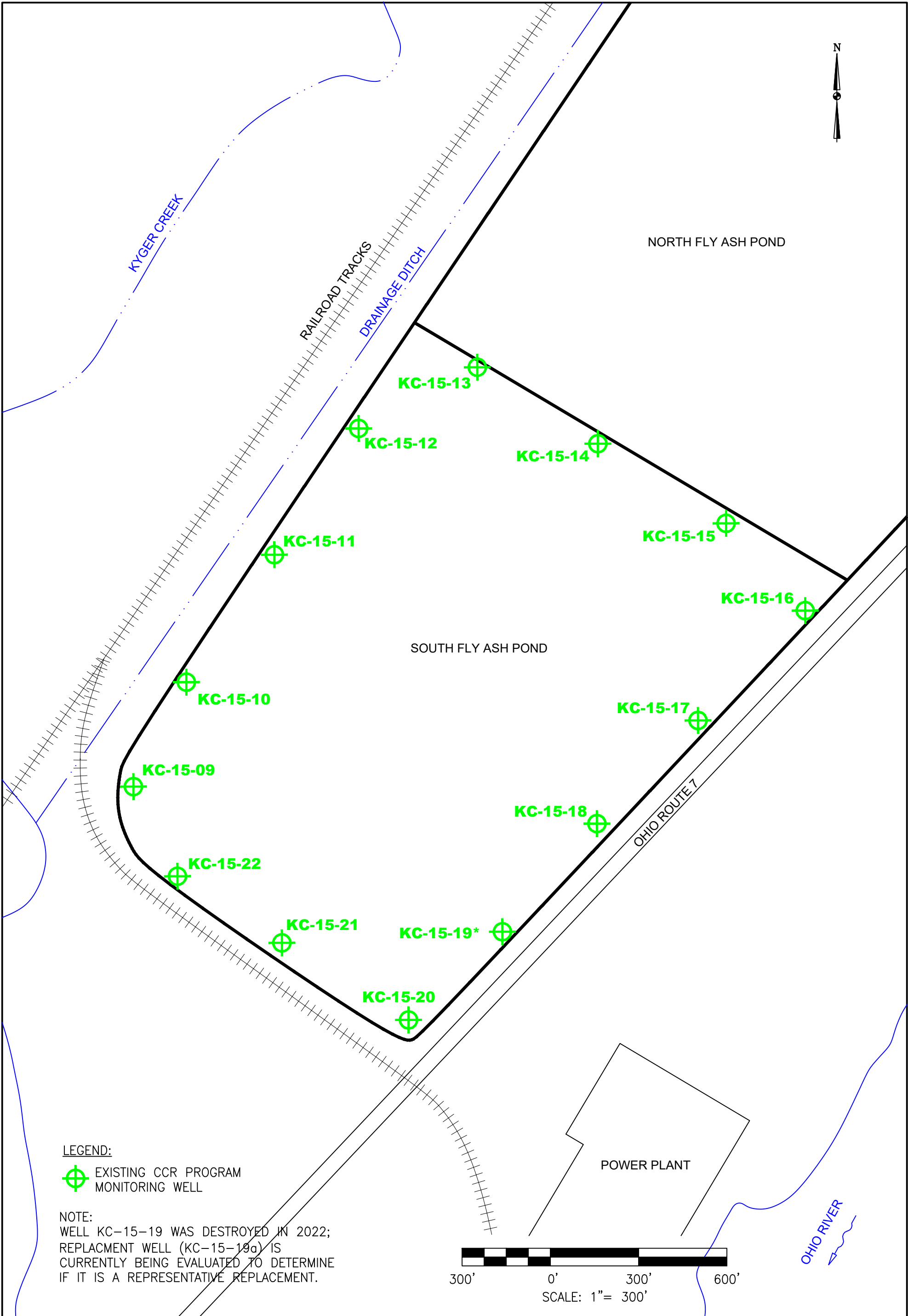
NOTE:
WELL KC-15-05 WAS DESTROYED IN 2022;
REPLACEMENT WELL (KC-15-05a) IS
CURRENTLY BEING EVALUATED TO DETERMINE
IF IT IS A REPRESENTATIVE REPLACEMENT.

DRAWN BY	AB
DATE	
CHECKED BY	
JOB NO.	2022042-KYGER
DWG FILE	KYGER_CCR_2022 Annual GW Rpt_Ponds+MWs b03-b04.dwg
DRAWING SCALE	1"=200'



AGES
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OHIO VALLEY ELECTRIC COMPANY	
KYGER CREEK STATION CHESHIRE, GALLIA COUNTY, OHIO BOILER SLAG POND GROUNDWATER MONITORING WELL LOCATIONS	
DRAWING NAME	FIGURE 3
REV.	0



DRAWN BY	AB
DATE	
CHECKED BY	
JOB NO.	2022042-KYGER
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DRAWING SCALE	1"=300'

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OHIO VALLEY ELECTRIC COMPANY	
KYGER CREEK STATION CHESHIRE, GALLIA COUNTY, OHIO SOUTH FLY ASH POND GROUNDWATER MONITORING WELL LOCATIONS	
DRAWING NAME	FIGURE 4
REV.	0

APPENDIX A
GROUNDWATER ELEVATIONS

TABLE A-1
SUMMARY OF GROUNDWATER ELEVATION DATA DURING 2024
CLASS III RESIDUAL WASTE LANDFILL
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

Well ID	Mar-24	Jun-24	Oct-24	Dec-24
	Groundwater Elevation (ft)			
BuSW-1	568.37	571.01	568.58	NM
BuSW-2	571.36	573.26	571.46	NM
BuSW-3	605.97	555.00	585.53	NM
BuSW-4	557.07	531.97	551.36	NM
BuSW-5	576.86	576.89	575.32	NM
BuSW-8	565.15	567.26	564.83	NM
BuSW-10	565.63	567.91	535.67	NM
IMW-1Bu	574.39	575.15	534.39	NM
IMW-2Bu	565.06	566.73	564.61	NM
CCR-1Bu	584.20	583.85	584.12	NM
CCR-2Bu	566.93	568.52	567.07	NM
MW-3D	578.23	573.81	610.33	NM
MW-4D	566.11	568.48	566.13	NM

Notes:

1. NM: Not Measured

TABLE A-2
SUMMARY OF GROUNDWATER ELEVATION DATA DURING 2024
BOILER SLAG POND
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

Well ID	Mar-24	Jun-24	Oct-24	Dec-24
	Groundwater Elevation (ft)			
KC-15-01	541.81	540.12	541.80	541.87
KC-15-02	542.75	539.36	542.75	542.87
KC-15-03	544.03	540.21	543.89	544.10
KC-15-04	538.65	538.94	538.61	538.59
KC-15-05a	538.68	538.49	538.96	538.76
KC-15-06	538.55	539.24	538.78	538.82
KC-15-07	538.53	539.15	537.89	538.46
KC-15-08	538.63	539.54	538.90	538.70
KC-19-27	538.06	539.07	537.43	539.49
KC-19-28	537.87	539.07	537.15	539.25
KC-19-29	537.95	539.05	538.57	540.79

TABLE A-3
SUMMARY OF GROUNDWATER ELEVATION DATA DURING 2024
SOUTH FLY ASH POND
CCR GROUNDWATER MONITORING PROGRAM
KYGER CREEK STATION
CHESHIRE, OHIO

