# CCR COMPLIANCE
# GROUNDWATER MONITORING AND CORRECTIVE ACTION
# ANNUAL REPORT
# ASH LANDFILL

Prepared for:

New Castle Power, LLC
New Castle Generating Station
West Pittsburg, Pennsylvania

Prepared by:


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December 2023

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## *Executive Summary*

In response to the newly adopted Part A elements (effective September 28, 2020) of the Coal Combustion Residuals (CCR) Rule (or Rule), this Executive Summary has been incorporated into the annual report per the specific provisions as codified in 40 CFR §257.90(e)(6). These provisions require that an up-front overview of the current status (covering the immediately preceding calendar year) of groundwater monitoring and corrective action programs be provided in a concise and focused manner for each CCR unit at the facility. Accordingly, the following paragraphs document the respective groundwater monitoring status (for Calendar Year 2023) of the Plant Ash Landfill at the New Castle Generating Station, operated by New Castle Power, LLC. Tables and/or figures referenced in the discussions below are included at the end of the report and further support the text (Section 2.0) in the main body of the report.

As shown in Figure 1, the Plant Ash Landfill is a captive landfill located in the northern portion of the New Castle Station proper, and includes a CCR groundwater monitoring network consisting of six wells, including two upgradient locations (Wells MP-11 and P-6) and four downgradient locations (Wells MP-10R, MP-12, MP-15, and MP-18). For Calendar Year 2023, the Plant Ash Landfill entered and ended the period in the Detection Monitoring Program, wherein it has remained since CCR groundwater monitoring activities were initiated. To support this continuation, an Alternate Source Demonstration (ASD) was completed in April 2018, which successfully showed that statistically significant increases (SSIs) in CCR Appendix III constituents, including boron, calcium, sulfate, and total dissolved solids (TDS) (see Table 1) were associated with a historical ash impoundment and other closed stages of the landfill underlying the landfill's active footprint associated with Stage 4.

The findings and conclusions from the April 2018 ASD remain relevant and applicable to the current groundwater monitoring observations, which continue to show several Appendix III constituents at values above background in the downgradient wells, including Wells MP-10R and MP-15 (boron, calcium, sulfate, and TDS), Well MP-12 (boron, calcium, fluoride, sulfate, and TDS), and Well MP-18 (boron and fluoride) (See Table 1). No groundwater activities to date have triggered the Plant Ash Landfill into the Assessment Monitoring Program, and correspondingly, there has never been basis for performance of an Assessment of Corrective Measures. Moreover, subsequent and existing documentation has confirmed the absence of flow in the landfill's leachate detection zone.

As documented in the 2019 annual groundwater report, the previously designated CCR unit identified as the North Ash Pond was subjected to a clean closure by removal per §257.102(c), and further groundwater monitoring under the CCR Program was successfully terminated.

# 1.0 Introduction

Title 40 Code of Federal Regulations (CFR) §257.90 mandates that existing Coal Combustion Residuals (CCR) landfills and surface impoundments, also known as CCR units, be subject to groundwater monitoring and corrective action requirements as further detailed in §257.91 through §257.98. These requirements are part of the overall CCR Rule (or Rule) which was published in the Federal Register on April 17, 2015 and which became effective on October 19, 2015. Specific obligations for Owners and Operators of existing CCR units regarding the preparation of "Annual Groundwater Monitoring and Corrective Action Reports (Annual Report)" are outlined in §257.90(e)(1-5). The first of these Annual Reports was completed no later than January 31, 2018, and provided information to address the following aspects for the preceding calendar year:

- Document the status of the groundwater monitoring and corrective action program for the respective CCR units;
- Summarize key actions completed;
- Describe any problems encountered and actions taken to resolve the problems; and
- Offer a projection of key activities for the upcoming year.

