2022 ANNUAL CCR RULE GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

COAL COMBUSTION BYPRODUCT LANDFILL

Ft. Martin Power Station
Monongalia County, West Virginia

Prepared for:

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Tetra Tech Project No. 212C-SW-00068

January 2023

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1.0 INTRODUCTION

This 2022 Annual Coal Combustion Residuals (CCR) Groundwater Monitoring and Corrective Action Report was prepared by Tetra Tech, Inc. (Tetra Tech) on behalf of FirstEnergy (FE), for the Coal Combustion Byproduct Landfill ("CCBL", "CCR unit", or "site") at the Ft. Martin Power Station (hereinafter referred to as the "Station"). The CCR unit and Station are located in Monongalia County, West Virginia. This report was developed to comply with the requirements of § 257.90(e) of the federal CCR Rule (40 CFR, Part 257, Subpart D). In accordance with § 257.90(e)(6), an overview of the current status of the CCR groundwater program at the site is provided in the table below, and discussed in Sections 2.0 through 4.0 of this report:

Status Summary for Reporting Period (January 1 to December 31, 2022)	
Groundwater Monitoring Program in Effect as of January 1, 2022 - 257.90(e)(6)(i)	Assessment Monitoring (Sampling Event AM-8)
Groundwater Monitoring Program in Effect as of December 31, 2022 - 257.90(e)(6)(ii)	Assessment Monitoring (Sampling Event AM-10)
Appendix III SSI's during Reporting Period - 257.90(e)(6)(iii)	n/a – Site in Assessment Monitoring
Appendix IV SSL's during Reporting Period - 257.90(e)(6)(iv)	None
Assessment of Corrective Measures - 257.90(e)(6)(iv)	n/a – Site only in Assessment Monitoring
Assessment of Corrective Measures Public Meeting - 257.90(e)(6)(iv)	n/a – Site only in Assessment Monitoring
Selection of Remedy - 257.90(e)(6)(v)	n/a – Site only in Assessment Monitoring
Corrective Action - 257.90(e)(6)(vi)	n/a – Site only in Assessment Monitoring

1.1 BACKGROUND AND SITE CHARACTERISTICS

CCRs produced at the Station are placed in the facility's captive CCBL, which is located approximately 0.75 miles northwest of the Station. The landfill is an existing CCR unit that is regulated under West Virginia Department of Environmental Protection (WVDEP) Solid Waste/National Pollutant Discharge Elimination System (NPDES) Water Pollution Control Permit No. WV0075752 and also under the CCR Rule. A WVDEP groundwater monitoring program for the landfill has been in effect since 1993 and a separate CCR Rule groundwater monitoring program was established in 2017. West Virginia State Legislative Rule 33 CSR-1B, which adopts the federal CCR Rule at 40 CFR Part 257, was promulgated on March 1, 2022. WVDEP subsequently issued Administrative Order No. 10077 for the facility on July 29, 2022 recognizing the groundwater monitoring program established for the site under the CCR Rule on an interim basis until such time as a major permit modification permanently establishing the CCR Rule monitoring well network as the sole program for the site is approved.

The permitted CCBL facility consists of two separate, active disposal areas, a haul road that also doubles as the primary Station access road, a gypsum stackout/loading pad, five combined leachate/sedimentation ponds, one equalization/settling pond, and a variety of stormwater management controls (channels, culverts, slope drains, etc.). The two active disposal areas are separated by the haul road and consist of the Original landfill (approximately 70 acres in size and located south of the Haul Road) and the Expansion Area landfill (approximately 77 acres in size and located north of the haul road). The Original landfill, which has historically been the primary disposal area, is unlined but was built with a bottom ash drainage blanket placed on prepared original ground which serves as a leachate collection layer. The Expansion Area landfill, which was constructed in 2009, is underlain with a composite liner system (geomembrane and geosynthetic clay liner) and has both leachate collection and leak detection layers. The Expansion Area landfill is permitted to be developed in two construction phases, referred to as Phase 1 and Phase 2. At this time, the Phase 1 area (approximately 30 acres) has been constructed and represents the active portion of the Expansion Area landfill.

Groundwater in the CCBL area occurs primarily within fractured bedrock. The Connellsville Sandstone has been identified as the uppermost aquifer for CCR Rule groundwater monitoring over most of the CCBL area, with the underlying Clarksburg units considered the uppermost aquifer in a few limited areas where monitoring is required but the Connellsville Sandstone has eroded away. Due to the site's positioning on a topographic high and its geologic setting, there is no shallow groundwater flow to the site from offsite areas. Historic and recent groundwater level data indicate groundwater flow at the CCBL to be primarily radial, away from the disposal areas and toward the local springs/seeps in the nearby stream valleys, and that both flow systems (Connellsville and Clarksburg) exhibit very little seasonal and temporal fluctuations. A representative set of water level data from the current reporting period (2022) were used for contouring groundwater flow patterns at the site. A more detailed discussion of the site's geologic and hydrogeologic characteristics is provided in Section 2.0 of this report.

1.2 REGULATORY BASIS

As required by § 257.90(e) of the CCR Rule, Owners or Operators of existing CCR landfills and surface impoundments were to prepare an initial Annual Groundwater Monitoring and Corrective Action Report ("AGMCA Report") no later than January 31, 2018, and annually thereafter. According to the subject section, "For the preceding calendar year, 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."

This report has been developed to meet the general requirements above and the specific requirements of §§ 257.90(e)(1) through (6), which include:

(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 (see Figures 2-1 and 2-2);

(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 (see Section 2.1.1);

(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 (see Sections 3.0 and 4.0 and Table 3-1);

(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 levels) (see Section 2.3);

(5) Other information required to be included in the annual report as specified in §§ 257.90 through 257.98 (see Section 4.1 and Tables 4-1a, 4-1b, 4-2, and 4-3); and

(6) A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit." (See Section 1.0).

In addition, the Owner or Operator must place the report in the facility's operating record as required by § 257.105(h)(1), provide notification of the report's availability to the appropriate State Director within 30 days of placement in the operating record as required by § 257.106(h)(1), and place the report on the facility's publicly accessible website, also within 30 days of placing the report in the operating record, as required by § 257.107(h)(1).

1.3 OVERVIEW OF REPORT CONTENTS

Section 1.0 of this report provided an overview of the CCR groundwater program status, CCR unit characteristics, regulatory basis, and a summary of the requirements for CCR Annual Groundwater Monitoring and Corrective Action Reports. Section 2.0 summarizes the status of key actions pertaining to CCR groundwater monitoring completed during 2022 for the CCBL and plans for the upcoming year. Section 3.0 discusses Detection Monitoring (DM) results from groundwater sampling events completed in 2022. Finally, Section 4.0 presents Assessment Monitoring (AM) results and corresponding statistical analyses and evaluations completed in 2022.

2.0 GENERAL INFORMATION

This section provides an overview of the status of the CCR groundwater monitoring program through 2022 and key activities planned for 2023.

2.1 STATUS OF THE CCR GROUNDWATER MONITORING AND CORRECTIVE ACTION PROGRAM

During calendar year 2022 (January 1st through December 31st), the following key actions were completed with regard to the CCR groundwater monitoring program for the CCBL.

2.1.1 Groundwater Monitoring Well System

As documented in the facility's previous AGMCA Reports (accessible at http://ccrdocs.firstenergycorp.com/), the certified CCR monitoring well network consists of three background wells (MW-101, -127, and -128), eight downgradient wells for the Original landfill (MW-106, -107, -129, -130, -131, -132, -133, and -134), eight downgradient wells for the Expansion Area landfill (MW-121, -123, -125, -135, -136, -137, -138, and -139), and two downgradient wells positioned between the two landfills (MW-109 and -112), as summarized in attached Table 2-1 and shown on attached Figures 2-1 and 2-2.

It was originally intended that upgradient wells MW-101 and -127, which are both screened in the Connellsville Sandstone, would be grouped for statistical evaluation purposes. However, it was subsequently determined that the two wells did not have the level of statistical similarity needed for grouping. As such, it was decided that only MW-101 would be used to establish background chemistry for the Connellsville Sandstone since it exhibited lower concentrations of all the Appendix III parameters than those measured in MW-127. MW-127 was left in place (i.e., it was not abandoned) as its water levels have continued to be used to verify groundwater flow patterns at the site. No other changes to the monitoring well network (i.e., new wells added, or existing wells abandoned) occurred during 2022.

2.1.2 Groundwater Monitoring Plan

Consistent with the work performed and summarized in previous AGMCA Reports, the CCR unit's Groundwater Monitoring Plan (GWMP) was followed during all 2022 field sampling and laboratory analysis activities and for statistically evaluating groundwater monitoring data developed from the CCR sampling and analysis program. No changes to the facility's GWMP occurred during 2022.

2.1.3 Background Groundwater Sampling

As documented in the 2017 and 2018 AGMCA Reports, eight independent rounds of background groundwater samples were collected from each CCR monitoring well and each sample was analyzed for all Appendix III and IV parameters prior to initiating the facility's CCR DM program in October 2017. No modifications to this background dataset occurred during 2022.

2.1.4 Statistical Methods

As documented in the 2017 and 2018 AGMCA Reports, the background dataset discussed in Section 2.1.3 of this Report was used to select the appropriate statistical evaluation methods for each CCR groundwater monitoring parameter to identify any Statistically Significant Increases (SSIs) over background concentrations and determine whether any concentrations were at Statistically Significant Levels (SSLs) above their respective Groundwater Protection Standards (GWPS) established for the site. These statistical methods are available on the facility's publicly accessible website and no changes were made to them during 2022.