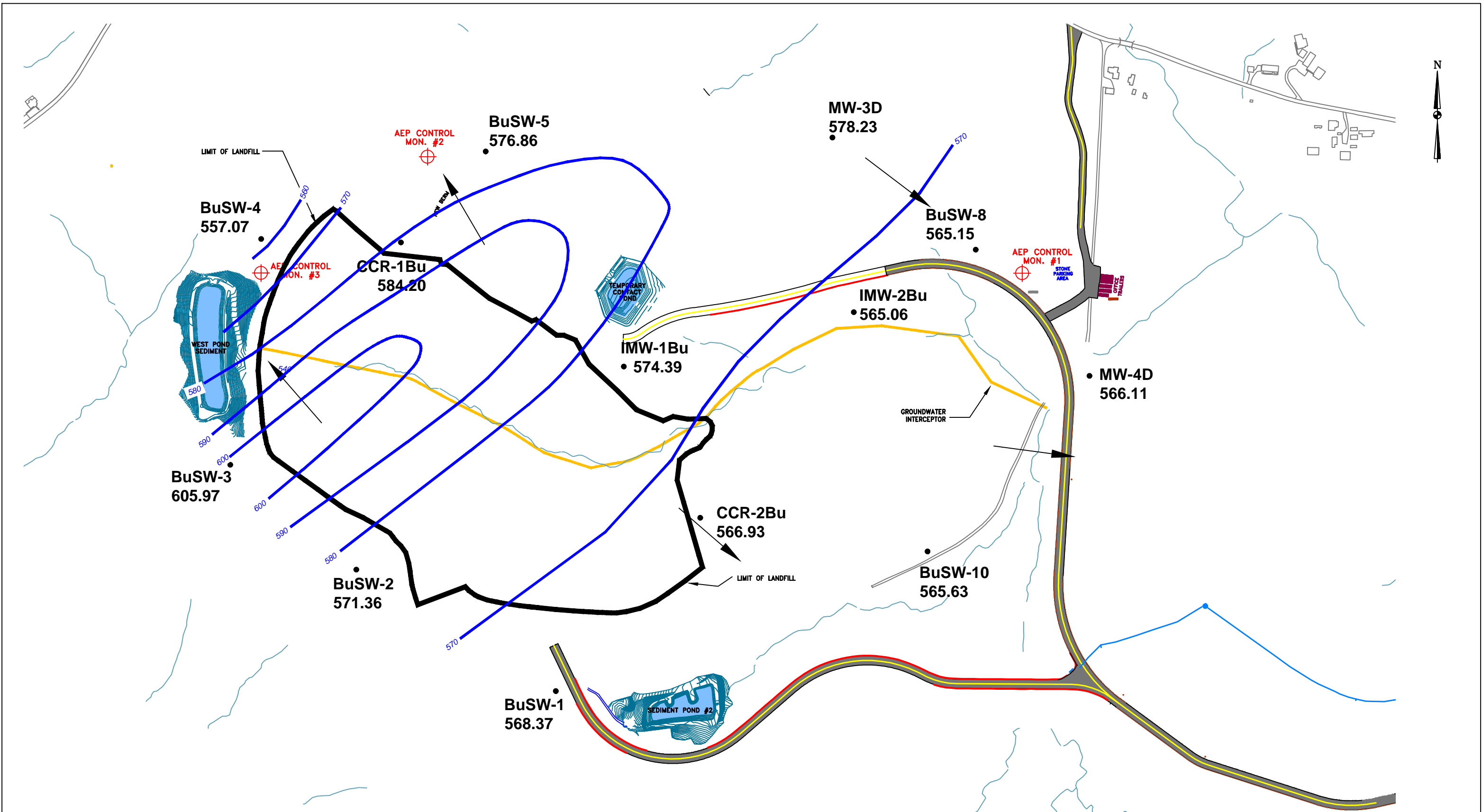
Well ID	Mar-24	Jun-24	Oct-24	Dec-24
	Groundwater Elevation (ft)			
KC-15-09	540.14	540.82	540.16	539.83
KC-15-10	540.25	541.05	540.37	540.05
KC-15-11	540.44	541.38	541.47	540.79
KC-15-12	540.45	541.68	540.65	539.93
KC-15-13	540.48	541.65	540.16	539.91
KC-15-14	540.40	541.28	540.07	540.17
KC-15-15	540.18	540.88	539.92	540.18
KC-15-16	540.04	540.18	540.11	539.88
KC-15-17	540.89	544.89	539.93	539.72
KC-15-18	539.99	540.27	539.62	539.50
KC-15-19a	540.31	540.96	540.05	539.82
KC-15-20	539.72	542.94	539.57	539.37
KC-15-21	539.94	542.17	539.69	539.49
KC-15-22	540.06	541.10	540.12	539.86

Notes:

1. NM: Not Measured

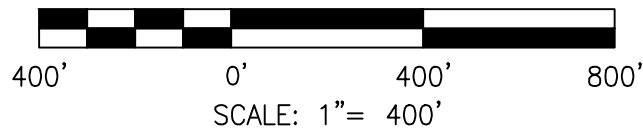
APPENDIX B

GROUNDWATER FLOW MAPS



LEGEND:

● BuSW-1 BUFFALO SANDSTONE WELL



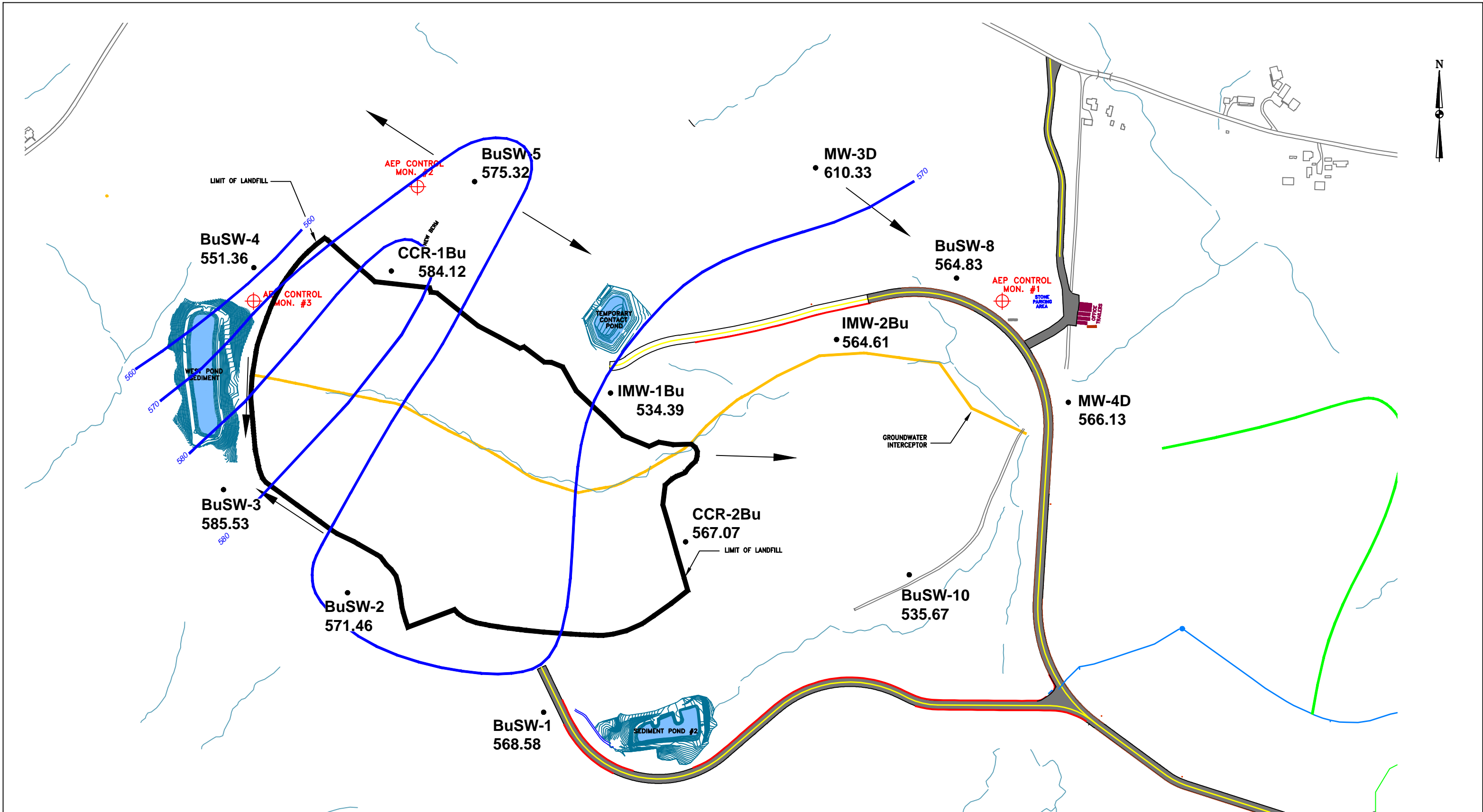
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DRAWING SCALE	AS SHOWN



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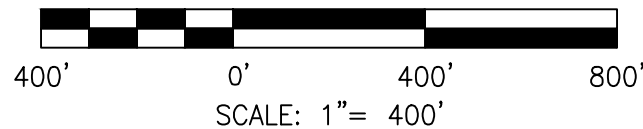
OHIO VALLEY ELECTRIC COMPANY
KYGER CREEK STATION
CHESHIRE, GALLIA COUNTY, OHIO
CLASS III RESIDUAL WASTE LANDFILL
GROUNDWATER ELEVATIONS AND FLOW MAP
MARCH/APRIL 2024

DRAWING NAME	FIGURE B-1	REV.	0
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LEGEND:

● BuSW-1 BUFFALO SANDSTONE WELL



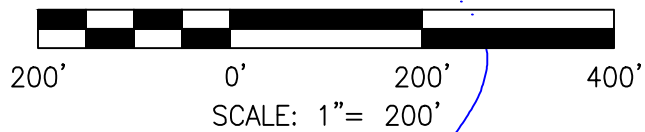
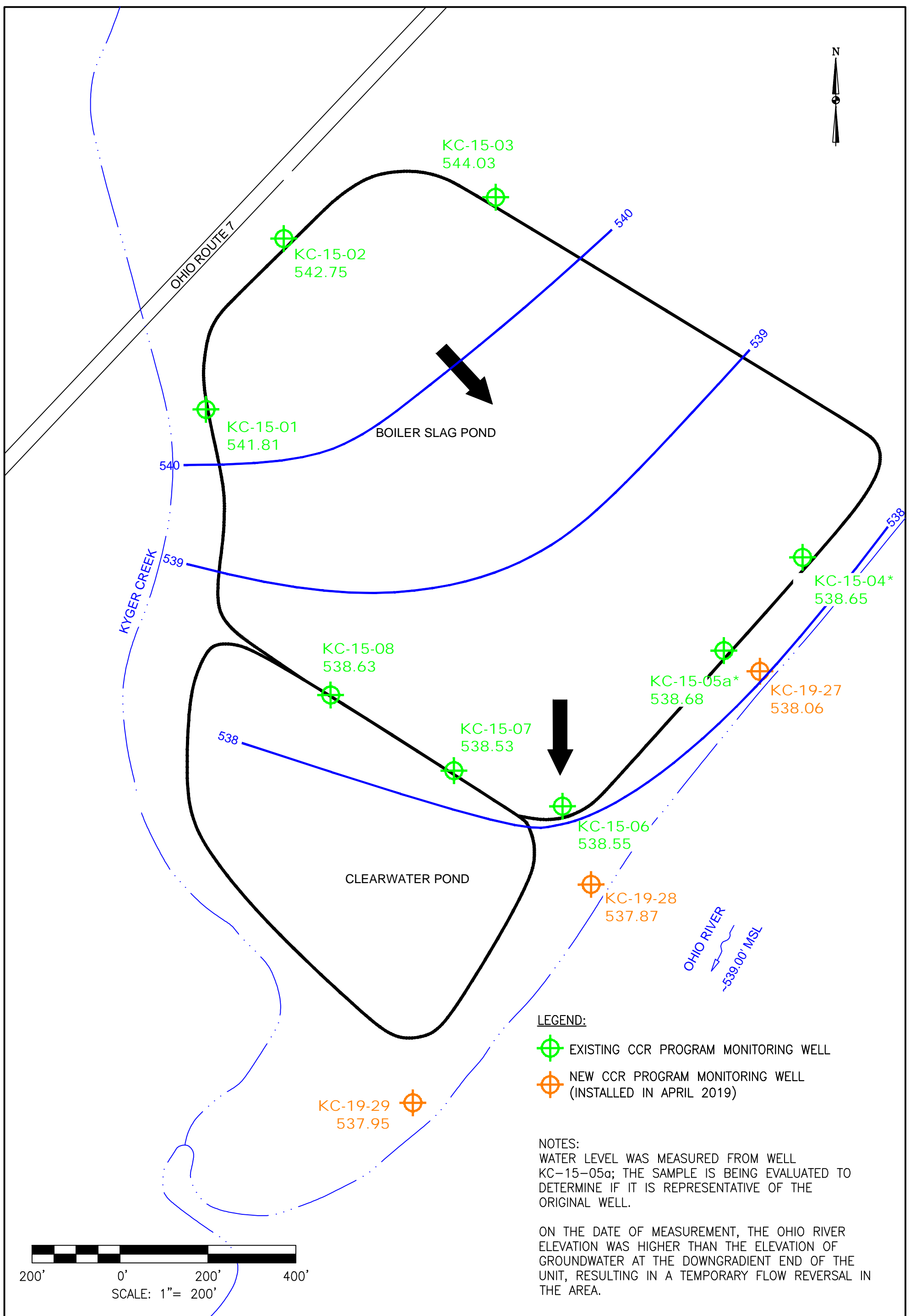
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DATE	12-26-2024
CHECKED BY	
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DRAWING SCALE	AS SHOWN



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OHIO VALLEY ELECTRIC COMPANY
KYGER CREEK STATION
CHESHIRE, GALLIA COUNTY, OHIO
CLASS III RESIDUAL WASTE LANDFILL
GROUNDWATER ELEVATIONS AND FLOW MAP
SEPTEMBER/OCTOBER 2024

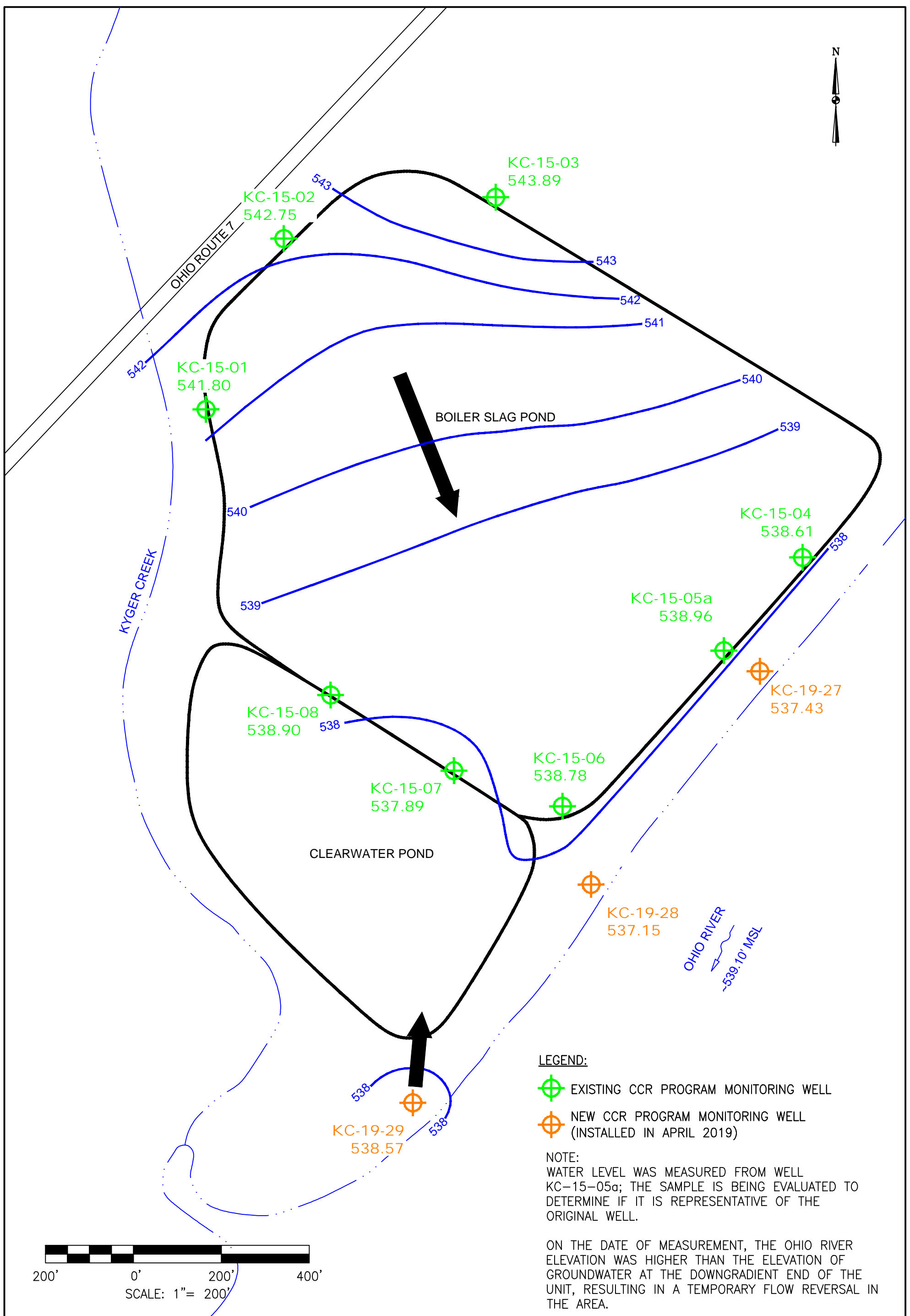
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DRAWING SCALE	1"=200'