At a minimum, the Annual Report must contain the following information to the extent applicable and available, and beginning with the current report, must also address the items contained in §257.90(e)(6) in the form of an Executive Summary:

- A map, aerial image, or diagram showing the CCR unit and all background/upgradient and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program;
- 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;
- 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/upgradient and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;
- 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); and
- Any other information required to be included as specified in §257.90 through §257.98.

The New Castle Generating Station, owned by New Castle Power, LLC, is located in West Pittsburg, Pennsylvania. The Rule applies to this facility due to the management/disposal of CCR materials that were generated from the previous combustion of coal. Following successful closure of the North Ash Pond in 2019, only the Plant Ash Landfill remains as the single designated on-site CCR unit. With the transition from coal to natural gas firing in mid-2016, the disposal/placement of CCR materials in the landfill has nearly been completely curtailed. The Plant Ash Landfill has a dedicated groundwater monitoring system that was originally installed to comply with Commonwealth of Pennsylvania Residual Waste Regulations, and was subsequently evaluated and modified (as needed) for use under the CCR Program.

In summary, this seventh Annual Report has been prepared to comply with the requirements of §257.90(e), addressing the New Castle Station's remaining CCR Unit with respect to the groundwater monitoring and corrective actions undertaken during Calendar Year 2023. This Annual Report and all subsequent reports thereto will be placed in the Station's operating record per §257.105(h)(1), noticed to the State Director per §257.106(h)(1), and posted to the publicly accessible internet site per §257.107(h)(1).

# 2.0 Plant Ash Landfill

## 2.1 Groundwater Monitoring Network

The CCR groundwater monitoring system for the Plant Ash Landfill is comprised of six wells, including Wells MP-11 and P-6 (upgradient), and Wells MP-10R, MP-12, MP-15, and MP-18 (downgradient). All of the wells are screened within the unconsolidated materials, wherein the uppermost aquifer exists. The locations of the wells are shown on Figure 1 along with a depiction of the generalized groundwater flow direction. Each of these wells was already existing, and no new wells were added nor were any existing wells abandoned/replaced during the 2023 reporting period.

## 2.2 2023 Data Collection

Based on the April 2018 Alternate Source Demonstration (ASD), which successfully identified the underlying historic ash impoundment and other closed stages of the landfill as the source of statistically significant increases (SSIs) for multiple Appendix III constituents (boron, calcium, sulfate, and total dissolved solids [TDS]), the Plant Ash Landfill continued in the CCR Detection Monitoring Program during the 2023 reporting period. Accordingly, samples were collected and analyzed for Appendix III constituents during each of the semi-annual monitoring events conducted in May and November 2023 per the requirements of §257.94(b). From review of Table 1, both of the 2023 Detection Monitoring events showed SSIs for the same general group of Appendix III constituents (boron, calcium, fluoride, sulfate, and TDS) as those addressed in the still relevant and applicable 2018 ASD. These observations, combined with the lack of flow in the leachate detection zone, will serve to keep the Plant Ash Landfill in the CCR Detection Monitoring Program moving into 2024.

## 2.3 2023 Monitoring Program Transitions

During 2023, there were no transitions between monitoring programs. As a result of the successful ASD (April 2018) and its continued relevance and applicability, the Plant Ash Landfill remained in the Detection Monitoring Program.

## 2.4 2023 Corrective Actions

During 2023, there were no problems identified or corrective actions undertaken.

## 2.5 2024 Projected Activities

As noted, it is anticipated that Detection Monitoring activities will continue for the Plant Ash Landfill during 2024, with continued review of Appendix III constituent concentrations and comparison against the calculated background values.