2.2 PROBLEMS ENCOUNTERED/RESOLVED

There were no significant problems (e.g., insufficient groundwater yields for sampling, quality control issues, etc.) encountered during 2022 with regard to the CCR groundwater monitoring program.

2.3 TRANSITION BETWEEN MONITORING PROGRAMS

As documented in the 2018 AGMCA Report, the CCR unit transitioned from DM to AM that year. As part of this transition, all required notifications were issued, appropriate GWPS for Appendix IV parameters were established, and the first two AM sampling events (AM-1 and AM-2) were completed that year. Between 2019 and 2021, two additional AM sampling events were completed each year (AM-3 through AM-8) and statistical evaluations of the AM-1 through AM-8 sampling events were performed and documented in the corresponding 2019, 2020, and 2021 AGMCA Reports, with no parameters being found at concentrations (SSLs) that exceeded their respective GWPS. As discussed in Section 4.1 of this Report, two AM sampling events were completed in 2022 (AM-9 and AM-10), and statistical evaluations of that data also indicate there are no SSLs in any of the CCR unit's monitoring wells. Accordingly, as of December 31, 2022, the CCR unit remains in AM.

2.4 KEY ACTIVITIES PLANNED FOR THE UPCOMING YEAR

The following are the key CCR groundwater compliance activities planned for 2023:

- Continue with AM by conducting the semi-annual rounds of sampling and analysis for Appendix III and Appendix IV constituents [per 40 CFR § 257.96(b)] and evaluate the need to update the background data sets and associated Upper Prediction Limits (UPLs).
- If any SSLs are identified, provide appropriate notification [per § 257.95(g)] then potentially conduct an Appendix IV ASD [per § 257.95(g)(3)(ii)] to determine if a source other than the CCR unit may be causing the SSLs. Concurrent with undertaking an Appendix IV ASD, characterize the Nature and Extent (N&E) of the Appendix IV release and provide appropriate notification depending on the findings [per §§ 257.95(g)(1) and (2), respectively].
- If any SSLs are identified and an ASD is either not undertaken, indicates that an alternative source is not responsible for all the SSLs identified, or is not completed within 90 days of identifying there are SSLs, then initiate and perform an Assessment of Corrective Measures (ACM) in accordance with § 257.96.

3.0 DETECTION MONITORING INFORMATION

3.1 GROUNDWATER ANALYTICAL RESULTS SUMMARY

As noted in Section 2.3, site-wide AM was performed throughout 2022. As part of the AM program, all DM (Appendix III) parameters were also analyzed during each AM sampling event.

The need to statistically evaluate the 2022 Appendix III data to identify SSIs and determine if AM was necessary was precluded by the CCR unit already being in AM during all of 2022, so no statistical analysis of the data was necessary. The 2022 Appendix III data that was collected and validated is presented in Table 3-1 with the intent of using it during the next update of the background dataset and associated UPLs, which will help increase the statistical power of future analyses.

4.0 ASSESSMENT MONITORING INFORMATION

4.1 GROUNDWATER ANALYTICAL RESULTS SUMMARY

In accordance with 40 CFR §§ 257.95(b) and (d)(1), the CCR groundwater sampling and analysis program implemented during 2022 consisted of two AM sampling events (AM-9 and AM-10) performed between January 24 and February 16, 2022, and between July 25 and August 10, 2022, respectively. For both AM events, all Appendix III and all Appendix IV constituents were analyzed with the exception of combined radium 226/228 during AM-9, which was incorrectly excluded from the sampling event. However, over the duration of the CCR program implemented at the site, combined radium 226/228 concentrations have either been below detectible limits or, when detected, measured at concentrations well below the associated GWPS in all of the wells that are part of the monitoring network. As such, the lack of radium data for AM-9 is not believed to have affected the 2022 AM program evaluations for the CCR units. The other analyses that were performed during AM-9 and AM-10 exceed the requirements of § 257.95 which only stipulate analyzing for all Appendix IV parameters once per year. Laboratory analysis and subsequent validation of the sample data were completed on August 5, 2022, and January 11, 2023, for AM-9 and AM-10, respectively. Table 3-1 presents the validated analytical results for these events.

Statistical evaluations of AM data performed in 2022 and January 2023 included sampling events AM-9 and AM-10. All statistical evaluation work was performed in accordance with the certified methods included in both the facility's operating record and the publicly accessible website and the results were used to determine whether there were any detected Appendix IV parameters at SSLs above the CCR unit's established GWPS. As documented in the 2018 AGMCA Report, site-specific Appendix IV GWPS were established for the CCR unit using the higher of the federal Maximum Contaminant Level (MCL) or UPL for each parameter or, for those parameters that do not have MCLs, the higher of the EPA Risk Screening Level (RSL) or the UPL. The site-specific GWPS and the results of the statistical evaluations of AM-9 and AM-10 are presented in Tables 4-1a, 4-1b, 4-2, and 4-3 and discussed below.

Statistical evaluation of the AM-9 and AM-10 data indicated the following:

- For the Original landfill, SSIs occurred for multiple parameters in multiple wells in the two aquifers monitored beneath the site. For the Connellsville Sandstone (Table 4-1a), SSIs were identified for eight different Appendix IV parameters with at least one parameter having an SSI in all six of the downgradient wells. The SSI parameters and associated wells were predominantly consistent with the findings from AM-1 through AM-8. There were a total of six less SSIs identified during the current reporting period than in 2021, including total chromium, which was identified as an SSI in one well during AM-8, but was not identified as an SSI during AM-9 or AM-10. However, none of the aforementioned SSI parameters were found at SSLs above their respective GWPS. For the underlying Clarksburg formation (Table 4-1b), SSIs were identified for five different Appendix IV parameters, with three of those parameters (beryllium, cobalt, and lithium) having an SSI in one of the downgradient wells (MW-129) during both AM events, while only one parameter (cobalt) had an SSI in the other downgradient well (MW-130) during both AM events. Arsenic was identified as a first-time SSI for MW-130 during AM-9 but was not an SSI during AM-10, while combined radium 226/228 was identified as a first-time SSI for MW-129 during AM-10. However, none of the aforementioned parameters exhibiting an SSI were found at SSLs above their respective GWPS.

- For the Expansion Area landfill, SSIs were identified in the Connellsville Sandstone (Table 4-2) for five different Appendix IV parameters with at least one parameter having an SSI in all eight downgradient wells. The SSI parameters and associated wells were predominantly consistent with the findings from AM-1 through AM-8. However, none of the aforementioned parameters were found at SSLs above their respective GWPS.
- For the area between both landfills, SSIs were identified in the Connellsville Sandstone (Table 4-3) for five different Appendix IV parameters in the two downgradient wells, with the parameters being predominantly consistent with the findings from AM-1 through AM-8. However, none of the parameters were found at SSLs above their respective GWPS.

In summary, although there were SSIs identified for multiple Appendix IV parameters for both CCR disposal areas, none of the parameter concentrations were found at SSLs above their respective GWPS during sampling events AM-9 and AM-10. If any Appendix IV SSLs are identified during the upcoming 2023 AM sampling events, ASD, N&E Characterization, and/or ACM activities will then be undertaken as outlined in Section 2.4 of this Report, and the associated recordkeeping, notification, and reporting will be performed in accordance with the applicable requirements of 40 CFR §§ 257.95, 96, 105, 106, and 10.

TABLES

TABLE 2-1
CCR RULE GROUNDWATER MONITORING SYSTEM WELL SUMMARY
FT. MARTIN CCB LANDFILL – 2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

