Integral Consulting Inc.
110 Marter Ave.
Suite 304
Moorestown, NJ 08057

telephone: 856.399.7700
www.integral-corp.com

# TECHNICAL MEMORANDUM

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|---|---|
| **To:** | Kristine Iazzetta, NJDEP |
| **From:** | Erin Palko, Integral and Scott Drew, Geosyntec |
| **Date:** | October 24, 2023 |
| **Subject:** | Solvay Specialty Polymers USA, LLC<br>10 Leonard Lane, West Deptford, New Jersey 08086<br>Second Quarter 2023 Groundwater Results Tech Memo<br>SRP PI No. 015010: RPC140002 and RPC230001 |

On behalf of Solvay Specialty Polymers USA, LLC (Solvay), Integral Consulting Inc. (Integral) prepared this technical memorandum for groundwater (Tech Memo) in conjunction with Licensed Site Remediation Professional (LSRP) Scott Drew, which presents a summary of groundwater remedial investigation activities completed during the second quarter (Q2) of 2023 for the facility located at 10 Leonard Lane, West Deptford, New Jersey (Site; Figure 1). This Tech Memo discusses investigation into per- and polyfluoroalkyl substances (PFAS), particularly perfluorononanoic acid (PFNA) and perfluorooctanoic acid (PFOA), as well as monofunctional surfactants (MFS [chloro-perfluoro-polyether carboxylic acids {ClPFPECAs}]) and bifunctional surfactants (BFS [perfluoropolyether dicarboxylic acids]). For the purposes of this document, "PFAS" refer to the compounds included in perfluoroalkyl acids (a category that includes but is not limited to PFNA, PFOA, and PFOS) and do not include per- and polyfluoroalkyl ether-based substances (the category which would include ClPFPECAs).

The scope of the groundwater monitoring activities discussed herein have been presented to the New Jersey Department of Environmental Protection (NJDEP) through regular meetings between NJDEP, the LSRP and Solvay and in the following submittals:

- Remedial Investigation Report dated February 8, 2023 (Interim RIR; Integral 2023a)
- Technical Memorandum – Groundwater Sampling dated August 29, 2023 (Tech Memo Q1, Integral 2023b)

This Tech Memo is submitted for this investigation under the NJDEP Contaminated Site Remediation and Redevelopment Program (CSRRP, formerly the Site Remediation Program [SRP]) Program Interest No. 015010 (SRP PI No. 015010). Applicable CSRRP Activity Numbers for this document include RPC140002 – Solvay PFCs (PFAS) and RPC230001 – Spill ID 22-04-08-1354-45 (MFS).

## INVESTIGATION ACTIVITIES

In accordance with the 2023 Interim RIR, groundwater sampling was conducted for PFAS and MFS using low-flow purge techniques. Additionally, of the samples collected for PFAS and MFS analysis, a separate grouping were also analyzed for BFS as outlined in the Interim RIR.

The locations of monitoring wells sampled as part of the second quarter monitoring are included on Figure 1. All samples described herein were analyzed in accordance with the Site-Specific Quality Assurance Project Plan and collected following procedures as described in the Site-Specific Field Sampling Plan.

The results of the analytical sampling are summarized in the sections below.

### PFAS and MFS Sampling Results

Groundwater sampling conducted in June 2023 was limited to a subset of wells within the greater monitoring well network as described in the 2023 Interim RIR.

A total of 69 monitoring wells screened in the Upper Potomac Raritan Magothy (PRM) aquifer were sampled as part of the Q2 sampling event. Four wells originally proposed for this quarter in the 2023 Interim RIR were not sampled during the Q2 event and include the following: MW-19S; MW-24I and MW-24D, and PZ-8S. MW-19S was dry, and the remaining monitoring wells were inaccessible due to heavy brush. A synoptic groundwater gauging event was not completed during Q2. The event was cancelled due to inclement weather. Site specific laboratory quality assurance and quality control samples including matrix spike (MS), matrix spike duplicates (MSD), and four blind duplicate samples were submitted for analysis.

Groundwater results from the second quarter 2023 sampling are presented in tabular format as Tables 1 through 4 and graphically on Figures 2 through 9. A summary of the results is included in the Exhibits below.