## *Table*

**Table 1**
**New Castle Generating Station**
**Plant Ash Landfill – Groundwater Analytical Data**
**CCR Appendix III Constituents**

| Monitoring Well | Date Sampled | Groundwater Elevation (ft. MSL) | Total Boron (mg/L) | Total Calcium (mg/L) | Total Chloride (mg/L) | Total Fluoride (mg/L) | Total Dissolved Solids (mg/L) | Sulfate (mg/L) | pH (S.U.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Calculated Background | | | | | | |
| | | | 0.30 | 217 | 50 | 0.1 | 980 | 454 | 6.04-7.96 |
| MP-11 (Upgradient) | 30-Dec-15 | 776.93 | 0.05 | 146 | 36 | < 0.1 | 922 | 425 | 7.47 |
| | 1-Mar-16 | 778.21 | 0.09 | 173 | 31 | < 0.1 | 842 | 410 | 7.39 |
| | 1-Jun-16 | 777.77 | 0.15 | 178 | 27 | < 0.1 | 890 | 385 | 7.29 |
| | 7-Sep-16 | 776.00 | 0.07 | 169 | 33 | 0.1 | 980 | 380 | 7.33 |
| | 30-Nov-16 | 776.24 | 0.08 | 167 | 33 | 0.1 | 872 | 390 | 7.43 |
| | 1-Mar-17 | 778.54 | 0.34 | 187 | 26 | < 0.1 | 880 | 371 | 7.35 |
| | 31-May-17 | 778.75 | 0.09 | 192 | 25 | 0.1 | 838 | 381 | 7.03 |
| | 29-Aug-17 | 776.66 | 0.08 | 178 | 48 | 0.1 | 916 | 408 | 7.11 |
| | 10-Oct-17 | 776.06 | 0.07 | 178 | 39 | < 0.1 | 916 | 392 | 6.90 |
| | 23-May-18 | 779.13 | 0.08 | 187 | 27 | 0.1 | 806 | 365 | 7.07 |
| | 28-Nov-18 | 780.14 | 0.09 | 172 | 29 | < 0.1 | 900 | 389 | 6.77 |
| | 22-May-19 | 778.35 | 0.08 | 179 | 24 | 0.2 | 794 | 400 | 7.18 |
| | 27-Aug-19 | 778.16 | 0.08 | 171 | 23 | 0.2 | 806 | 395 | 7.29 |
| | 10-Jun-20 | 778.42 | 0.09 | 161 | 21 | < 0.1 | 782 | 372 | 7.40 |
| | 1-Dec-20 | 776.95 | 0.08 | 147 | 27 | 0.2 | 788 | 370 | 7.53 |
| | 2-Mar-21 | 777.53 | 0.07 | 165 | 26 | 0.2 | 810 | 375 | 7.31 |
| | 30-Nov-21 | 776.31 | 0.08 | 155 | 28 | 0.2 | 790 | 384 | 6.79 |
| | 1-Jun-22 | 779.25 | 0.08 | 161 | 26 | < 0.1 | 772 | 332 | 6.96 |
| | 29-Nov-22 | 776.82 | 0.07 | 148 | 36 | 0.1 | 778 | 348 | 6.95 |
| | 30-May-23 | 777.39 | 0.08 | 163 | 27 | < 0.1 | 784 | 338 | 7.30 |
| | 29-Nov-23 | 775.88 | 0.07 | 151 | 32 | 0.2 | 792 | 327 | 7.20 |
| P-6 (Upgradient) | 30-Dec-15 | 777.39 | 0.11 | 126 | 19 | < 0.1 | 622 | 297 | 6.69 |
| | 1-Mar-16 | 777.65 | 0.13 | 146 | 26 | < 0.1 | 602 | 322 | 6.65 |
| | 1-Jun-16 | 777.93 | 0.11 | 129 | 19 | < 0.1 | 618 | 302 | 6.63 |
| | 7-Sep-16 | 776.38 | 0.12 | 136 | 21 | < 0.1 | 620 | 306 | 6.58 |
| | 30-Nov-16 | 776.97 | 0.12 | 141 | 19 | < 0.1 | 614 | 297 | 6.56 |
| | 1-Mar-17 | 778.64 | 0.12 | 135 | 20 | < 0.1 | 614 | 305 | 6.60 |
| | 31-May-17 | 778.64 | 0.11 | 146 | 22 | < 0.1 | 606 | 316 | 6.42 |