Well	Year Installed	Formation Monitored	Ground Surface Elevation (ft MSL)	Total Well Depth (ft bgs)	Monitored Interval (ft bgs)	Monitored Interval (ft MSL)	Casing ID and Material
Background							
MW-101	1993	Connellsville SS	1113.05	34.0	24.0 – 34.0	1079.05 - 1089.05	2" - Sch. 40 PVC
MW-127*	2008	Connellsville SS	1112.00	37.0	27.0 – 37.0	1075.00 – 1085.00	2" - Sch. 40 PVC
MW-128	2008	Clarksburg	1114.00	97.5	77.5 – 97.5	1016.50 – 1036.50	2" - Sch. 40 PVC
Original Landfill - Downgradient							
MW-106	1993	Connellsville SS	1111.51	44.0	24.0 – 44.0	1067.51 – 1087.51	2" - Sch. 40 PVC
MW-107	1993	Connellsville SS	1107.28	55.5	45.5 – 55.5	1051.78 – 1061.78	2" - Sch. 40 PVC
MW-129	2016	Clarksburg	1057.84	29.4	19.4 – 29.4	1028.40 – 1038.40	2" - Sch. 40 PVC
MW-130	2016	Clarksburg	1034.29	33.3	23.3 – 33.3	1001.03 – 1011.03	2" - Sch. 40 PVC
MW-131	2016	Connellsville SS	1133.45	25.5	15.5 – 25.5	1107.95 – 1117.95	2" - Sch. 40 PVC
MW-132	2016	Connellsville SS	1155.72	77.5	67.5 – 77.5	1078.27 – 1088.27	2" - Sch. 40 PVC
MW-133	2016	Connellsville SS	1130.70	45.3	35.3 – 45.3	1085.45 – 1095.45	2" - Sch. 40 PVC
MW-134	2016	Connellsville SS	1088.67	23.8	13.8 – 23.8	1064.91 – 1074.91	2" - Sch. 40 PVC
Expansion Area Landfill - Downgradient							
MW-121	2008	Connellsville SS	1098.00	39.0	29.0 – 39.0	1059.00 – 1069.00	2" - Sch. 40 PVC
MW-123	2008	Connellsville SS	1084.00	35.5	25.5 – 35.5	1048.50 – 1058.50	2" - Sch. 40 PVC
MW-125	2008	Connellsville SS	1140.41	75.0	55.0 – 75.0	1065.41 – 1085.41	2" - Sch. 40 PVC
MW-135	2016	Connellsville SS	1081.36	37.5	27.5 – 37.5	1043.82 – 1053.82	2" - Sch. 40 PVC
MW-136	2016	Connellsville SS	1075.59	22.5	12.5 – 22.5	1053.12 – 1063.12	2" - Sch. 40 PVC
MW-137	2016	Connellsville SS	1094.53	37.9	27.9 – 37.9	1056.64 – 1066.64	2" - Sch. 40 PVC
MW-138	2016	Connellsville SS	1150.12	49.9	39.9 – 49.9	1100.25 – 1110.25	2" - Sch. 40 PVC
MW-139	2016	Connellsville SS	1127.26	42.8	32.8 – 42.8	1084.48 – 1094.48	2" - Sch. 40 PVC
Both Landfills - Downgradient							
MW-109	1993	Connellsville SS	1122.79	54.5	34.5 – 54.5	1068.29 – 1088.29	2" - Sch. 40 PVC
MW-112	2002	Connellsville SS	1124.11	50.0	40.0 – 50.0	1074.11 – 1084.11	2" - Sch. 40 PVC

Notes: SS = sandstone MSL = mean sea level bgs = below ground surface ID = inside diameter Sch = Schedule PVC = polyvinyl chloride
* = used only for water level measurements

SAMPLING EVENT NO.[2]	WELL ID[3]	SAMPLE DATE	APPENDIX III (all Chemical Constituents reported as TOTAL RECOVERABLE)[1]							APPENDIX IV (all Chemical Constituents reported as TOTAL RECOVERABLE)[1]														
			BORON	CALCIUM	CHLORIDE	FLUORIDE	PH[4]	SULFATE	TDS	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CHROMIUM	COBALT	LEAD	LITHIUM	MERCURY	MOLYBDENUM	SELENIUM	THALLIUM	RADIUM-226	RADIUM-228
			METALS	METALS	MISC	MISC	MISC	MISC	MISC	METALS	METALS	METALS	METALS	METALS	METALS	METALS	METALS	METALS	METALS	METALS	METALS	METALS	RADIOCHEM	RADIOCHEM
			MG/L	MG/L	MG/L	MG/L	S.U.	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	PCI/L	PCI/L
19 (AM-9)	MW-101	1/25/2022	0.0358 J	65.222	34.9	0.025 U	6.86	54.6 J-	348	0.0012 U	0.00032 U	0.075725	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.009405	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-101	8/10/2022	0.0264 J	64.0962	28.32	0.025 U	6.86	49.06	428	0.0012 U	0.00032 U	0.065583	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.009161	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.0556 U	1.96 U
19 (AM-9)	MW-106	2/14/2922	0.0162 J	86.981	1.515	0.112	6.99	84.9	348	0.0012 U	0.00032 U	0.060425	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.007708	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-106	7/26/2022	0.015 U	92.6834	1.456 J	0.153	6.82	87 J-	368	0.0012 U	0.00032 U	0.050564	0.000088 U	0.0004 U	0.0018 U	0.000198 J	0.00044 U	0.006072	0.000163 U	0.001851 J	0.0017 U	0.00016 U	0.174	0.311 U
19 (AM-9)	MW-107	2/8/2022	0.6716	77.833	3.101	0.222	7.25	125	484	0.0012 U	0.00032 U	0.031887	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.014421	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-107	8/3/2022	0.6339	75.3542	3.165	0.2786 J	7.15	119.2 J-	504	0.0012 U	0.00032 U	0.029784	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.01242	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.0484 U	0.00744 U
19 (AM-9)	MW-109	2/1/2022	0.0739 J	240	14.5	0.282	6.92	453	1050	0.0012 U	0.00032 U	0.032755	0.000088 U	0.0004 U	0.0018 U	0.000337 J	0.00044 U	0.019033	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-109	8/4/2022	0.1252 J	256.3289	15.71	0.2723 J+	6.92	503.9	1265	0.0012 U	0.00032 U	0.026438	0.000088 U	0.0004 U	0.0018 U	0.000439 J	0.00044 U	0.014637	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.288	0.765
19 (AM-9)	MW-112	2/1/2022	0.015 U	76.981	41.7	0.072 J	7.24	31.6	328	0.0012 U	0.00032 U	0.189726	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.01014	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-112	8/3/2022	0.015 U	86.0676	40.73	0.0756 J	7.27	34.15 J-	384	0.0012 U	0.00032 U	0.130552	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.008103	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.179	0.232 U
19 (AM-9)	MW-121	2/1/2022	0.015 U	79.824	13	0.131	7.24	93.1	500	0.0012 U	0.000325 J	0.047846	0.000088 U	0.0004 U	0.0018 U	0.000247 J	0.00044 U	0.011762	0.000163 U	0.001582 J	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-121	8/9/2022	0.019 U	86.0323	13.78 J-	0.025 U	7.26	89.84 J-	540	0.0012 U	0.000628 J	0.043288	0.000088 U	0.0004 U	0.0018 U	0.001121	0.00044 U	0.011204	0.000163 U	0.001436 J	0.0017 U	0.00016 U	0.558	1.05
19 (AM-9)	MW-123	2/9/2022	0.015 U	82.515	5.687	0.103	7.26	24.4	368	0.0012 U	0.00032 U	0.111433	0.000088 U	0.0004 U	0.0018 U	0.000354 J	0.00044 U	0.006051	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-123	7/25/2022	0.015 U	85.8228	5.725	0.087 J	7.35	23.18 J-	388	0.0012 U	0.00032 U	0.107447	0.000088 U	0.0004 U	0.0018 U	0.00049 J	0.00044 U	0.005616	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.566	0.682
19 (AM-9)	MW-125	2/9/2022	0.0949 J	125	1.151	0.23	7.04	193	668	0.0012 U	0.000183 U	0.015414	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.018732	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-125	7/26/2022	0.0931 J	132.3795	1.113 J-	0.196	7.16	189.5 J-	704	0.0012 U	0.00032 U	0.013647	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.012751	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.23	0.206 U
19 (AM-9)	MW-127	2/1/2022	0.015 U	161	126	0.126	7.00	123	784	0.0012 U	0.00032 U	0.049699	0.000088 U	0.0004 U	0.0018 U	0.000204 J	0.00044 U	0.042461	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-127	8/9/2022	0.0162 J	165.9945	132.9 J-	0.025 U	7.1	119.1 J-	868	0.0012 U	0.00095	0.050226	0.000115 J	0.0004 U	0.0018 U	0.001863	0.00044 U	0.04664	0.000163 U	0.00126 U	0.003457 J	0.00016 U	0.146	1.3
19 (AM-9)	MW-128	1/25/2022	0.18 J	12.977	0.788	1.793	7.83	12.3 J-	320	0.0012 U	0.00032 U	0.485354	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.011514	0.000163 U	0.00126 U	0.0017 U	0.00008 U	NA	NA
20 (AM-10)	MW-128	8/9/2022	0.1923 J	13.052	0.7963 J-	1.9853	7.85	9.6281 J-	336	0.0012 U	0.00032 U	0.477703	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.013072	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.181	0.864
19 (AM-9)	MW-129	2/8/2022	4.07	353	23.9	0.068 J	6.64	1092	1940	0.0012 U	0.00032 U	0.020227	0.000294	0.0004 U	0.0018 U	0.000572 J	0.00044 U	0.019537	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-129	8/9/2022	3.7613	352.0601	23.46 J-	0.025 U	6.73	1084 J-	2133	0.0012 U	0.000561 J	0.021992	0.000097 J	0.0004 U	0.0018 U	0.000616 J	0.00044 U	0.019737	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.206	0.97
19 (AM-9)	MW-130	2/8/2022	0.0992 J	60.218	6.592	0.169	6.91	103	304	0.0012 U	0.004834	0.214015	0.000144 J	0.0004 U	0.0018 U	0.005036	0.00044 U	0.003778	0.000163 U	0.001533 J	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-130	8/10/2022	0.1056 J	59.8519	6.0163	0.1329	6.99	95.06	400	0.0012 U	0.000356 J	0.045445 D	0.000088 U	0.0004 U	0.0018 U	0.000436 J	0.00044 U	0.004356	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.0827 U	1.33 U
19 (AM-9)	MW-131	2/2/2022	0.015 U	64.046	0.654	0.203	7.12	40 J-	304	0.0012 U	0.00032 U	0.107775	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.01201	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-131	8/4/2022	0.015 U	63.0822	0.69	0.2241 J+	7.18	33.83 J	280	0.0012 U	0.00032 U	0.081935	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.006168	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.0878 U	0.283 U
19 (AM-9)	MW-132	1/24/2022	0.2472	9.61	2.043	1.409 J+	8.27	200	744	0.0022 J	0.003737	0.058516	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.024076	0.000163 U	0.013285	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-132	8/4/2022	0.2583	13.1162	1.5735	1.3665 J	8.18	196.7 J	796	0.001411 J	0.002481	0.042012	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.022863	0.000163 U	0.006637	0.0017 U	0.00016 U	0.154	0.203 U
19 (AM-9)	MW-133	1/24/2022	1.06	190	5.095	0.025 U	7.0	407	928	0.0012 U	0.00032 U	0.019611	0.000088 U	0.0004 U	0.0018 U	0.000238 J	0.00044 U	0.018744	0.000163 U	0.002831	0.0017 U	0.00016 U	NA	NA
19 (AM-9)	MW-133 (D)	1/24/2022	1.06	189	5.134	0.025 U	7.0	407	904	0.0012 U	0.00032 U	0.019578	0.000088 U	0.0004 U	0.0018 U	0.000244 J	0.00044 U	0.017913	0.000163 U	0.002138 J	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-133	7/27/2022	0.9725	194.1759	5.0696	0.1267 J+	7.04	413.1 J-	1068	0.0012 U	0.00032 U	0.015011	0.000088 U	0.0004 U	0.0018 U	0.000211 J	0.00044 U	0.018096	0.000163 U	0.001642 J	0.0017 U	0.00016 U	0.108 U	0.43 U
20 (AM-10)	MW-133 (D)	7/27/2022	0.9805	194.3117	5.0382	0.1294	7.04	406.2	1044	0.0012 U	0.00032 U	0.014278	0.000353	0.0004 U	0.0018 U	0.000202 J	0.00044 U	0.017203	0.000163 U	0.001584 J	0.0017 U	0.00016 U	0.106	0.89
19 (AM-9)	MW-134	2/8/2022	0.0452 J	56.376	1.684	0.044 J	7.38	10.1	240	0.0006 U	0.00032 U	0.269511	0.000044 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.009359	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-134	8/3/2022	0.0389 J	58.053	1.5068	0.0524 J	7.05	10.74	264	0.0012 U	0.00032 U	0.284345	0.000088 U	0.0004 U	0.0018 U	0.00021 J	0.00044 U	0.00903	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.29	0.556
19 (AM-9)	MW-135	2/1/2022	0.015 U	72.075	2.299	0.158	7.18	18.9	332	0.0012 U	0.0006 J	0.184245	0.000088 U	0.0004 U	0.0018 U	0.000474 J	0.00044 U	0.009182	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-135	8/4/2022	0.0283 J	70.3656	2.1028	0.1514 J+	7.23	16.34	336	0.0012 U	0.000436 J	0.120811	0.000088 U	0.0004 U	0.0018 U	0.00076 J	0.00044 U	0.006631	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.325	0.299 U
19 (AM-9)	MW-136	2/16/2022	0.1175 J	53.904	2.524	0.141	6.86	38 J-	292	0.0012 U	0.00032 U	0.078093	0.000088 U	0.0004 U	0.0018 U	0.000342 J	0.00044 U	0.002902	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-136	7/27/2022	0.015 U	61.3931	2.4502	0.1472	6.9	33.89	324	0.0012 U	0.00032 U	0.06603	0.000088 U	0.0004 U	0.0018 U	0.000292 J	0.00044 U	0.002806	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.153	0.708
19 (AM-9)	MW-137	2/2/2022	0.0156 J	56.247	2.083	0.095 J	6.96	18.6 J-	276	0.0012 U	0.00032 U	0.127241	0.000088 U	0.0004 U	0.0018 U	0.000242 J	0.00044 U	0.006242	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-137	7/27/2022	0.015 U	59.4772	2.6614	0.0799 J	7.05	19.89	288	0.0012 U	0.00032 U	0.101118	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.004516	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.117	0.223 U
19 (AM-9)	MW-138	2/2/2022	0.096 J	251	1.675	0.31	6.8	508 J-	1170	0.0012 U	0.000714	0.009801 J	0.000088 U	0.0004 U	0.0018 U	0.00105	0.00044 U	0.018208	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-138	7/28/2022	0.0923 J	274.0216	1.7072	0.3217	6.89	484.9 J-	1256	0.0012 U	0.000386 J	0.008783 J	0.000088 U	0.0004 U	0.0018 U	0.00091 J	0.00044 U	0.013856	0.000163 U	.00126 U	0.0017 U	0.00016 U	0.778	0.959
19 (AM-9)	MW-139	2/2/2022	0.1562 J	109	1.824	0.342	7.03	72.6 J-	452	0.0012 U	0.00033 J	0.04289	0.000088 U	0.0004 U	0.0018 U	0.000194 J	0.00044 U	0.010792	0.000163 U	0.00126 U	0.0017 U	0.00016 U	NA	NA
20 (AM-10)	MW-139	8/3/2022	0.1365 J	112.5215	1.8021	0.3428 J	7.15	66.79 J	484	0.0012 U	0.00032 U	0.03785	0.000088 U	0.0004 U	0.0018 U	0.00019 U	0.00044 U	0.010372	0.000163 U	0.00126 U	0.0017 U	0.00016 U	0.16	0.543