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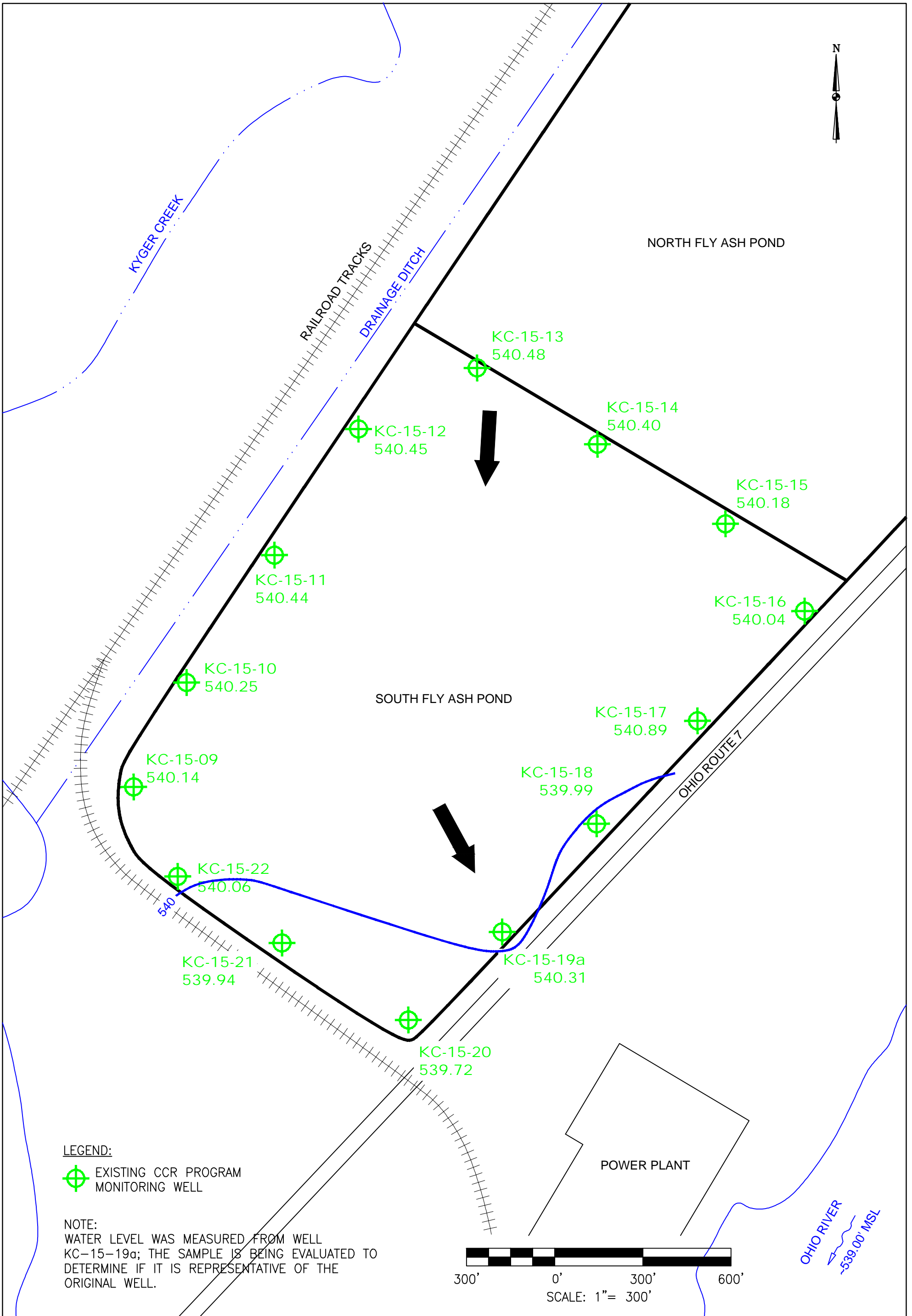
OHIO VALLEY ELECTRIC COMPANY	
KYGER CREEK STATION	
CHESHIRE, GALLIA COUNTY, OHIO	
BOILER SLAG POND	
GROUNDWATER LEVELS AND FLOW DIRECTION	
MARCH/APRIL 2024	
DRAWING NAME	FIGURE B-3
REV.	0



DRAWN BY	GRM
DATE	12-26-2024
CHECKED BY	
JOB NO.	2024024
DWG FILE	B-4_KYGER_CCR_2023 ANNUAL GW RPT_BSP_GW FLOW_SEPTOCT2024-GRM.DWG
DRAWING SCALE	1"=200'

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OHIO VALLEY ELECTRIC COMPANY	
KYGER CREEK STATION	
CHESHIRE, GALLIA COUNTY, OHIO	
BOILER SLAG POND	
GROUNDWATER LEVELS AND FLOW DIRECTION	
SEPTEMBER/OCTOBER 2024	
DRAWING NAME	FIGURE B-4
REV.	0



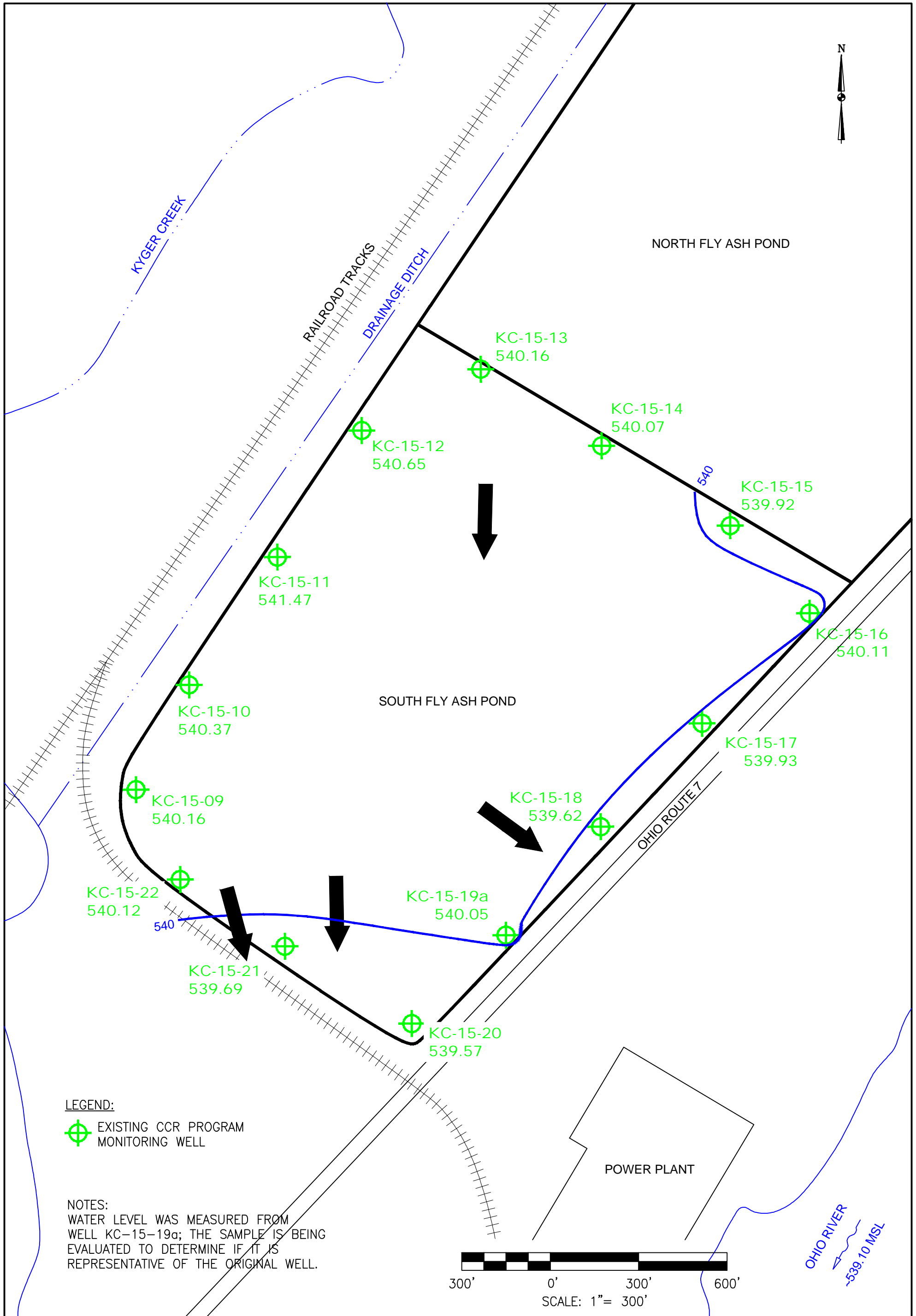
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JOB NO.	2024024
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DRAWING SCALE	1"=300'



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OHIO VALLEY ELECTRIC COMPANY
 KYGER CREEK STATION
 CHESHIRE, GALLIA COUNTY, OHIO
 SOUTH FLY ASH POND
 GROUNDWATER LEVELS AND FLOW DIRECTION
 MARCH/APRIL 2024

DRAWING NAME	FIGURE B-5	REV.	0
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DRAWN BY	GRM
DATE	12-26-2024
CHECKED BY	
JOB NO.	2024024
DWG FILE	B-6_KYGER_CCR_2023 ANNUAL GW RPT_SFAP_GW FLOW_OCT2024-GRM.DWG
DRAWING SCALE	1"=300'

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OHIO VALLEY ELECTRIC COMPANY	
KYGER CREEK STATION	
CHESHIRE, GALLIA COUNTY, OHIO	
SOUTH FLY ASH POND	
GROUNDWATER LEVELS AND FLOW DIRECTION	
SEPTEMBER/OCTOBER 2024	
DRAWING NAME	FIGURE B-6
REV.	0

APPENDIX C

APPENDIX III AND APPENDIX IV CONSTITUENTS

**APPENDIX III AND APPENDIX IV CONSTITUENTS
KYGER CREEK STATION
CHESHIRE, OHIO**

Appendix III Constituents
Boron, B
Calcium, Ca
Chloride, Cl
Fluoride, F
pH (units=SU)
Sulfate, SO4
Total Dissolved Solids (TDS)
Appendix IV Constituents
Antimony, Sb
Arsenic, As
Barium, Ba
Beryllium, Be
Cadmium, Cd
Chromium, Cr
Cobalt, Co
Fluoride, F
Lithium, Li
Lead, Pb
Mercury, Hg
Molybdenum, Mo
Radium 226 & 228 (combined)(units=pCi/L)
Selenium, Se
Thallium, Tl