| | 29-Aug-17 | 777.17 | 0.12 | 138 | 22 | < 0.1 | 644 | 327 | 6.52 |
| | 10-Oct-17 | 776.67 | 0.12 | 139 | 21 | < 0.1 | 620 | 320 | 6.62 |
| | 23-May-18 | 779.25 | 0.12 | 154 | 20 | < 0.1 | 614 | 301 | 6.46 |
| | 28-Nov-18 | 779.95 | 0.12 | 142 | 24 | < 0.1 | 656 | 342 | 6.32 |
| | 22-May-19 | 779.44 | 0.12 | 147 | 25 | < 0.1 | 606 | 353 | 6.80 |
| | 27-Aug-19 | 778.99 | 0.11 | 139 | 25 | 0.1 | 602 | 356 | 6.82 |
| | 10-Jun-20 | 779.05 | 0.13 | 136 | 23 | < 0.1 | 590 | 345 | 6.75 |
| | 1-Dec-20 | 778.60 | 0.11 | 127 | 23 | < 0.1 | 610 | 330 | 6.85 |
| | 2-Mar-21 | 779.16 | 0.11 | 133 | 22 | < 0.1 | 594 | 324 | 6.65 |
| | 30-Nov-21 | 778.15 | 0.12 | 131 | 22 | < 0.1 | 598 | 336 | 6.71 |
| | 1-Jun-22 | 780.72 | 0.11 | 127 | 19 | < 0.1 | 580 | 307 | 6.42 |
| | 29-Nov-22 | 778.06 | 0.11 | 125 | 20 | < 0.1 | 598 | 324 | 6.52 |
| | 30-May-23 | 778.76 | 0.12 | 134 | 21 | < 0.1 | 540 | 302 | 6.55 |
| | 29-Nov-23 | 777.70 | 0.13 | 134 | 20 | < 0.1 | 566 | 289 | 6.72 |
| MP-10R (Downgradient) | 30-Dec-15 | 768.89 | 9.62 | 294 | 24 | < 0.1 | 1650 | 853 | 6.02 |
| | 1-Mar-16 | 769.63 | 9.55 | 330 | 26 | < 0.1 | 1510 | 784 | 6.14 |
| | 1-Jun-16 | 768.79 | 7.95 | 226 | 20 | < 0.1 | 1250 | 609 | 5.90 |
| | 7-Sep-16 | 764.97 | 10.9 | 352 | 31 | < 0.1 | 1730 | 817 | 6.05 |
| | 30-Nov-16 | 766.49 | 12.7 | 330 | 34 | < 0.1 | 1670 | 824 | 6.10 |
| | 1-Mar-17 | 769.79 | 12.1 | 285 | 37 | < 0.1 | 1450 | 797 | 6.17 |
| | 31-May-17 | 770.70 | 5.47 | 212 | 23 | < 0.1 | 1010 | 474 | 6.01 |
| | 29-Aug-17 | 766.48 | 10.1 | 254 | 27 | < 0.1 | 1300 | 625 | 6.06 |
| | 10-Oct-17 | 765.37 | 12.5 | 296 | 31 | < 0.1 | 1550 | 742 | 6.10 |
| | 23-May-18 | 771.74 | 3.06 | 156 | 8 | < 0.1 | 592 | 212 | 6.00 |
| | 28-Nov-18 | 772.33 | 4.85 | 212 | 17 | < 0.1 | 906 | 415 | 6.01 |
| | 22-May-19 | 770.86 | 1.60 | 118 | 4 | < 0.1 | 410 | 134 | 6.43 |
| | 27-Aug-19 | 769.17 | 1.56 | 118 | 2 | < 0.1 | 462 | 191 | 6.52 |
| | 9-Jun-20 | 769.91 | 1.49 | 112 | 3 | < 0.1 | 484 | 197 | 6.44 |
| | 1-Dec-20 | 769.44 | 3.60 | 278 | 20 | < 0.1 | 1330 | 839 | 6.34 |
| | 2-Mar-21 | 769.75 | 2.52 | 246 | 16 | < 0.1 | 1110 | 607 | 6.32 |
| | 30-Nov-21 | 767.81 | 10.60 | 289 | 35 | < 0.1 | 1470 | 858 | 6.45 |
| | 1-Jun-22 | 769.90 | 1.79 | 123 | 7 | < 0.1 | 510 | 194 | 6.37 |
| | 29-Nov-22 | 768.24 | 9.90 | 266 | 26 | < 0.1 | 1350 | 619 | 6.29 |
| | 30-May-23 | 769.49 | 3.09 | 158 | 9 | < 0.1 | 738 | 317 | 6.38 |
| | 29-Nov-23 | 766.78 | 9.51 | 270 | 29 | < 0.1 | 1230 | 695 | 6.23 |