NOTES:

[1] Lab analyses were completed by Beta Lab and Eurofins/TestAmerica Laboratories, Inc., both of which are accredited/certified laboratories: Beta Lab NSF/ISR ISO 9001:2015 Cert. No. 83761-IS8 (Exp. 01-16-24) and Eurofins/TestAmerica WVDEP Certificate No. 381, Expiration Date: 10-31-22.

[2] Sampling Event Nos. 19 and 20 correspond to Assessment Monitoring (AM) sampling events AM-9 and AM-10, respectively.

[3] Field duplicate samples that were taken for Quality Control purposes are noted with a (D).

[4] pH results reported are field sampling measurments as lab pH testing exceeded hold times.

NA = Parameter was not analyzed.

NS = Not sampled.

DATA QUALIFER DEFINITIONS:

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

- U — The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
- J — The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
- J+ — The result is an estimated quantity, but the result may be biased high.
- J- — The result is an estimated quantity, but the result may be biased low.
- UJ — The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
- R — The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in sample
- UR — The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in sample.

TABLE 4-1a
CCR RULE INTERWELL COMPARISON OF SAMPLING EVENT AM-9 AND -10 APPENDIX IV DATA

Original Landfill - Connellsville Sandstone							Event 19 (AM-9) Downgradient Wells						Event 19 (AM-9) Background Well MW-101	
Parameter	Units	Data Distribution for Background Well MW-101	UPL Type	UPL Value[a,b]	Federal MCLs/RSLs	GWPS	MW-131	MW-132	MW-133	MW-134	MW-106	MW-107		
Antimony	mg/L	Unknown	Poisson	0.00146	0.006	0.006	<0.0012	0.0022	<0.0012	<0.0006	<0.0012	<0.0012	<0.0012	U
Arsenic	mg/L	Unknown	Poisson	0.0015	0.01	0.01	<0.00032	0.003737	<0.00032	<0.00032	<0.00032	<0.00032	<0.00032	U
Barium	mg/L	Normal	Parametric	0.092642	2	2	0.107775	0.058516	0.0195945	0.269511	0.060425	0.031887	0.075725	
Beryllium	mg/L	Unknown[c]	DQ[d]	NA	0.004	0.004	<0.000088	<0.000088	<0.000088	<0.000044	<0.000088	<0.000088	<0.000088	U
Cadmium	mg/L	Unknown[c]	DQ[d]	NA	0.005	0.005	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	U
T. Chromium	mg/L	Unknown[c]	DQ[d]	NA	0.1	0.1	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	U
Cobalt	mg/L	Unknown[c]	DQ[d]	NA	0.006	0.006	<0.00019	<0.00019	0.000241	<0.00019	<0.00019	<0.00019	<0.00019	U
Fluoride	mg/L	Normal	Parametric	0.103	4	4	0.203	1.409	<0.025	0.044	0.112	0.222	<0.025	U
Lead	mg/L	Unknown[c]	DQ[d]	NA	0.015	0.015	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	U
Lithium	mg/L	Normal	Parametric	0.009909	0.04	0.04	0.01201	0.024076	0.0183285	0.009359	0.007708	0.014421	0.009405	
Mercury	mg/L	Unknown	Poisson	0.00029	0.002	0.002	<0.000163	<0.000163	<0.000163	<0.000163	<0.000163	<0.000163	<0.000163	U
Molybdenum	mg/L	Unknown	Poisson	0.00765	0.1	0.1	<0.00126	0.013285	0.0024845	<0.00126	<0.00126	<0.00126	<0.00126	U
Selenium	mg/L	Unknown[c]	DQ[d]	NA	0.5	0.5	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	U
Thallium	mg/L	Unknown[c]	DQ[d]	NA	0.002	0.002	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	U
Sum Ra226+Ra228	pCi/L	Unknown	Poisson	0.54	5	5	NA[e]	NA[e]	NA[e]	NA[e]	NA[e]	NA[e]	NA[e]	

[a]Prediction Limits calculated using 5% alpha.

[b]Upper Prediction Limit used for all parameters.

[c]Data distribution set to Unknown if all values non-detect in upgradient well.

[d]DQ is Double Quantification Rule. If two successive, independent detected values occur, that would be an SSI and also an SSL if > GWPS. However, if value was detected in upgradient well during the same sampling event, would use Poisson PL instead.