Exhibit 1. PFAS Groundwater Results Analysis (Shallow/Intermediate Upper PRM Wells)

| Analyte | Max Detection (µg/L) | Max Sample ID | Min Detection (µg/L) | Min Sample ID | # Non-detects | Exceedances of GWQS |
|---|---|---|---|---|---|---|
| PFNA | 161 | MW-128S | 0.0018 J | MW-126D | 0 | 34 |
| PFOA | 71.1 | MW-128S | 0.0011 J | MW-126D | 0 | 28 |
| PFOS | 0.136 | MW-123S | 0.001 J | MW-104S, MW-117S | 8 | 8 |

Exhibit 2. PFAS Groundwater Results Analysis (Deep Upper PRM Wells)

| Analyte | Max Detection (µg/L) | Max Sample ID | Min Detection (µg/L) | Min Sample ID | # Non-detects | Exceedances of GWQS |
|---|---|---|---|---|---|---|
| PFNA | 114 | M/H-2D | 0.0019 | DUP_061923 | 1 | 30 |
| PFOA | 3.65 | MW-19D | 0.0084 J | DUP_061923 | 1 | 22 |
| PFOS | 0.0377 | MW-111D | 0.0011 J | MW-104D | 8 | 10 |

Exhibit 3. Total MFS Groundwater Results Analysis (all wells)

| Aquifer Zone | Max Detection (µg/L) | Max Sample ID | Min Detection (µg/L) | Min Sample ID | # Non-detects | Exceedances of GWQS |
|---|---|---|---|---|---|---|
| Shallow/ Intermediate Upper PRM | 121 J | MW-128S | 0.00085 J | MW-107S | 7 | 25 |
| Deep Upper PRM | 33.6 J | MW-1D | 0.00066 J | MW-114D | 9 | 25 |

In the tables above, the "J" qualifier shows that the sample result is considered estimated. The laboratory analytical data package and/or data validation report provides additional information as to why the result has been "J" flagged. Sample DUP_061923 referenced in Exhibit 2 was collected from monitoring well location MW-126D.

Total MFS is calculated in this deliverable (exhibits, tables, figures) using a sum of all reported oligomer detections. When an oligomer was not detected by the laboratory, the "U" qualified value was converted to a zero rather than using the reporting limit (RL) or method detection limit (MDL) as agreed to with the NJDEP. Exhibit 3 above only represents detected concentrations; however, Figure 8 and Figure 9 shows a total calculated sum of MFS. When only "U" values were reported, the total MFS is presented as "0 U". This is intended to show that no detections were reported for any oligomers.

Data validation was completed for the MFS and BFS analysis, consistent with prior deliverables and showed the following:

- A total of 720 results were reported. Of those results, 155 results (22 percent) were qualified as estimated or not detected. Three results were rejected: MFS_N4 and MFS_N5 results in parent sample MW-111S and the MFS_N5 result in parent sample MW-103S due to percent recovery values in the MS and/or MSD. Completeness was calculated as 99.6 percent.

- The data meet the criteria set forth in the method and referenced quality assurance documents, with the exceptions noted above. All results, with the exception of three rejected results, are acceptable for their intended use.

Field sampling forms and other applicable sampling documentation are included as Appendix A. The laboratory analytical data packages for this sampling event are included electronically in Appendix B, and the data validation reports are included as Appendix C. Electronic data deliverables for the data described herein have been emailed to srpedd@dep.nj.gov per NJDEP guidelines.

## NEXT STEPS

Q3 groundwater sampling was completed in August and September 2023 and a synoptic gauging event was conducted in September 2023. The following modifications to the proposed plan presented in the Interim RIR were implemented during the Q3 groundwater sampling event:

- Recently installed wells MW-130S/D. MW-131S/D, MW-132S/D, MW-133S/D and MW-134S/D were sampled during Q3. These wells will be added to the quarterly monitoring program for PFAS, MFS and BFS. BFS analysis is proposed for these well clusters due to their proximity to the Solvay facility.

- Wells screened in the middle and lower PRM were included in the Q3 groundwater sampling event. Wells MW-5X, MW-10X, MW-19X, MW-22X, MW-102X, MW-114X, MW-115X, MW-123I and MW-123D will be added to the quarterly monitoring program for PFAS, MFS and BFS.

- Corrective actions completed between the Q2 and Q3 sampling events include brush clearing activities to allow access to remote locations. In addition, well MW-19S is being evaluated to determine if the well can be redeveloped to restore the screen zone or if abandonment and replacement is appropriate.