**Table 1**
**New Castle Generating Station**
**Plant Ash Landfill – Groundwater Analytical Data**
**CCR Appendix III Constituents**

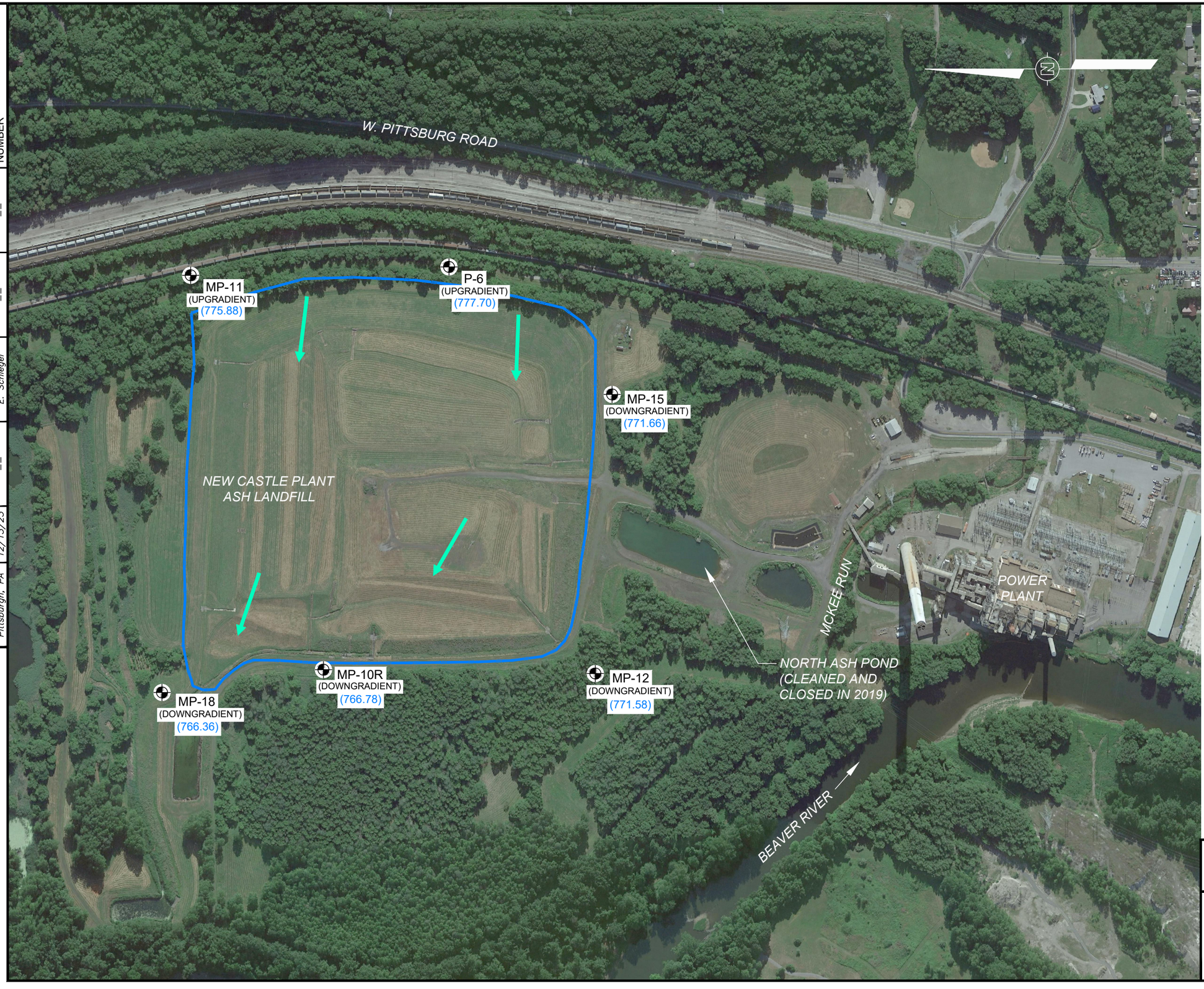
| Monitoring Well | Date Sampled | Groundwater Elevation (ft. MSL) | Total Boron (mg/L) | Total Calcium (mg/L) | Total Chloride (mg/L) | Total Fluoride (mg/L) | Total Dissolved Solids (mg/L) | Sulfate (mg/L) | pH (S.U.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Calculated Background | | | | | | |
| | | | 0.30 | 217 | 50 | 0.1 | 980 | 454 | 6.04-7.96 |
| MP-12 (Downgradient) | 30-Dec-15 | 772.05 | 4.96 | 573 | 14 | < 0.5 | 4320 | 2560 | 6.61 |
| | 1-Mar-16 | 772.56 | 4.38 | 594 | 11 | < 1.0 | 3640 | 1970 | 6.55 |
| | 1-Jun-16 | 772.38 | 3.63 | 482 | 11 | < 1.0 | 3780 | 2140 | 6.54 |
| | 7-Sep-16 | 769.74 | 5.35 | 600 | 14 | < 1 | 4420 | 2490 | 6.50 |
| | 30-Nov-16 | 770.29 | 4.32 | 600 | 12 | < 0.5 | 4030 | 1950 | 6.53 |
| | 1-Mar-17 | 772.65 | 4.19 | 582 | 16 | 0.2 | 4040 | 2380 | 6.60 |
| | 31-May-17 | 773.85 | 2.59 | 569 | 14 | < 0.2 | 3300 | 1780 | 6.18 |
| | 29-Aug-17 | 771.16 | 3.94 | 589 | 18 | < 0.5 | 4600 | 2760 | 6.31 |
| | 10-Oct-17 | 770.36 | 4.43 | 585 | 14 | < 0.1 | 4490 | 1920 | 6.38 |
| | 23-May-18 | 775.03 | 0.63 | 58 | 2 | 0.2 | 258 | 115 | 5.62 |
| | 28-Nov-18 | 775.26 | 1.26 | 175 | 5 | 0.2 | 1160 | 666 | 6.20 |
| | 22-May-19 | 773.88 | 0.76 | 96 | 2 | 0.2 | 554 | 328 | 5.74 |
| | 27-Aug-19 | 773.12 | 1.72 | 248 | 5 | 1.2 | 1520 | 990 | 5.91 |
| | 9-Jun-20 | 773.39 | 1.69 | 244 | < 10 | < 1.0 | 1080 | 979 | 5.84 |
| | 1-Dec-20 | 773.01 | 2.21 | 282 | < 10 | < 1 | 2070 | 1340 | 6.67 |