[e]Not Analyzed

#.#### = UPL > Result > MCL/RSL

(green) = SSI < GWPS

(red) = SSI > GWPS

(yellow) = DQ Parameter with Verification Sampling Needed

Original Landfill - Connellsville Sandstone							Event 20 (AM-10) Downgradient Wells						Event 20 (AM-10) Background Well MW-101	
Parameter	Units	Data Distribution for Background Well MW-101	UPL Type	UPL Value[a,b]	Federal MCLs/RSLs	GWPS	MW-131	MW-132	MW-133	MW-134	MW-106	MW-107		
Antimony	mg/L	Unknown	Poisson	0.00146	0.006	0.006	<0.0012	0.001411	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	U
Arsenic	mg/L	Unknown	Poisson	0.0015	0.01	0.01	<0.00032	0.002481	<0.00032	<0.00032	<0.00032	<0.00032	<0.00032	U
Barium	mg/L	Normal	Parametric	0.092642	2	2	0.081935	0.042012	0.0146445	0.284345	0.050564	0.029784	0.065583	
Beryllium	mg/L	Unknown[c]	DQ[d]	NA	0.004	0.004	<0.000088	<0.000088	0.0002205	<0.000088	<0.000088	<0.000088	<0.000088	U
Cadmium	mg/L	Unknown[c]	DQ[d]	NA	0.005	0.005	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	U
T. Chromium	mg/L	Unknown[c]	DQ[d]	NA	0.1	0.1	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	U
Cobalt	mg/L	Unknown[c]	DQ[d]	NA	0.006	0.006	<0.00019	<0.00019	0.0002065	0.00021	0.000198	<0.00019	<0.00019	U
Fluoride	mg/L	Normal	Parametric	0.103	4	4	0.2241	1.3665	0.12805	0.0524	0.153	0.2786	<0.025	U
Lead	mg/L	Unknown[c]	DQ[d]	NA	0.015	0.015	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	U
Lithium	mg/L	Normal	Parametric	0.009909	0.04	0.04	0.006168	0.022863	0.0176495	0.00903	0.006072	0.01242	0.009161	
Mercury	mg/L	Unknown	Poisson	0.00029	0.002	0.002	<0.000163	<0.000163	<0.000163	<0.000163	<0.000163	<0.000163	<0.000163	U
Molybdenum	mg/L	Unknown	Poisson	0.00765	0.1	0.1	<0.00126	0.006637	0.001613	<0.00126	0.001851	<0.00126	<0.00126	U
Selenium	mg/L	Unknown[c]	DQ[d]	NA	0.5	0.5	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	U
Thallium	mg/L	Unknown[c]	DQ[d]	NA	0.002	0.002	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	U
Sum Ra226+Ra228	pCi/L	Unknown	Poisson	0.54	5	5	<0.3708	0.2555	0.6325	0.846	0.3295	<0.05584	<2.0156	U

[a]Prediction Limits calculated using 5% alpha.

[b]Upper Prediction Limit used for all parameters.

[c]Data distribution set to Unknown if all values non-detect in upgradient well.

[d]DQ is Double Quantification Rule. If two successive, independent detected values occur, that would be an SSI and also an SSL if > GWPS. However, if value was detected in upgradient well during the same sampling event, would use Poisson PL instead.

#.#### = UPL > Result > MCL/RSL

(green) = SSI < GWPS

(red) = SSI > GWPS

(yellow) = DQ Parameter with Verification Sampling Needed

TETRA TECH

TABLE 4-1b
CCR RULE INTERWELL COMPARISON OF SAMPLING EVENT AM-9 AND -10 APPENDIX IV DATA

Original Landfill - Clarksburg Formation							Event 19 (AM-9) Downgradient Wells					
Parameter	Units	Data Distribution for Background Well MW-128	UPL Type	UPL Value[a,b]	Federal MCLs/RSLs	GWPS	MW-129	MW-130				
Antimony	mg/L	Unknown	Poisson	0.000576	0.006	0.006	<0.0012	<0.0012				
Arsenic	mg/L	Normal	Parametric	0.001357	0.01	0.01	<0.00032	0.004834				
Barium	mg/L	Normal	Parametric	0.509786	2	2	0.020227	0.214015				
Beryllium	mg/L	Unknown[c]	DQ[d]	NA	0.004	0.004	0.000294	0.000144				
Cadmium	mg/L	Unknown[c]	DQ[d]	NA	0.005	0.005	<0.0004	<0.0004				
T. Chromium	mg/L	Unknown	Poisson	0.00114	0.1	0.1	<0.0018	<0.0018				
Cobalt	mg/L	Unknown[c]	DQ[d]	NA	0.006	0.006	0.000572	0.005036				
Fluoride	mg/L	Normal	Parametric	2.133	4	4	0.068	0.169				
Lead	mg/L	Unknown[c]	DQ[d]	NA	0.015	0.015	<0.00044	<0.00044				
Lithium	mg/L	Normal	Parametric	0.013878	0.04	0.04	0.019537	0.003778				
Mercury	mg/L	Unknown	Poisson	0.00099	0.002	0.002	<0.000163	<0.000163				
Molybdenum	mg/L	Normal	Parametric	0.009648	0.1	0.1	<0.00126	0.001533				
Selenium	mg/L	Unknown[c]	DQ[d]	NA	0.5	0.5	<0.0017	<0.0017				
Thallium	mg/L	Unknown[c]	DQ[d]	NA	0.002	0.002	<0.00016	<0.00016				
Sum Ra226+Ra228	pCi/L	Unknown	Non-parametric	1.127	5	5	NA[e]	NA[e]				

Event 19 (AM-9) Background Well MW-128	
<0.0012	U
<0.00032	U
0.485354	
<0.000088	U
<0.0004	U
<0.0018	U
<0.00019	U
1.793	
<0.00044	U
0.011514	
<0.000163	U
<0.00126	U
<0.0017	U
<0.00008	U
NA[e]	

[a]Prediction Limits calculated using 5% alpha.
[b]Upper Prediction Limit used for all parameters.
[c]Data distribution set to Unknown if all values non-detect in upgradient well.
[d]DQ is Double Quantification Rule. If two successive, independent detected values occur, that would be an SSI and also an SSL if > GWPS. However, if value was detected in upgradient well during the same sampling event, would use Poisson PL instead.
[e]Not Analyzed

#.#### = UPL > Result > MCL/RSL
(green) = SSI < GWPS
(red) = SSI > GWPS
(yellow) = DQ Parameter with Verification Sampling Needed

Original Landfill - Clarksburg Formation							Event 20 (AM-10) Downgradient Wells					
Parameter	Units	Data Distribution for Background Well MW-128	UPL Type	UPL Value[a,b]	Federal MCLs/RSLs	GWPS	MW-129	MW-130				
Antimony	mg/L	Unknown	Poisson	0.000576	0.006	0.006	<0.0012	<0.0012				
Arsenic	mg/L	Normal	Parametric	0.001357	0.01	0.01	0.000561	0.000356				
Barium	mg/L	Normal	Parametric	0.509786	2	2	0.021992	0.045445				
Beryllium	mg/L	Unknown[c]	DQ[d]	NA	0.004	0.004	0.000097	<0.000088				
Cadmium	mg/L	Unknown[c]	DQ[d]	NA	0.005	0.005	<0.0004	<0.0004				
T. Chromium	mg/L	Unknown	Poisson	0.00114	0.1	0.1	<0.0018	<0.0018				
Cobalt	mg/L	Unknown[c]	DQ[d]	NA	0.006	0.006	0.000616	0.000436				
Fluoride	mg/L	Normal	Parametric	2.133	4	4	<0.025	0.1329				
Lead	mg/L	Unknown[c]	DQ[d]	NA	0.015	0.015	<0.00044	<0.00044				
Lithium	mg/L	Normal	Parametric	0.013878	0.04	0.04	0.019737	0.004356				
Mercury	mg/L	Unknown	Poisson	0.00099	0.002	0.002	<0.000163	<0.000163				
Molybdenum	mg/L	Unknown	Parametric	0.009648	0.1	0.1	<0.00126	<0.00126				
Selenium	mg/L	Unknown[c]	DQ[d]	NA	0.5	0.5	<0.0017	<0.0017				
Thallium	mg/L	Unknown[c]	DQ[d]	NA	0.002	0.002	<0.00016	<0.00016				
Sum Ra226+Ra228	pCi/L	Unknown	Non-parametric	1.127	5	5	1.176	<1.4127				

Event 20 (AM-10) Background Well MW-128	
<0.0012	U
<0.00032	U
0.477703	
<0.000088	U
<0.0004	U
<0.0018	U
<0.00019	U
1.9853	
<0.00044	U
0.013072	
<0.000163	U
<0.00126	U
<0.0017	
<0.00016	U
1.045	

[a]Prediction Limits calculated using 5% alpha.
[b]Upper Prediction Limit used for all parameters.
[c]Data distribution set to Unknown if all values non-detect in upgradient well.
[d]DQ is Double Quantification Rule. If two successive, independent detected values occur, that would be an SSI and also an SSL if > GWPS. However, if value was detected in upgradient well during the same sampling event, would use Poisson PL instead.
[e]Not Analyzed

#.#### = UPL > Result > MCL/RSL
(green) = SSI < GWPS
(red) = SSI > GWPS
(yellow) = DQ Parameter with Verification Sampling Needed