APPENDIX D
ANALYTICAL RESULTS

BuSW-1
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.32	0.28
Calcium, Ca	mg/L	17	18
Chloride, Cl	mg/L	2000	1700
Fluoride, F	mg/L	1.4	1.3
pH	s.u.	7.6	7.05
Sulfate, SO ₄	mg/L	74	83
Total Dissolved Solids (TDS)	mg/L	3600	3000

BuSW-2
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.4	0.43
Calcium, Ca	mg/L	67	52
Chloride, Cl	mg/L	4500	3500
Fluoride, F	mg/L	2.1J	1.7J
pH	s.u.	7.26	7
Sulfate, SO4	mg/L	100U	17J
Total Dissolved Solids (TDS)	mg/L	5700	4100

BuSW-3
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.41	0.39
Calcium, Ca	mg/L	990	980
Chloride, Cl	mg/L	18000	18000
Fluoride, F	mg/L	5.0U	5.0U
pH	s.u.	7.06	7.12
Sulfate, SO4	mg/L	200U	70J
Total Dissolved Solids (TDS)	mg/L	32000	30000

BuSW-4
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.36	0.34
Calcium, Ca	mg/L	880	1000
Chloride, Cl	mg/L	19000	20000
Fluoride, F	mg/L	5.0U	5.0U
pH	s.u.	7.28	6.87
Sulfate, SO ₄	mg/L	43J	62J
Total Dissolved Solids (TDS)	mg/L	32000	32000

BuSW-5
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.43	0.31
Calcium, Ca	mg/L	150	540
Chloride, Cl	mg/L	1100	14000
Fluoride, F	mg/L	0.81	5.0U
pH	s.u.	7.07	7.15
Sulfate, SO ₄	mg/L	550	200U
Total Dissolved Solids (TDS)	mg/L	2500	18000

BuSW-8
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.16	0.31
Calcium, Ca	mg/L	270	480
Chloride, Cl	mg/L	6900	15000
Fluoride, F	mg/L	2.5U	5.0U
pH	s.u.	7.16	7.09
Sulfate, SO4	mg/L	100U	91J
Total Dissolved Solids (TDS)	mg/L	8600	17000

BuSW-10
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.37	0.36
Calcium, Ca	mg/L	45	52
Chloride, Cl	mg/L	3100	3100
Fluoride, F	mg/L	0.90J	1.5
pH	s.u.	7.27	7
Sulfate, SO4	mg/L	40U	22J
Total Dissolved Solids (TDS)	mg/L	4800	5100

CCR-1BU
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Jun-24	Oct-24
Appendix III Constituents				
Boron, B	mg/L	0.3	NA	0.35
Calcium, Ca	mg/L	770	NA	560
Chloride, Cl	mg/L	27000	17000	15000
Fluoride, F	mg/L	5.0U	NA	5.0U
pH	s.u.	7.15	NA	7.11
Sulfate, SO4	mg/L	200U	NA	45J
Total Dissolved Solids (TDS)	mg/L	26000	NA	20000

CCR-2BU
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.27	0.15
Calcium, Ca	mg/L	72	13
Chloride, Cl	mg/L	4300	1200
Fluoride, F	mg/L	2.0J	1.2
pH	s.u.	7.66	7.18
Sulfate, SO ₄	mg/L	27J	33
Total Dissolved Solids (TDS)	mg/L	5800	2400

IMW-1BU
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.37	0.41
Calcium, Ca	mg/L	110	110
Chloride, Cl	mg/L	5600	5400
Fluoride, F	mg/L	2.0J	1.6J
pH	s.u.	7.12	7.47
Sulfate, SO ₄	mg/L	31J	37J
Total Dissolved Solids (TDS)	mg/L	7400	7800

IMW-2BU
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.37	0.37
Calcium, Ca	mg/L	420	390
Chloride, Cl	mg/L	14000	13000
Fluoride, F	mg/L	5.0U	5.0U
pH	s.u.	7.23	7.04
Sulfate, SO ₄	mg/L	200U	200U
Total Dissolved Solids (TDS)	mg/L	20000	19000

MW-3D
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.2	0.37
Calcium, Ca	mg/L	470	1100
Chloride, Cl	mg/L	9500	22000
Fluoride, F	mg/L	2.5U	5.0U
pH	s.u.	7.1	6.95
Sulfate, SO4	mg/L	100U	200U
Total Dissolved Solids (TDS)	mg/L	17000	30000

MW-4D
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.4	0.39
Calcium, Ca	mg/L	3.4	3.7
Chloride, Cl	mg/L	220	230
Fluoride, F	mg/L	1.3	1.2
pH	s.u.	7.25	7.21
Sulfate, SO ₄	mg/L	280	290
Total Dissolved Solids (TDS)	mg/L	1200	1100

KC-15-01
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.14	0.15
Calcium, Ca	mg/L	95	96
Chloride, Cl	mg/L	36	33
Fluoride, F	mg/L	0.071J	0.091J
pH	s.u.	6.52	6.18
Sulfate, SO4	mg/L	190	210
Total Dissolved Solids (TDS)	mg/L	490	490
Appendix IV Constituents			
Antimony, Sb	ug/L	1.0U	0.41J
Arsenic, As	ug/L	1.5	1.5
Barium, Ba	ug/L	49	77
Beryllium, Be	ug/L	0.037J	0.70U
Cadmium, Cd	ug/L	0.076J	0.50U
Chromium, Cr	ug/L	0.71J	1.6
Cobalt, Co	ug/L	6.2	6.3
Fluoride, F	mg/L	0.071J	0.091J
Lead, Pb	ug/L	0.30J	0.21J
Lithium, Li	mg/L	0.0095	0.019
Mercury, Hg	ug/L	0.20U	0.20U
Molybdenum, Mo	ug/L	1.3	1.6
Radium 226 & 228 (combined)	pCi/L	1.13	5U
Selenium, Se	ug/L	1.0U	1.0U
Thallium, Tl	ug/L	0.20U	0.098J

KC-15-02
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.13	0.16
Calcium, Ca	mg/L	120	120
Chloride, Cl	mg/L	36	39
Fluoride, F	mg/L	0.16	0.14
pH	s.u.	6.56	6.26
Sulfate, SO4	mg/L	150	160
Total Dissolved Solids (TDS)	mg/L	530	550
Appendix IV Constituents			
Antimony, Sb	ug/L	1.0U	1.0U
Arsenic, As	ug/L	2.2	2.3
Barium, Ba	ug/L	100	120
Beryllium, Be	ug/L	0.70U	0.70U
Cadmium, Cd	ug/L	0.13J	0.15J
Chromium, Cr	ug/L	2.3	2.6
Cobalt, Co	ug/L	3.1	4.1
Fluoride, F	mg/L	0.16	0.14
Lead, Pb	ug/L	0.18J	1.0U
Lithium, Li	mg/L	0.0057	0.0055
Mercury, Hg	ug/L	0.20U	0.20U
Molybdenum, Mo	ug/L	2	1.2
Radium 226 & 228 (combined)	pCi/L	1.09	5U
Selenium, Se	ug/L	1.0U	1.0U
Thallium, Tl	ug/L	0.20U	0.20U

KC-15-03
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.78	0.9
Calcium, Ca	mg/L	130	120
Chloride, Cl	mg/L	29	29
Fluoride, F	mg/L	0.11	0.12
pH	s.u.	6.11	6.15
Sulfate, SO4	mg/L	210	220
Total Dissolved Solids (TDS)	mg/L	570	560
Appendix IV Constituents			
Antimony, Sb	ug/L	1.0U	1.0U
Arsenic, As	ug/L	1	0.94J
Barium, Ba	ug/L	52	60
Beryllium, Be	ug/L	0.70U	0.70U
Cadmium, Cd	ug/L	0.50U	0.50U
Chromium, Cr	ug/L	1.5U	1.5
Cobalt, Co	ug/L	3.4	2.5
Fluoride, F	mg/L	0.11	0.12
Lead, Pb	ug/L	0.28J	0.28J
Lithium, Li	mg/L	0.0073	0.011
Mercury, Hg	ug/L	0.20U	0.20U
Molybdenum, Mo	ug/L	0.58J	0.32J
Radium 226 & 228 (combined)	pCi/L	5U	5U
Selenium, Se	ug/L	1.0U	1.0U
Thallium, Tl	ug/L	0.20U	0.20U

KC-15-04
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24	Dec-24
Appendix III Constituents				
Boron, B	mg/L	0.41	0.087	NA
Calcium, Ca	mg/L	110	44	NA
Chloride, Cl	mg/L	26	1.1	NA
Fluoride, F	mg/L	0.11	0.13	NA
pH	s.u.	7.08	7.17	NA
Sulfate, SO4	mg/L	280	37	NA
Total Dissolved Solids (TDS)	mg/L	590	120	NA
Appendix IV Constituents				
Antimony, Sb	ug/L	1.0U	0.53J	NA
Arsenic, As	ug/L	1.9	14	2.4
Barium, Ba	ug/L	52	120	NA
Beryllium, Be	ug/L	0.075J	1	NA
Cadmium, Cd	ug/L	0.50U	0.17J	NA
Chromium, Cr	ug/L	1.1J	26	NA
Cobalt, Co	ug/L	8.6	8.4	NA
Fluoride, F	mg/L	0.11	0.13	NA
Lead, Pb	ug/L	1	13	NA
Lithium, Li	mg/L	0.01	0.02	NA
Mercury, Hg	ug/L	0.20U	0.20U	NA
Molybdenum, Mo	ug/L	1.2	10	NA
Radium 226 & 228 (combined)	pCi/L	5U	5U	NA
Selenium, Se	ug/L	1.0U	2	NA
Thallium, Tl	ug/L	0.029J	0.45	NA

Notes:

NA: Sampling not required for this parameter.