| | 2-Mar-21 | 773.56 | 2.56 | 327 | 8 | 0.4 | 2380 | 1380 | 6.53 |
| | 30-Nov-21 | 772.15 | 3.12 | 397 | 10 | < 0.1 | 3140 | 2090 | 6.39 |
| | 1-Jun-22 | 773.49 | 2.12 | 286 | 7 | 0.3 | 1660 | 921 | 6.38 |
| | 29-Nov-22 | 772.72 | 2.28 | 379 | 9 | 0.3 | 2530 | 1340 | 6.44 |
| | 30-May-23 | 772.53 | 2.22 | 342 | 8 | 0.2 | 2160 | 1260 | 6.47 |
| | 29-Nov-23 | 771.58 | 3.08 | 445 | 10 | 0.3 | 2970 | 1540 | 6.56 |
| MP-15 (Downgradient) | 30-Dec-15 | 773.86 | 1.13 | 638 | 7 | < 0.1 | 2340 | 1150 | 6.68 |
| | 2-Mar-16 | 775.04 | 1.25 | 761 | 6 | < 0.1 | 2310 | 1230 | 6.73 |
| | 2-Jun-16 | 773.54 | 1.22 | 645 | 6 | < 0.1 | 2390 | 1180 | 6.62 |
| | 7-Sep-16 | 770.57 | 1.13 | 643 | 5 | < 0.1 | 2320 | 1120 | 6.53 |
| | 30-Nov-16 | 772.62 | 1.06 | 585 | 6 | < 0.1 | 2190 | 1060 | 6.61 |
| | 1-Mar-17 | 775.78 | 1.20 | 670 | 7 | < 0.1 | 2290 | 1210 | 6.48 |
| | 31-May-17 | 775.86 | 1.30 | 669 | 8 | < 0.2 | 2420 | 1120 | 6.49 |
| | 29-Aug-17 | 771.62 | 1.12 | 627 | 6 | < 0.2 | 2280 | 1130 | 6.41 |
| | 9-Oct-17 | 771.11 | 1.09 | 620 | 5 | < 0.1 | 2310 | 990 | 6.54 |
| | 23-May-18 | 777.07 | 1.10 | 699 | 4 | < 0.1 | 2330 | 1060 | 6.30 |
| | 29-Nov-18 | 776.30 | 1.27 | 715 | 5 | < 0.1 | 2570 | 1260 | 6.39 |
| | 22-May-19 | 779.54 | 1.07 | 681 | 3 | < 0.1 | 2310 | 1300 | 6.81 |
| | 27-Aug-19 | 775.98 | 1.13 | 697 | 8 | 0.2 | 2400 | 1360 | 6.58 |
| | 10-Jun-20 | 776.13 | 1.01 | 669 | 4 | < 0.2 | 2300 | 1310 | 6.74 |
| | 1-Dec-20 | 773.81 | 1.05 | 658 | 5 | 0.2 | 2370 | 1410 | 6.79 |
| | 2-Mar-21 | 774.48 | 1.09 | 649 | 3 | 0.1 | 2370 | 1360 | 6.44 |
| | 30-Nov-21 | 773.71 | 0.94 | 694 | 5 | 0.3 | 2420 | 1420 | 6.72 |
| | 1-Jun-22 | 775.71 | 0.93 | 653 | 3 | < 0.1 | 2340 | 1420 | 6.38 |