TABLE 4-2
CCR RULE INTERWELL COMPARISON OF SAMPLING EVENT AM-9 AND -10 APPENDIX IV DATA

Expansion Area Landfill - Connellsville Sandstone							Event 19 (AM-9) Downgradient Wells									
Parameter	Units	Data Distribution for Background Well MW-101	UPL Type	UPL Value[a,b]	Federal MCLs/RSLs	GWPS	MW-121	MW-123	MW-125	MW-135	MW-136	MW-137	MW-138	MW-139	Event 19 (AM-9) Background Well MW-101	
Antimony	mg/L	Unknown	Poisson	0.00146	0.006	0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	U
Arsenic	mg/L	Unknown	Poisson	0.0015	0.01	0.01	0.000325	<0.00032	<0.000183	0.0006	<0.00032	<0.00032	0.000714	0.00033	<0.00032	U
Barium	mg/L	Normal	Parametric	0.092642	2	2	0.047846	0.111433	0.015414	0.184245	0.078093	0.127241	0.009801	0.04289	0.075725	
Beryllium	mg/L	Unknown[c]	DQ[d]	NA	0.004	0.004	<0.000088	<0.000088	<0.000088	<0.000088	<0.000088	<0.000088	<0.000088	<0.000088	<0.000088	U
Cadmium	mg/L	Unknown[c]	DQ[d]	NA	0.005	0.005	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	U
T. Chromium	mg/L	Unknown[c]	DQ[d]	NA	0.1	0.1	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	U
Cobalt	mg/L	Unknown[c]	DQ[d]	NA	0.006	0.006	0.000247	0.000354	<0.00019	0.000474	0.000342	0.000242	0.00105	0.000194	<0.00019	U
Fluoride	mg/L	Normal	Parametric	0.103	4	4	0.131	0.103	0.23	0.158	0.141	0.095	0.31	0.342	<0.025	U
Lead	mg/L	Unknown[c]	DQ[d]	NA	0.015	0.015	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	U
Lithium	mg/L	Normal	Parametric	0.009909	0.04	0.04	0.011762	0.006051	0.018732	0.009182	0.002902	0.006242	0.018208	0.010792	0.009405	
Mercury	mg/L	Unknown	Poisson	0.00029	0.002	0.002	<0.000163	<0.000163	<0.000163	<0.000163	<0.000163	<0.0000163	<0.000163	<0.000163	<0.000163	U
Molybdenum	mg/L	Unknown	Poisson	0.00765	0.1	0.1	0.001582	<0.00126	<0.00126	<0.00126	<0.00126	<0.00126	<0.00126	<0.00126	<0.00126	U
Selenium	mg/L	Unknown[c]	DQ[d]	NA	0.5	0.5	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	U
Thallium	mg/L	Unknown[c]	DQ[d]	NA	0.002	0.002	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	U
Sum Ra226+Ra228	pCi/L	Unknown	Poisson	0.54	5	5	NA[e]	NA[e]	NA[e]	NA[e]	NA[e]	NA[e]	NA[e]	NA[e]	NA[e]	

[a]Prediction Limits calculated using 5% alpha.

[b]Upper Prediction Limit used for all parameters.

[c]Data distribution set to Unknown if all values non-detect in upgradient well.

[d]DQ is Double Quantification Rule. If two successive, independent detected values occur, that would be an SSI and also an SSL if > GWPS. However, if value was detected in upgradient well during the same sampling event, would use Poisson PL instead.

[e]Not Analyzed

#.#### = UPL > Result > MCL/RSL

(green) = SSI < GWPS

(red) = SSI > GWPS

(yellow) = DQ Parameter with Verification Sampling Needed

Expansion Area Landfill - Connellsville Sandstone							Event 20 (AM-10) Downgradient Wells									
Parameter	Units	Data Distribution for Background Well MW-101	UPL Type	UPL Value[a,b]	Federal MCLs/RSLs	GWPS	MW-121	MW-123	MW-125	MW-135	MW-136	MW-137	MW-138	MW-139	Event 20 (AM-10) Background Well MW-101	
Antimony	mg/L	Unknown	Poisson	0.00146	0.006	0.006	<0.012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	U
Arsenic	mg/L	Unknown	Poisson	0.0015	0.01	0.01	0.000628	<0.00032	<0.00032	0.000436	<0.00032	<0.00032	0.000386	<0.00032	<0.00032	U
Barium	mg/L	Normal	Parametric	0.092642	2	2	0.043288	0.107447	0.013647	0.120811	0.06603	0.101118	0.008783	0.03785	0.065583	
Beryllium	mg/L	Unknown[c]	DQ[d]	NA	0.004	0.004	<0.000088	<0.000088	<0.000088	<0.000088	<0.000088	<0.000088	<0.000088	<0.000088	<0.000088	U
Cadmium	mg/L	Unknown[c]	DQ[d]	NA	0.005	0.005	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	U
T. Chromium	mg/L	Unknown[c]	DQ[d]	NA	0.1	0.1	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	U
Cobalt	mg/L	Unknown[c]	DQ[d]	NA	0.006	0.006	0.001121	0.00049	<0.00019	0.00076	0.000292	<0.00019	0.00091	<0.00019	<0.00019	U
Fluoride	mg/L	Normal	Parametric	0.103	4	4	<0.025	0.087	0.196	0.1514	0.1472	0.0799	0.3217	0.3428	<0.025	U
Lead	mg/L	Unknown[c]	DQ[d]	NA	0.015	0.015	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	<0.00044	U
Lithium	mg/L	Normal	Parametric	0.009909	0.04	0.04	0.011204	0.005616	0.012751	0.006631	0.002806	0.004516	0.013856	0.010372	0.009161	
Mercury	mg/L	Unknown	Poisson	0.00029	0.002	0.002	<0.000163	<0.000163	<0.000163	<0.000163	<0.000163	<0.000163	<0.000163	<0.000163	<0.000163	U
Molybdenum	mg/L	Unknown	Poisson	0.00765	0.1	0.1	0.001436	<0.00126	<0.00126	<0.00126	<0.00126	<0.00126	<0.00126	<0.00126	<0.00126	U
Selenium	mg/L	Unknown[c]	DQ[d]	NA	0.5	0.5	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	U
Thallium	mg/L	Unknown[c]	DQ[d]	NA	0.002	0.002	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	<0.00016	U
Sum Ra226+Ra228	pCi/L	Unknown	Poisson	0.54	5	5	1.608	1.248	0.333	0.4745	0.861	0.2285	1.737	0.703	<2.0156	U

[a]Prediction Limits calculated using 5% alpha.

[b]Upper Prediction Limit used for all parameters.

[c]Data distribution set to Unknown if all values non-detect in upgradient well.

[d]DQ is Double Quantification Rule. If two successive, independent detected values occur, that would be an SSI and also an SSL if > GWPS. However, if value was detected in upgradient well during the same sampling event, would use Poisson PL instead.

[e]Not Analyzed

#.#### = UPL > Result > MCL/RSL

(green) = SSI < GWPS

(red) = SSI > GWPS

(yellow) = DQ Parameter with Verification Sampling Needed

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TABLE 4-3
CCR RULE INTERWELL COMPARISON OF SAMPLING EVENT AM-9 AND -10 APPENDIX IV DATA

Both Landfills (Perimeter Wells) - Connellsville Sandstone							Event 19 (AM-9) Downgradient Wells		Event 19 (AM-9) Background Well MW-101	
Parameter	Units	Data Distribution for Background Well MW-101	UPL Type	UPL Value[a,b]	Federal MCLs/RSLs	GWPS	MW-109	MW-112		
Antimony	mg/L	Unknown	Poisson	0.00146	0.006	0.006	<0.0012	<0.0012	<0.0012	U
Arsenic	mg/L	Unknown	Poisson	0.0015	0.01	0.01	<0.00032	<0.00032	<0.00032	U
Barium	mg/L	Normal	Parametric	0.092642	2	2	0.032755	0.189726	0.075725	
Beryllium	mg/L	Unknown[c]	DQ[d]	NA	0.004	0.004	<0.000088	<0.000088	<0.000088	U
Cadmium	mg/L	Unknown[c]	DQ[d]	NA	0.005	0.005	<0.0004	<0.0004	<0.0004	U
T. Chromium	mg/L	Unknown[c]	DQ[d]	NA	0.1	0.1	<0.0018	<0.0018	<0.0018	U
Cobalt	mg/L	Unknown[c]	DQ[d]	NA	0.006	0.006	0.000337	<0.00019	<0.00019	U
Fluoride	mg/L	Normal	Parametric	0.103	4	4	0.282	0.072	<0.025	U
Lead	mg/L	Unknown[c]	DQ[d]	NA	0.015	0.015	<0.00044	<0.00044	<0.00044	U
Lithium	mg/L	Normal	Parametric	0.009909	0.04	0.04	0.019033	0.01014	0.009405	
Mercury	mg/L	Unknown	Poisson	0.00029	0.002	0.002	<0.000163	<0.000163	<0.000163	U
Molybdenum	mg/L	Unknown	Poisson	0.00765	0.1	0.1	<0.00126	<0.00126	<0.00126	U
Selenium	mg/L	Unknown[c]	DQ[d]	NA	0.5	0.5	<0.0017	<0.0017	<0.0017	U
Thallium	mg/L	Unknown[c]	DQ[d]	NA	0.002	0.002	<0.00016	<0.00016	<0.00016	U
Sum Ra226+Ra228	pCi/L	Unknown	Poisson	0.54	5	5	NA[e]	NA[e]	NA[e]	