KC-15-05a
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Jun-24	Oct-24
Appendix III Constituents				
Boron, B	mg/L	0.74	0.56	0.36
Calcium, Ca	mg/L	140	140	100
Chloride, Cl	mg/L	30	NA	16
Fluoride, F	mg/L	0.2	0.22J	0.15
pH	s.u.	6.99	NA	7.06
Sulfate, SO4	mg/L	330	340	240
Total Dissolved Solids (TDS)	mg/L	740	700	490
Appendix IV Constituents				
Antimony, Sb	ug/L	1.0U	NA	1.0U
Arsenic, As	ug/L	2.1	NA	1.8
Barium, Ba	ug/L	58	NA	71
Beryllium, Be	ug/L	0.085J	NA	0.12J
Cadmium, Cd	ug/L	0.50U	NA	0.50U
Chromium, Cr	ug/L	2.1	NA	3.8
Cobalt, Co	ug/L	5.6	NA	1.1
Fluoride, F	mg/L	0.2	0.22J	0.15
Lead, Pb	ug/L	1.9	NA	1
Lithium, Li	mg/L	0.0045	NA	0.0058
Mercury, Hg	ug/L	0.20U	NA	0.20U
Molybdenum, Mo	ug/L	0.85J	NA	5.9
Radium 226 & 228 (combined)	pCi/L	2.04	NA	0.831
Selenium, Se	ug/L	1.0U	NA	0.96J
Thallium, Tl	ug/L	0.086J	NA	0.20U

Notes:

NA: Sampling not required for this parameter.

KC-15-06
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.43	0.48
Calcium, Ca	mg/L	100	96
Chloride, Cl	mg/L	37	33
Fluoride, F	mg/L	0.13	0.13
pH	s.u.	7.05	6.36
Sulfate, SO4	mg/L	180	180
Total Dissolved Solids (TDS)	mg/L	510	500
Appendix IV Constituents			
Antimony, Sb	ug/L	1.0U	1.0U
Arsenic, As	ug/L	3.4	3.1
Barium, Ba	ug/L	130	120
Beryllium, Be	ug/L	0.12J	0.70U
Cadmium, Cd	ug/L	0.15J	0.10J
Chromium, Cr	ug/L	2.7	1.9
Cobalt, Co	ug/L	3.5	1.8
Fluoride, F	mg/L	0.13	0.13
Lead, Pb	ug/L	1.4	0.42J
Lithium, Li	mg/L	0.005	0.0046
Mercury, Hg	ug/L	0.20U	0.20U
Molybdenum, Mo	ug/L	2.8	1.8
Radium 226 & 228 (combined)	pCi/L	5U	5U
Selenium, Se	ug/L	1.0U	1.0U
Thallium, Tl	ug/L	0.047J	0.20U

KC-15-07
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Jun-24	Oct-24	Dec-24
Appendix III Constituents					
Boron, B	mg/L	0.31	NA	0.16	NA
Calcium, Ca	mg/L	110	NA	70	NA
Chloride, Cl	mg/L	34	NA	22	NA
Fluoride, F	mg/L	0.097J	NA	0.11	NA
pH	s.u.	6.35	NA	7.17	NA
Sulfate, SO4	mg/L	170	NA	62	NA
Total Dissolved Solids (TDS)	mg/L	520	NA	330	NA
Appendix IV Constituents					
Antimony, Sb	ug/L	1.0U	NA	1.0U	NA
Arsenic, As	ug/L	68	160	120	67
Barium, Ba	ug/L	340	NA	55	NA
Beryllium, Be	ug/L	0.70U	NA	0.70U	NA
Cadmium, Cd	ug/L	0.50U	NA	0.50U	NA
Chromium, Cr	ug/L	1.5U	NA	1.6	NA
Cobalt, Co	ug/L	0.64	NA	0.34	NA
Fluoride, F	mg/L	0.097J	NA	0.11	NA
Lead, Pb	ug/L	1.0U	NA	0.25J	NA
Lithium, Li	mg/L	0.0048	NA	0.0035J	NA
Mercury, Hg	ug/L	0.20U	NA	0.20U	NA
Molybdenum, Mo	ug/L	1	NA	3.3	NA
Radium 226 & 228 (combined)	pCi/L	1.75	NA	5U	NA
Selenium, Se	ug/L	1.0U	NA	1.0U	NA
Thallium, Tl	ug/L	0.20U	NA	0.20U	NA

Notes:

NA: Sampling not required for this parameter.

KC-15-08
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Jun-24	Oct-24	Dec-24
Appendix III Constituents					
Boron, B	mg/L	0.46	NA	0.73	0.75
Calcium, Ca	mg/L	160	240	190	230
Chloride, Cl	mg/L	36	NA	31	NA
Fluoride, F	mg/L	0.11	NA	0.15J	NA
pH	s.u.	6.4	NA	6.51	NA
Sulfate, SO4	mg/L	380	660	500	590
Total Dissolved Solids (TDS)	mg/L	830	1200	940	690
Appendix IV Constituents					
Antimony, Sb	ug/L	1.0U	NA	1.0U	NA
Arsenic, As	ug/L	8.5	NA	7.1	NA
Barium, Ba	ug/L	71	NA	57	NA
Beryllium, Be	ug/L	0.10J	NA	0.70U	NA
Cadmium, Cd	ug/L	0.50U	NA	0.50U	NA
Chromium, Cr	ug/L	1.2J	NA	1.3J	NA
Cobalt, Co	ug/L	11	5.6	5.8	NA
Fluoride, F	mg/L	0.11	NA	0.15J	NA
Lead, Pb	ug/L	0.98J	NA	1.0U	NA
Lithium, Li	mg/L	0.012	NA	0.034	NA
Mercury, Hg	ug/L	0.20U	NA	0.20U	NA
Molybdenum, Mo	ug/L	0.35J	NA	0.33J	NA
Radium 226 & 228 (combined)	pCi/L	0.827	NA	5U	NA
Selenium, Se	ug/L	1.0U	NA	1.0U	NA
Thallium, Tl	ug/L	0.20U	NA	0.20U	NA

Notes:

NA: Sampling not required for this parameter.

KC-19-27
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24	Dec-24
Appendix IV Constituents				
Arsenic, As	ug/L	8.8	25	9.1

KC-19-28
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix IV Constituents			
Arsenic, As	ug/L	0.48J	1.2

KC-19-29
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix IV Constituents			
Arsenic, As	ug/L	0.48J	0.77J

KC-15-09
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.018J	0.020U
Calcium, Ca	mg/L	72	71
Chloride, Cl	mg/L	25	12
Fluoride, F	mg/L	0.23	0.19
pH	s.u.	6.16	7.35
Sulfate, SO4	mg/L	55	55
Total Dissolved Solids (TDS)	mg/L	310	310
Appendix IV Constituents			
Antimony, Sb	ug/L	1.0U	1.0U
Arsenic, As	ug/L	1.6	1.2
Barium, Ba	ug/L	29	24
Beryllium, Be	ug/L	0.70U	0.70U
Cadmium, Cd	ug/L	0.50U	0.50U
Chromium, Cr	ug/L	0.84J	1.5U
Cobalt, Co	ug/L	1.9	1.9
Fluoride, F	mg/L	0.23	0.19
Lead, Pb	ug/L	0.20J	1.0U
Lithium, Li	mg/L	0.006	0.0053
Mercury, Hg	ug/L	0.20U	0.20U
Molybdenum, Mo	ug/L	0.23J	1.0U
Radium 226 & 228 (combined)	pCi/L	5U	5U
Selenium, Se	ug/L	1.0U	1.0U
Thallium, Tl	ug/L	0.20U	0.20U