| | 29-Nov-22 | 774.21 | 0.93 | 665 | 3 | < 0.1 | 2570 | 1290 | 6.60 |
| | 30-May-23 | 774.80 | 0.94 | 645 | 4 | < 0.1 | 2340 | 1280 | 6.31 |
| | 29-Nov-23 | 771.66 | 1.00 | 675 | 3 | < 0.1 | 2640 | 1490 | 6.57 |
| MP-18 (Downgradient) | 30-Dec-15 | 769.18 | 1.03 | 124 | 10 | 0.2 | 536 | 98 | 6.75 |
| | 1-Mar-16 | 769.56 | 1.03 | 87 | 4 | 0.1 | 336 | 53 | 6.49 |
| | 1-Jun-16 | 768.74 | 0.99 | 137 | 10 | < 0.2 | 580 | 91 | 6.82 |
| | 7-Sep-16 | 765.28 | 1.04 | 149 | 14 | 0.2 | 606 | 115 | 6.74 |
| | 30-Nov-16 | 767.26 | 1.18 | 134 | 15 | 0.2 | 512 | 80 | 6.55 |
| | 1-Mar-17 | 770.51 | 0.99 | 108 | 12 | 0.1 | 442 | 66 | 6.54 |
| | 31-May-17 | 770.28 | 0.80 | 66 | 5 | 0.1 | 252 | 33 | 5.93 |
| | 29-Aug-17 | 767.09 | 1.06 | 144 | 12 | 0.2 | 520 | 59 | 6.74 |
| | 10-Oct-17 | 766.96 | 1.15 | 136 | 9 | 0.1 | 518 | 68 | 6.69 |
| | 23-May-18 | 770.94 | 0.58 | 49 | 2 | < 0.1 | 192 | 18 | 5.88 |
| | 28-Nov-18 | 771.42 | 0.85 | 71 | 3 | 0.1 | 294 | 37 | 5.99 |
| | 22-May-19 | 770.36 | 1.02 | 126 | 7 | 0.3 | 422 | 24 | 6.65 |
| | 27-Aug-19 | 769.05 | 1.11 | 132 | 6 | 0.4 | 472 | 43 | 6.98 |
| | 9-Jun-20 | 769.11 | 1.03 | 130 | 6 | 0.3 | 512 | 93 | 6.84 |
| | 1-Dec-20 | 768.57 | 0.83 | 86 | 4 | 0.3 | 382 | 58 | 6.63 |
| | 2-Mar-21 | 769.65 | 1.04 | 106 | 7 | 0.2 | 388 | 82 | 6.45 |
| | 30-Nov-21 | 767.81 | 1.13 | 120 | 7 | 0.3 | 462 | 66 | 6.76 |
| | 1-Jun-22 | 769.02 | 0.91 | 100 | 6 | 0.2 | 376 | 43 | 6.39 |
| | 29-Nov-22 | 768.27 | 0.98 | 113 | 5 | 0.2 | 444 | 90 | 6.64 |
| | 30-May-23 | 767.77 | 1.18 | 140 | 9 | 0.2 | 532 | 83 | 6.47 |
| | 29-Nov-23 | 766.36 | 1.17 | 143 | 7 | 0.3 | 530 | 56 | 6.70 |