[a]Prediction Limits calculated using 5% alpha.
[b]Upper Prediction Limit used for all parameters.
[c]Data distribution set to Unknown if all values non-detect in upgradient well.
[d]DQ is Double Quantification Rule. If two successive, independent detected values occur, that would be an SSI and also an SSL if > GWPS. However, if value was detected in upgradient well during the same sampling event, would use Poisson PL instead.
[e]Not Analyzed

- #.#### = UPL > Result > MCL/RSL
- (green) = SSI < GWPS
- (red) = SSI > GWPS
- (yellow) = DQ Parameter with Verification Sampling Needed

Both Landfills (Perimeter Wells) - Connellsville Sandstone							Event 20 (AM-10) Downgradient Wells		Event 20 (AM-10) Background Well MW-101	
Parameter	Units	Data Distribution for Background Well MW-101	UPL Type	UPL Value[a,b]	Federal MCLs/RSLs	GWPS	MW-109	MW-112		
Antimony	mg/L	Unknown	Poisson	0.00146	0.006	0.006	<0.0012	<0.0012	<0.0012	U
Arsenic	mg/L	Unknown	Poisson	0.0015	0.01	0.01	<0.00032	<0.00032	<0.00032	U
Barium	mg/L	Normal	Parametric	0.092642	2	2	0.026438	0.130552	0.065583	
Beryllium	mg/L	Unknown[c]	DQ[d]	NA	0.004	0.004	<0.000088	<0.000088	<0.000088	U
Cadmium	mg/L	Unknown[c]	DQ[d]	NA	0.005	0.005	<0.0004	<0.0004	<0.0004	U
T. Chromium	mg/L	Unknown[c]	DQ[d]	NA	0.1	0.1	<0.0018	<0.0018	<0.0018	U
Cobalt	mg/L	Unknown[c]	DQ[d]	NA	0.006	0.006	0.000439	<0.00019	<0.00019	U
Fluoride	mg/L	Normal	Parametric	0.103	4	4	0.2723	0.0756	<0.025	U
Lead	mg/L	Unknown[c]	DQ[d]	NA	0.015	0.015	<0.00044	<0.00044	<0.00044	U
Lithium	mg/L	Normal	Parametric	0.009909	0.04	0.04	0.014637	0.008103	0.009161	
Mercury	mg/L	Unknown	Poisson	0.00029	0.002	0.002	<0.000163	<0.000163	<0.000163	U
Molybdenum	mg/L	Unknown	Poisson	0.00765	0.1	0.1	<0.00126	<0.00126	<0.00126	U
Selenium	mg/L	Unknown[c]	DQ[d]	NA	0.5	0.5	<0.0017	<0.0017	<0.0017	U
Thallium	mg/L	Unknown[c]	DQ[d]	NA	0.002	0.002	<0.00016	<0.00016	<0.00016	U
Sum Ra226+Ra228	pCi/L	Unknown	Poisson	0.54	5	5	1.053	0.295	<2.0156	U

[a]Prediction Limits calculated using 5% alpha.
[b]Upper Prediction Limit used for all parameters.
[c]Data distribution set to Unknown if all values non-detect in upgradient well.
[d]DQ is Double Quantification Rule. If two successive, independent detected values occur, that would be an SSI and also an SSL if > GWPS. However, if value was detected in upgradient well during the same sampling event, would use Poisson PL instead.

- #.#### = UPL > Result > MCL/RSL
- (green) = SSI < GWPS
- (red) = SSI > GWPS
- (yellow) = DQ Parameter with Verification Sampling Needed

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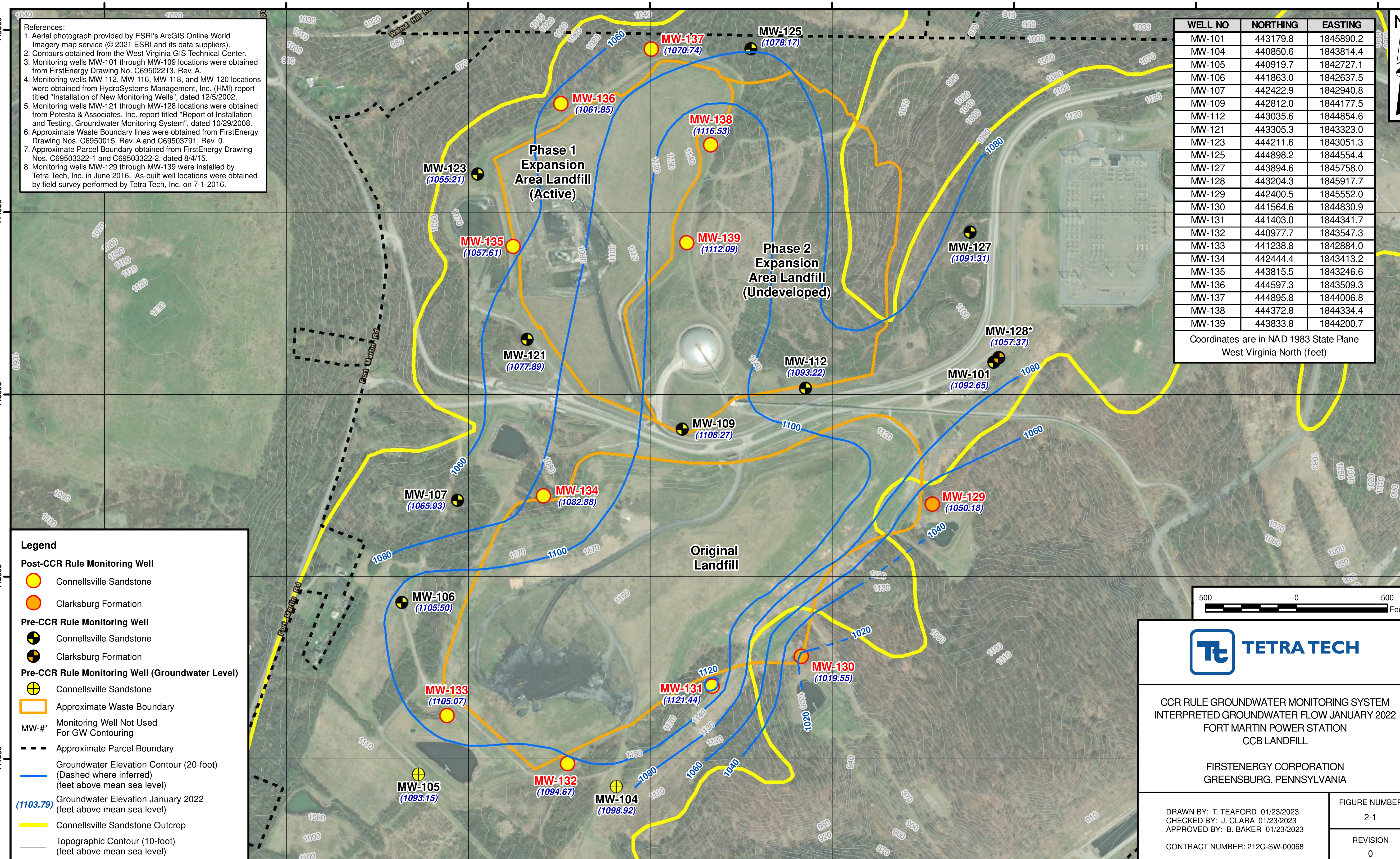
FIGURES



References:

1. Aerial photograph provided by ESRI's ArcGIS Online World Imagery map service (© 2021 ESRI and its data suppliers).
2. Contours obtained from the West Virginia GIS Technical Center.
3. Monitoring wells MW-101 through MW-109 locations were obtained from FirstEnergy Drawing No. C69502213, Rev. A.
4. Monitoring wells MW-112, MW-116, MW-118, and MW-120 locations were obtained from HydroSystems Management, Inc. (HMI) report titled "Installation of New Monitoring Wells", dated 12/5/2002.
5. Monitoring wells MW-121 through MW-128 locations were obtained from Potesta & Associates, Inc. report titled "Report of Installation and Testing, Groundwater Monitoring System", dated 10/29/2008.
6. Approximate Waste Boundary lines were obtained from FirstEnergy Drawing Nos. C6950015, Rev. A and C69503791, Rev. 0.
7. Approximate Parcel Boundary obtained from FirstEnergy Drawing Nos. C69503322-1 and C69503322-2, dated 8/4/15.
8. Monitoring wells MW-129 through MW-139 were installed by Tetra Tech, Inc. in June 2016. As-built well locations were obtained by field survey performed by Tetra Tech, Inc. on 7-1-2016.