KC-15-10
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.021	0.020U
Calcium, Ca	mg/L	59	58
Chloride, Cl	mg/L	9	9.3
Fluoride, F	mg/L	0.19	0.19
pH	s.u.	6.88	7.14
Sulfate, SO4	mg/L	67	67
Total Dissolved Solids (TDS)	mg/L	290	280
Appendix IV Constituents			
Antimony, Sb	ug/L	1.0U	1.0U
Arsenic, As	ug/L	2.3	2
Barium, Ba	ug/L	39	32
Beryllium, Be	ug/L	0.70U	0.70U
Cadmium, Cd	ug/L	0.50U	0.50U
Chromium, Cr	ug/L	0.68J	1.5U
Cobalt, Co	ug/L	1.1	1.1
Fluoride, F	mg/L	0.19	0.19
Lead, Pb	ug/L	0.20J	1.0U
Lithium, Li	mg/L	0.0069	0.0061
Mercury, Hg	ug/L	0.20U	0.20U
Molybdenum, Mo	ug/L	1.0U	1.0U
Radium 226 & 228 (combined)	pCi/L	0.613	1.34
Selenium, Se	ug/L	1.0U	1.0U
Thallium, Tl	ug/L	0.20U	0.20U

KC-15-11
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.033	0.021
Calcium, Ca	mg/L	65	63
Chloride, Cl	mg/L	15	11
Fluoride, F	mg/L	0.22	0.18
pH	s.u.	6.06	7.17
Sulfate, SO4	mg/L	81	94
Total Dissolved Solids (TDS)	mg/L	300	310
Appendix IV Constituents			
Antimony, Sb	ug/L	1.0U	1.0U
Arsenic, As	ug/L	0.92J	0.70J
Barium, Ba	ug/L	33	36
Beryllium, Be	ug/L	0.031J	0.70U
Cadmium, Cd	ug/L	0.18J	0.10J
Chromium, Cr	ug/L	1.2J	1.5U
Cobalt, Co	ug/L	1.3	1.3
Fluoride, F	mg/L	0.22	0.18
Lead, Pb	ug/L	0.40J	1.0U
Lithium, Li	mg/L	0.0064	0.0061
Mercury, Hg	ug/L	0.20U	0.20U
Molybdenum, Mo	ug/L	1.0U	1.0U
Radium 226 & 228 (combined)	pCi/L	0.928	5U
Selenium, Se	ug/L	1.0U	1.0U
Thallium, Tl	ug/L	0.20U	0.20U

KC-15-12
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.53	0.14
Calcium, Ca	mg/L	110	99
Chloride, Cl	mg/L	37	14
Fluoride, F	mg/L	0.15	0.17
pH	s.u.	6.35	7.65
Sulfate, SO4	mg/L	140	92
Total Dissolved Solids (TDS)	mg/L	480	380
Appendix IV Constituents			
Antimony, Sb	ug/L	1.0U	1.0U
Arsenic, As	ug/L	0.84J	0.55J
Barium, Ba	ug/L	99	78
Beryllium, Be	ug/L	0.70U	0.70U
Cadmium, Cd	ug/L	0.10J	0.099J
Chromium, Cr	ug/L	0.82J	1.5U
Cobalt, Co	ug/L	0.72	0.68
Fluoride, F	mg/L	0.15	0.17
Lead, Pb	ug/L	0.19J	1.0U
Lithium, Li	mg/L	0.0055	0.0041
Mercury, Hg	ug/L	0.20U	0.20U
Molybdenum, Mo	ug/L	0.48J	0.29J
Radium 226 & 228 (combined)	pCi/L	5U	5U
Selenium, Se	ug/L	1.0U	1.0U
Thallium, Tl	ug/L	0.20U	0.20U

KC-15-13
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	4.4	5.7
Calcium, Ca	mg/L	78	100
Chloride, Cl	mg/L	55	64
Fluoride, F	mg/L	0.11	0.25U
pH	s.u.	7.02	6.71
Sulfate, SO4	mg/L	300	370
Total Dissolved Solids (TDS)	mg/L	570	760
Appendix IV Constituents			
Antimony, Sb	ug/L	1.0U	1.0U
Arsenic, As	ug/L	2.9	1.3
Barium, Ba	ug/L	71	64
Beryllium, Be	ug/L	0.12J	0.70U
Cadmium, Cd	ug/L	0.50U	0.50U
Chromium, Cr	ug/L	3.6	1.2J
Cobalt, Co	ug/L	9.8	15
Fluoride, F	mg/L	0.11	0.25U
Lead, Pb	ug/L	1.8	1.0U
Lithium, Li	mg/L	0.017	0.012
Mercury, Hg	ug/L	0.20U	0.20U
Molybdenum, Mo	ug/L	0.71J	1.0U
Radium 226 & 228 (combined)	pCi/L	5U	5U
Selenium, Se	ug/L	1.0U	1.0U
Thallium, Tl	ug/L	0.055J	0.20U

KC-15-14
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	12	11
Calcium, Ca	mg/L	70	72
Chloride, Cl	mg/L	61	62
Fluoride, F	mg/L	0.15	0.13
pH	s.u.	7.04	7.09
Sulfate, SO4	mg/L	200	200
Total Dissolved Solids (TDS)	mg/L	500	500
Appendix IV Constituents			
Antimony, Sb	ug/L	1.0U	1.0U
Arsenic, As	ug/L	3	2.8
Barium, Ba	ug/L	39	36
Beryllium, Be	ug/L	0.037J	0.70U
Cadmium, Cd	ug/L	0.087J	0.50U
Chromium, Cr	ug/L	1.3J	1.3J
Cobalt, Co	ug/L	3.4	3
Fluoride, F	mg/L	0.15	0.13
Lead, Pb	ug/L	0.44J	1.0U
Lithium, Li	mg/L	0.019	0.018
Mercury, Hg	ug/L	0.20U	0.20U
Molybdenum, Mo	ug/L	0.68J	1.0U
Radium 226 & 228 (combined)	pCi/L	1.38	5U
Selenium, Se	ug/L	1.0U	1.0U
Thallium, Tl	ug/L	0.20U	0.20U

KC-15-15
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	13	14
Calcium, Ca	mg/L	74	74
Chloride, Cl	mg/L	66	61
Fluoride, F	mg/L	0.15	0.13
pH	s.u.	6.34	6.59
Sulfate, SO4	mg/L	220	220
Total Dissolved Solids (TDS)	mg/L	510	530
Appendix IV Constituents			
Antimony, Sb	ug/L	1.0U	1.0U
Arsenic, As	ug/L	0.48J	0.83J
Barium, Ba	ug/L	20	29
Beryllium, Be	ug/L	0.70U	0.70U
Cadmium, Cd	ug/L	0.9	0.55
Chromium, Cr	ug/L	0.54J	1.2J
Cobalt, Co	ug/L	7.9	7.6
Fluoride, F	mg/L	0.15	0.13
Lead, Pb	ug/L	1.0U	0.28J
Lithium, Li	mg/L	0.021	0.022
Mercury, Hg	ug/L	0.20U	0.20U
Molybdenum, Mo	ug/L	1.0U	1.0U
Radium 226 & 228 (combined)	pCi/L	1.46	5U
Selenium, Se	ug/L	1.0U	1.0U
Thallium, Tl	ug/L	0.20U	0.20U

KC-15-16
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	13	15
Calcium, Ca	mg/L	500	310
Chloride, Cl	mg/L	110	110
Fluoride, F	mg/L	0.25U	0.25U
pH	s.u.	6.22	6.29
Sulfate, SO4	mg/L	890	960
Total Dissolved Solids (TDS)	mg/L	1500	1600
Appendix IV Constituents			
Antimony, Sb	ug/L	1.0U	1.0U
Arsenic, As	ug/L	1.5	1.3
Barium, Ba	ug/L	65	46
Beryllium, Be	ug/L	0.049J	0.70U
Cadmium, Cd	ug/L	0.48J	0.43J
Chromium, Cr	ug/L	0.41J	1.5
Cobalt, Co	ug/L	7	7.7
Fluoride, F	mg/L	0.25U	0.25U
Lead, Pb	ug/L	0.62J	0.33J
Lithium, Li	mg/L	0.012	0.014
Mercury, Hg	ug/L	0.20U	0.20U
Molybdenum, Mo	ug/L	0.48J	0.29J
Radium 226 & 228 (combined)	pCi/L	1.27	5U
Selenium, Se	ug/L	1.0U	1.0U
Thallium, Tl	ug/L	0.13J	0.21

KC-15-17
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Oct-24
Appendix III Constituents			
Boron, B	mg/L	0.65	12
Calcium, Ca	mg/L	220	280
Chloride, Cl	mg/L	1.3	78
Fluoride, F	mg/L	0.21	0.19J
pH	s.u.	7.83	7.1
Sulfate, SO4	mg/L	23	710
Total Dissolved Solids (TDS)	mg/L	120	1200
Appendix IV Constituents			
Antimony, Sb	ug/L	0.80J	0.58J
Arsenic, As	ug/L	23	4.4
Barium, Ba	ug/L	270	100
Beryllium, Be	ug/L	2.5	0.17J
Cadmium, Cd	ug/L	0.61	0.11J
Chromium, Cr	ug/L	140	86
Cobalt, Co	ug/L	19	2.7
Fluoride, F	mg/L	0.21	0.19J
Lead, Pb	ug/L	41	3.4
Lithium, Li	mg/L	0.068	0.083
Mercury, Hg	ug/L	0.13J	0.20U
Molybdenum, Mo	ug/L	4.3	12
Radium 226 & 228 (combined)	pCi/L	2.54	5U
Selenium, Se	ug/L	1.7	0.96J
Thallium, Tl	ug/L	0.97	0.086J