Notes:

1. Cells with "<" are represented as non-detects. Values shown correspond to the laboratory reporting limit.
2. Background values based on statistical evaluation of initial eight rounds (Dec. 2015 thru Aug. 2017) of groundwater sampling data for Wells MP-11 and P-6.

*Figure*

| OFFICE | DATE | DESIGNED BY | DRAWN BY | CHECKED BY | APPROVED BY | DRAWING NUMBER |
|---|---|---|---|---|---|---|
| Pittsburgh, PA | 12/13/23 | -- | E. Schlegel | -- | -- | 631003785-B5 |




LEGEND:

MP-11
(775.88)

CCR GROUNDWATER MONITORING WELL FOR NEW CASTLE PLANT ASH LANDFILL WITH GROUNDWATER ELEVATIONS MEASURED ON NOVEMBER 29, 2023.

GROUNDWATER FLOW DIRECTION

SCALE
0 400 800 FEET

REFERENCES:

1. GOOGLE AERIAL PHOTOGRAPH, DATED 7/9/2022.


APTIM
500 Penn Center Boulevard,
Suite 1000
Pittsburgh, Pennsylvania 15235


# FIGURE 1
## CCR COMPLIANCE GROUNDWATER MONITORING WELL LOCATION MAP PLANT ASH LANDFILL
NEW CASTLE GENERATING STATION
WEST PITTSBURG, PENNSYLVANIA


File: O:\PROJECT\631003785_New Castle\631003785-B5.dwg
Plot Date/Time: Dec 13, 2023 - 4:51pm
Plotted By: Evon.Schlegel
Xref:
Image