WELL NO	NORTHING	EASTING
MW-101	443179.8	1845890.2
MW-104	440850.6	1843814.4
MW-105	440919.7	1842727.1
MW-106	441863.0	1842637.5
MW-107	442422.9	1842940.8
MW-109	442812.0	1844177.5
MW-112	443035.6	1844854.6
MW-121	443305.3	1843323.0
MW-123	444211.6	1843051.3
MW-125	444898.2	1844554.4
MW-127	443894.6	1845758.0
MW-128	443204.3	1845917.7
MW-129	442400.5	1845552.0
MW-130	441564.6	1844830.9
MW-131	441403.0	1844341.7
MW-132	440977.7	1843547.3
MW-133	441238.8	1842884.0
MW-134	442444.4	1843413.2
MW-135	443815.5	1843246.6
MW-136	444597.3	1843509.3
MW-137	444895.8	1844006.8
MW-138	444372.8	1844334.4
MW-139	443833.8	1844200.7

Coordinates are in NAD 1983 State Plane West Virginia North (feet)

Legend

Post-CCR Rule Monitoring Well
- Connellsville Sandstone
- Clarksburg Formation

Pre-CCR Rule Monitoring Well
- Connellsville Sandstone
- Clarksburg Formation

Pre-CCR Rule Monitoring Well (Groundwater Level)
- Connellsville Sandstone
- Approximate Waste Boundary
- MW-#* Monitoring Well Not Used For GW Contouring
- Approximate Parcel Boundary
- Groundwater Elevation Contour (20-foot) (Dashed where inferred) (feet above mean sea level)
- (1103.79) Groundwater Elevation January 2022 (feet above mean sea level)
- Connellsville Sandstone Outcrop
- Topographic Contour (10-foot) (feet above mean sea level)

TETRA TECH

CCR RULE GROUNDWATER MONITORING SYSTEM
INTERPRETED GROUNDWATER FLOW JANUARY 2022
FORT MARTIN POWER STATION
CCB LANDFILL

FIRSTENERGY CORPORATION
GREENSBURG, PENNSYLVANIA

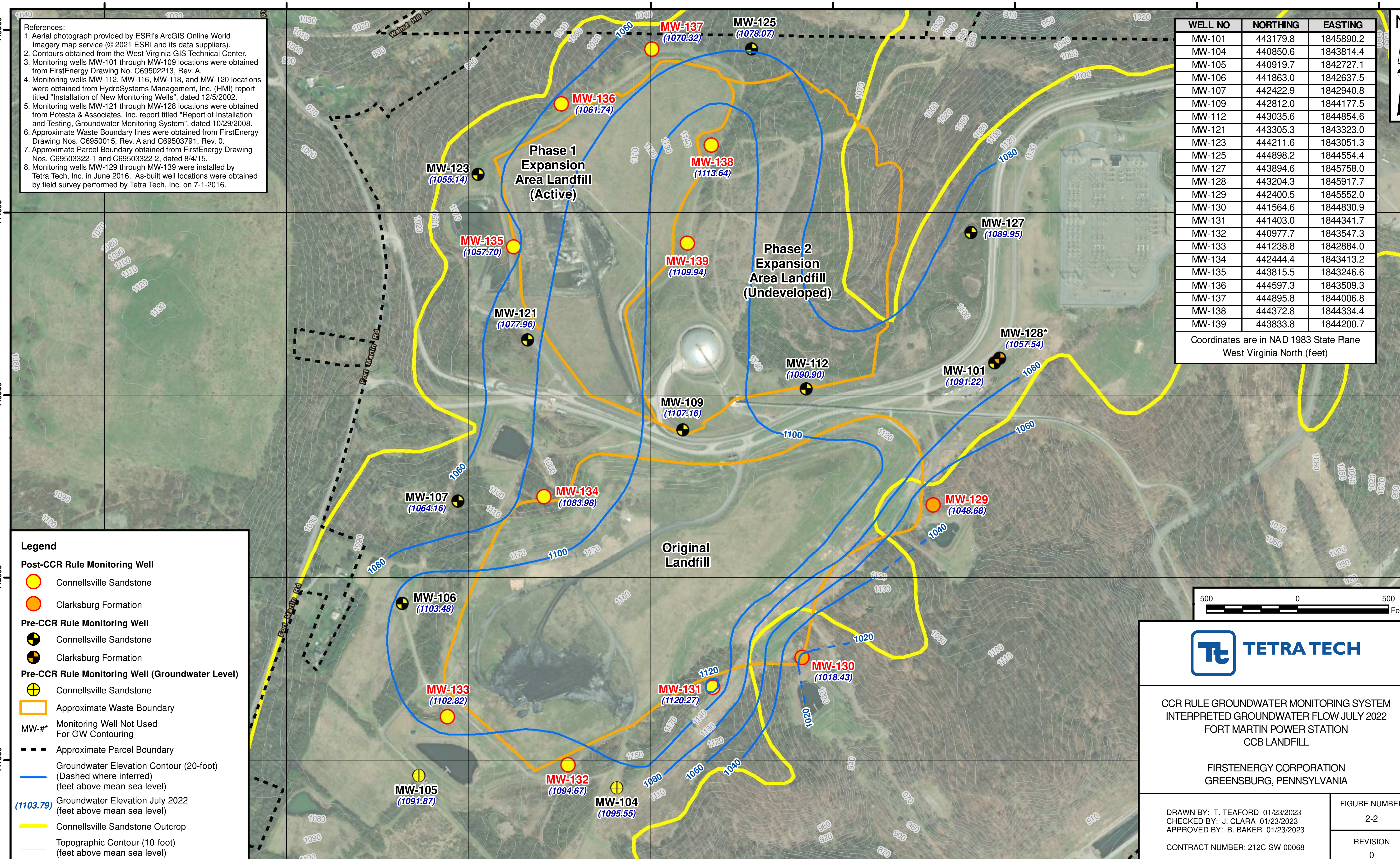
DRAWN BY: T. TEAFORD 01/23/2023
CHECKED BY: J. CLARA 01/23/2023
APPROVED BY: B. BAKER 01/23/2023

CONTRACT NUMBER: 212C-SW-00068

FIGURE NUMBER 2-1

REVISION 0

PGH P:\GIS\FIRST_ENERGY\MAPDOCS\FORT_MARTIN\FORTMARTIN_CCR_GWMONITORING_2022_07JULY_20230111.MXD 1/23/2023 TIM.TEAFORD



References:
1. Aerial photograph provided by ESRI's ArcGIS Online World Imagery map service (© 2021 ESRI and its data suppliers).
2. Contours obtained from the West Virginia GIS Technical Center.
3. Monitoring wells MW-101 through MW-109 locations were obtained from FirstEnergy Drawing No. C69502213, Rev. A.
4. Monitoring wells MW-112, MW-116, MW-118, and MW-120 locations were obtained from HydroSystems Management, Inc. (HMI) report titled "Installation of New Monitoring Wells", dated 12/5/2002.
5. Monitoring wells MW-121 through MW-128 locations were obtained from Potesta & Associates, Inc. report titled "Report of Installation and Testing, Groundwater Monitoring System", dated 10/29/2008.
6. Approximate Waste Boundary lines were obtained from FirstEnergy Drawing Nos. C6950015, Rev. A and C69503791, Rev. 0.
7. Approximate Parcel Boundary obtained from FirstEnergy Drawing Nos. C69503322-1 and C69503322-2, dated 8/4/15.
8. Monitoring wells MW-129 through MW-139 were installed by Tetra Tech, Inc. in June 2016. As-built well locations were obtained by field survey performed by Tetra Tech, Inc. on 7-1-2016.

WELL NO	NORTHING	EASTING
MW-101	443179.8	1845890.2
MW-104	440850.6	1843814.4
MW-105	440919.7	1842727.1
MW-106	441863.0	1842637.5
MW-107	442422.9	1842940.8
MW-109	442812.0	1844177.5
MW-112	443035.6	1844854.6
MW-121	443305.3	1843323.0
MW-123	444211.6	1843051.3
MW-125	444898.2	1844554.4
MW-127	443894.6	1845758.0
MW-128	443204.3	1845917.7
MW-129	442400.5	1845552.0
MW-130	441564.6	1844830.9
MW-131	441403.0	1844341.7
MW-132	440977.7	1843547.3
MW-133	441238.8	1842884.0
MW-134	442444.4	1843413.2
MW-135	443815.5	1843246.6
MW-136	444597.3	1843509.3
MW-137	444895.8	1844006.8
MW-138	444372.8	1844334.4
MW-139	443833.8	1844200.7

Coordinates are in NAD 1983 State Plane West Virginia North (feet)

Legend

Post-CCR Rule Monitoring Well
- Connellsville Sandstone
- Clarksburg Formation

Pre-CCR Rule Monitoring Well
- Connellsville Sandstone
- Clarksburg Formation

Pre-CCR Rule Monitoring Well (Groundwater Level)
- Connellsville Sandstone
- Approximate Waste Boundary
- MW-#* Monitoring Well Not Used For GW Contouring
- Approximate Parcel Boundary
- Groundwater Elevation Contour (20-foot) (Dashed where inferred) (feet above mean sea level)
- (1103.79) Groundwater Elevation July 2022 (feet above mean sea level)
- Connellsville Sandstone Outcrop
- Topographic Contour (10-foot) (feet above mean sea level)

TETRA TECH

CCR RULE GROUNDWATER MONITORING SYSTEM
INTERPRETED GROUNDWATER FLOW JULY 2022
FORT MARTIN POWER STATION
CCB LANDFILL

FIRSTENERGY CORPORATION
GREENSBURG, PENNSYLVANIA

DRAWN BY: T. TEAFORD 01/23/2023
CHECKED BY: J. CLARA 01/23/2023
APPROVED BY: B. BAKER 01/23/2023

CONTRACT NUMBER: 212C-SW-00068

FIGURE NUMBER
2-2

REVISION
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