KC-15-18
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Jun-24	Oct-24	Dec-24
Appendix III Constituents					
Boron, B	mg/L	1.9	NA	14	NA
Calcium, Ca	mg/L	110	NA	190	170
Chloride, Cl	mg/L	17	NA	110	60
Fluoride, F	mg/L	0.33	0.15J	0.14J	NA
pH	s.u.	7.48	NA	6.72	NA
Sulfate, SO ₄	mg/L	220	NA	600	480
Total Dissolved Solids (TDS)	mg/L	420	NA	1200	870
Appendix IV Constituents					
Antimony, Sb	ug/L	0.66J	NA	1.0U	NA
Arsenic, As	ug/L	4.5	NA	0.81J	NA
Barium, Ba	ug/L	52	NA	9.6	NA
Beryllium, Be	ug/L	0.40J	NA	0.70U	NA
Cadmium, Cd	ug/L	0.12J	NA	0.57	NA
Chromium, Cr	ug/L	130	4.9	10	NA
Cobalt, Co	ug/L	4	NA	8.8	NA
Fluoride, F	mg/L	0.33	0.15J	0.14J	NA
Lead, Pb	ug/L	8.5	NA	1.0U	NA
Lithium, Li	mg/L	0.066	NA	0.046	NA
Mercury, Hg	ug/L	0.30U	NA	0.20U	NA
Molybdenum, Mo	ug/L	14	NA	1.6	NA
Radium 226 & 228 (combined)	pCi/L	5.04	NA	5U	NA
Selenium, Se	ug/L	1	NA	1.0U	NA
Thallium, Tl	ug/L	0.15J	NA	0.25	NA

Notes:

NA: Sampling not required for this parameter.

KC-15-19a
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Jun-24	Oct-24	Dec-24
Appendix III Constituents					
Boron, B	mg/L	16	14	15	NA
Calcium, Ca	mg/L	150	150	150	150
Chloride, Cl	mg/L	54	NA	59	NA
Fluoride, F	mg/L	0.25U	NA	0.19J	NA
pH	s.u.	7.17	NA	6.32	NA
Sulfate, SO4	mg/L	480	NA	470	NA
Total Dissolved Solids (TDS)	mg/L	900	860	890	NA
Appendix IV Constituents					
Antimony, Sb	ug/L	1.0U	NA	1.0U	NA
Arsenic, As	ug/L	0.31J	NA	0.50J	NA
Barium, Ba	ug/L	24	NA	24	NA
Beryllium, Be	ug/L	0.70U	NA	0.70U	NA
Cadmium, Cd	ug/L	0.16J	NA	0.15J	NA
Chromium, Cr	ug/L	1.5U	NA	1.5	NA
Cobalt, Co	ug/L	15	14	14	NA
Fluoride, F	mg/L	0.25U	NA	0.19J	NA
Lead, Pb	ug/L	0.24J	NA	1	NA
Lithium, Li	mg/L	0.016	NA	0.016	NA
Mercury, Hg	ug/L	0.20U	NA	0.20U	NA
Molybdenum, Mo	ug/L	0.097J	NA	1.0U	NA
Radium 226 & 228 (combined)	pCi/L	0.988	NA	0.968	NA
Selenium, Se	ug/L	1.0U	NA	1.0U	NA
Thallium, Tl	ug/L	0.053J	NA	0.20U	NA

Notes:

Results for well KC-15-19a are provided; the facility is evaluating whether the sampling results are the result of an error in accordance with 40 C.F.R. § 257.95(g)(3)(ii).

KC-15-20
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Jun-24	Oct-24	Dec-24
Appendix III Constituents					
Boron, B	mg/L	9.3	NA	9.3	NA
Calcium, Ca	mg/L	200	190	180	230
Chloride, Cl	mg/L	46	NA	45	NA
Fluoride, F	mg/L	0.25U	NA	0.18J	NA
pH	s.u.	6.5	NA	6.63	NA
Sulfate, SO4	mg/L	450	490	420	NA
Total Dissolved Solids (TDS)	mg/L	910	880	850	NA
Appendix IV Constituents					
Antimony, Sb	ug/L	1.0U	NA	1.0U	NA
Arsenic, As	ug/L	1.2	NA	0.64J	NA
Barium, Ba	ug/L	18	NA	21	NA
Beryllium, Be	ug/L	0.069J	NA	0.70U	NA
Cadmium, Cd	ug/L	0.5	NA	0.39J	NA
Chromium, Cr	ug/L	5.7	NA	4.8	NA
Cobalt, Co	ug/L	1.3	NA	1	NA
Fluoride, F	mg/L	0.25U	NA	0.18J	NA
Lead, Pb	ug/L	1.1	NA	0.43J	NA
Lithium, Li	mg/L	0.016	NA	0.013	NA
Mercury, Hg	ug/L	0.20U	NA	0.20U	NA
Molybdenum, Mo	ug/L	1.6	NA	1.5	NA
Radium 226 & 228 (combined)	pCi/L	1.72	NA	5U	NA
Selenium, Se	ug/L	1.0U	NA	1.0U	NA
Thallium, Tl	ug/L	0.039J	NA	0.20U	NA

Notes:

NA: Sampling not required for this parameter.

KC-15-21
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Jun-24	Oct-24	Dec-24
Appendix III Constituents					
Boron, B	mg/L	3	NA	3.6	NA
Calcium, Ca	mg/L	360	200	160	170
Chloride, Cl	mg/L	25	NA	33	NA
Fluoride, F	mg/L	0.28	NA	0.62	0.28
pH	s.u.	6.77	NA	7.41	NA
Sulfate, SO ₄	mg/L	860	450	320	NA
Total Dissolved Solids (TDS)	mg/L	1300	780	670	NA
Appendix IV Constituents					
Antimony, Sb	ug/L	1.0U	NA	1.0U	NA
Arsenic, As	ug/L	1.1	NA	0.89J	NA
Barium, Ba	ug/L	21	NA	16	NA
Beryllium, Be	ug/L	0.060J	NA	0.70U	NA
Cadmium, Cd	ug/L	0.21J	NA	0.086J	NA
Chromium, Cr	ug/L	1.5	NA	1.5U	NA
Cobalt, Co	ug/L	3.1	NA	3.3	NA
Fluoride, F	mg/L	0.28	NA	0.62	NA
Lead, Pb	ug/L	0.57J	NA	1.0U	NA
Lithium, Li	mg/L	0.0054	NA	0.0052	NA
Mercury, Hg	ug/L	0.053J	NA	0.20U	NA
Molybdenum, Mo	ug/L	0.30J	NA	0.50J	NA
Radium 226 & 228 (combined)	pCi/L	0.912	NA	5U	NA
Selenium, Se	ug/L	0.91J	NA	1.0U	NA
Thallium, Tl	ug/L	0.035J	NA	0.20U	NA

Notes:

NA: Sampling not required for this parameter.

KC-15-22
SUMMARY OF 2024 ANALYTICAL RESULTS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	Mar/Apr-24	Jun-24	Oct-24
Appendix III Constituents				
Boron, B	mg/L	0.89	NA	0.79
Calcium, Ca	mg/L	120	110	110
Chloride, Cl	mg/L	25	NA	17
Fluoride, F	mg/L	0.13	NA	0.13
pH	s.u.	7.18	NA	7.36
Sulfate, SO4	mg/L	130	NA	130
Total Dissolved Solids (TDS)	mg/L	490	NA	450
Appendix IV Constituents				
Antimony, Sb	ug/L	1.0U	NA	1.0U
Arsenic, As	ug/L	3.7	NA	3.7
Barium, Ba	ug/L	88	NA	84
Beryllium, Be	ug/L	0.70U	NA	0.70U
Cadmium, Cd	ug/L	0.50U	NA	0.50U
Chromium, Cr	ug/L	1.5U	NA	1.2J
Cobalt, Co	ug/L	0.14J	NA	0.25J
Fluoride, F	mg/L	0.13	NA	0.13
Lead, Pb	ug/L	1.0U	NA	0.21J
Lithium, Li	mg/L	0.0054	NA	0.0063
Mercury, Hg	ug/L	0.20U	NA	0.20U
Molybdenum, Mo	ug/L	0.21J	NA	1.0U
Radium 226 & 228 (combined)	pCi/L	1.77	NA	5U
Selenium, Se	ug/L	1.0U	NA	1.0U
Thallium, Tl	ug/L	0.020J	NA	0.20U

Notes:

NA: Sampling not required for this parameter.