Results from the August and September 2023 sampling will be provided in a separate quarterly report anticipated to be submitted in December 2023.

## REFERENCES

Integral 2023a. Interim Groundwater Remedial Investigation Report. Prepared for Solvay Specialty Polymers USA, LLC, West Deptford, NJ. Integral Consulting Inc., Moorestown, NJ. February 17.

Integral 2023b. Technical Memorandum for Groundwater (Q1). Prepared for Solvay Specialty Polymers USA, LLC, West Deptford, NJ. Integral Consulting Inc., Moorestown, NJ. August 29.

# Figures

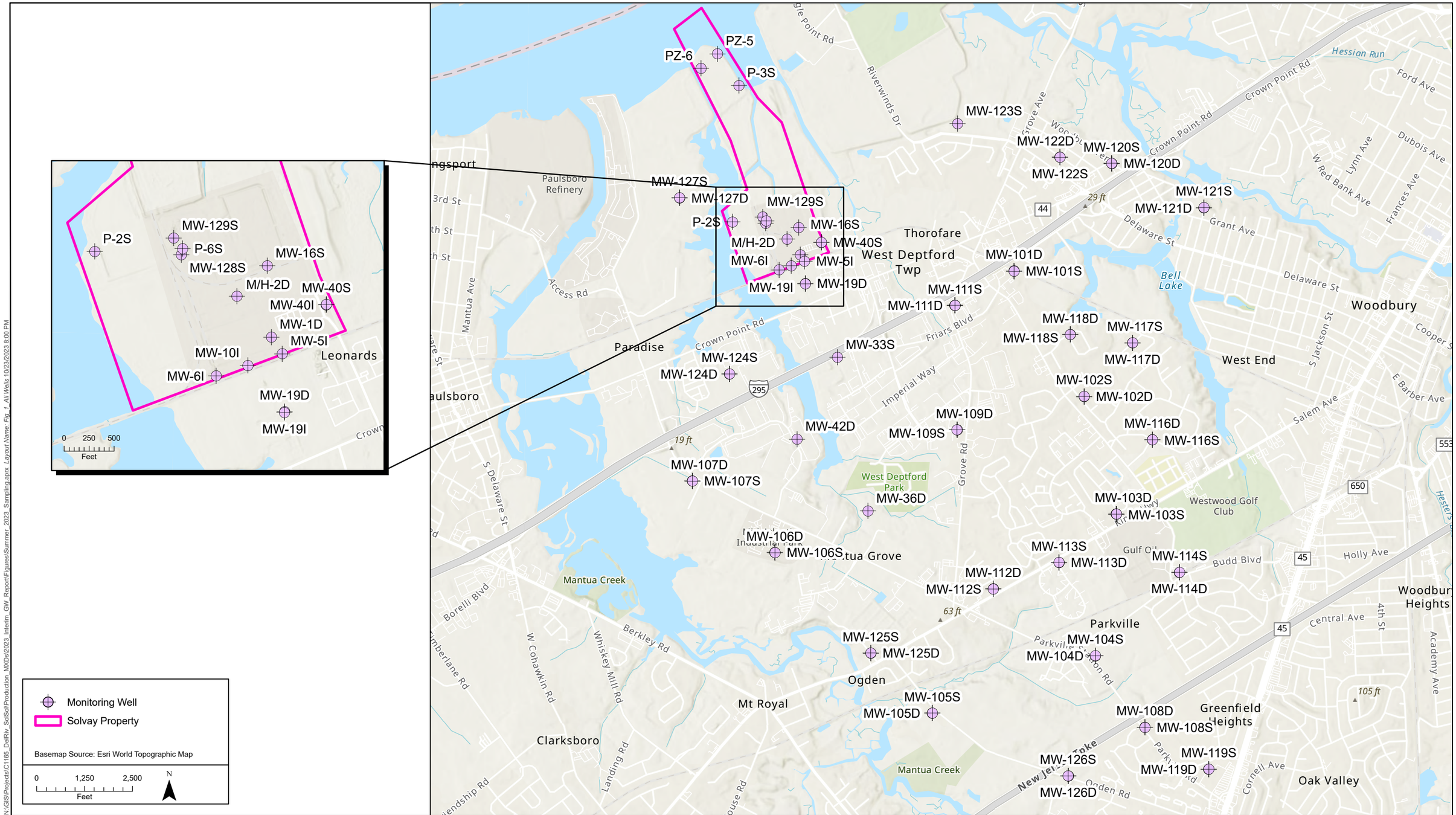


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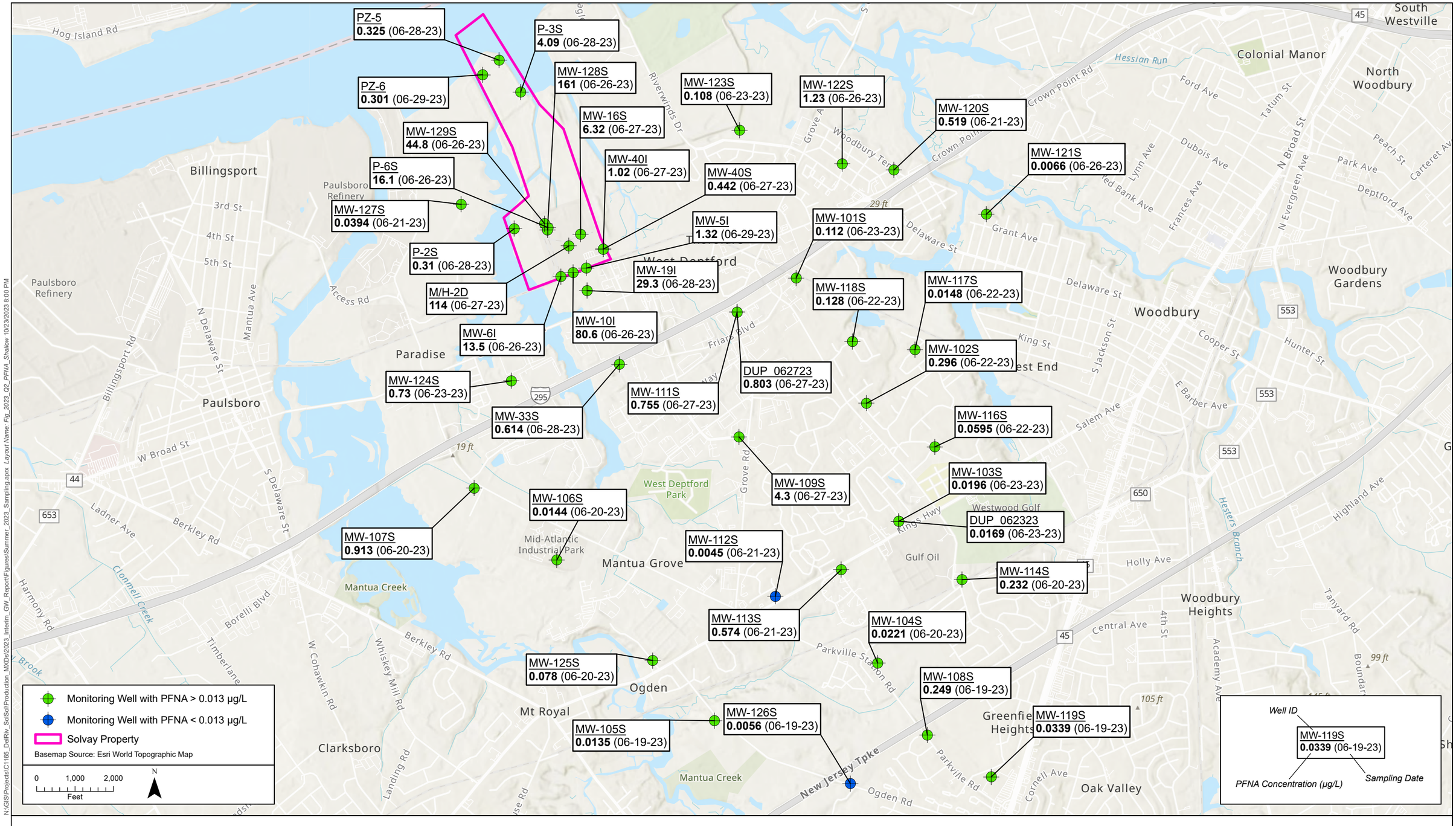
**Figure 1.**
Monitoring Well Location Map (Upper and Middle PRM)
June 2023 Groundwater Sampling




Notes:
1. PFNA concentrations shown in µg/L
3. J = estimated value
2. U = not detected

**Figure 2.**
Shallow and Intermediate Wells (Upper PRM)
PFNA Concentrations in Groundwater (June 2023)

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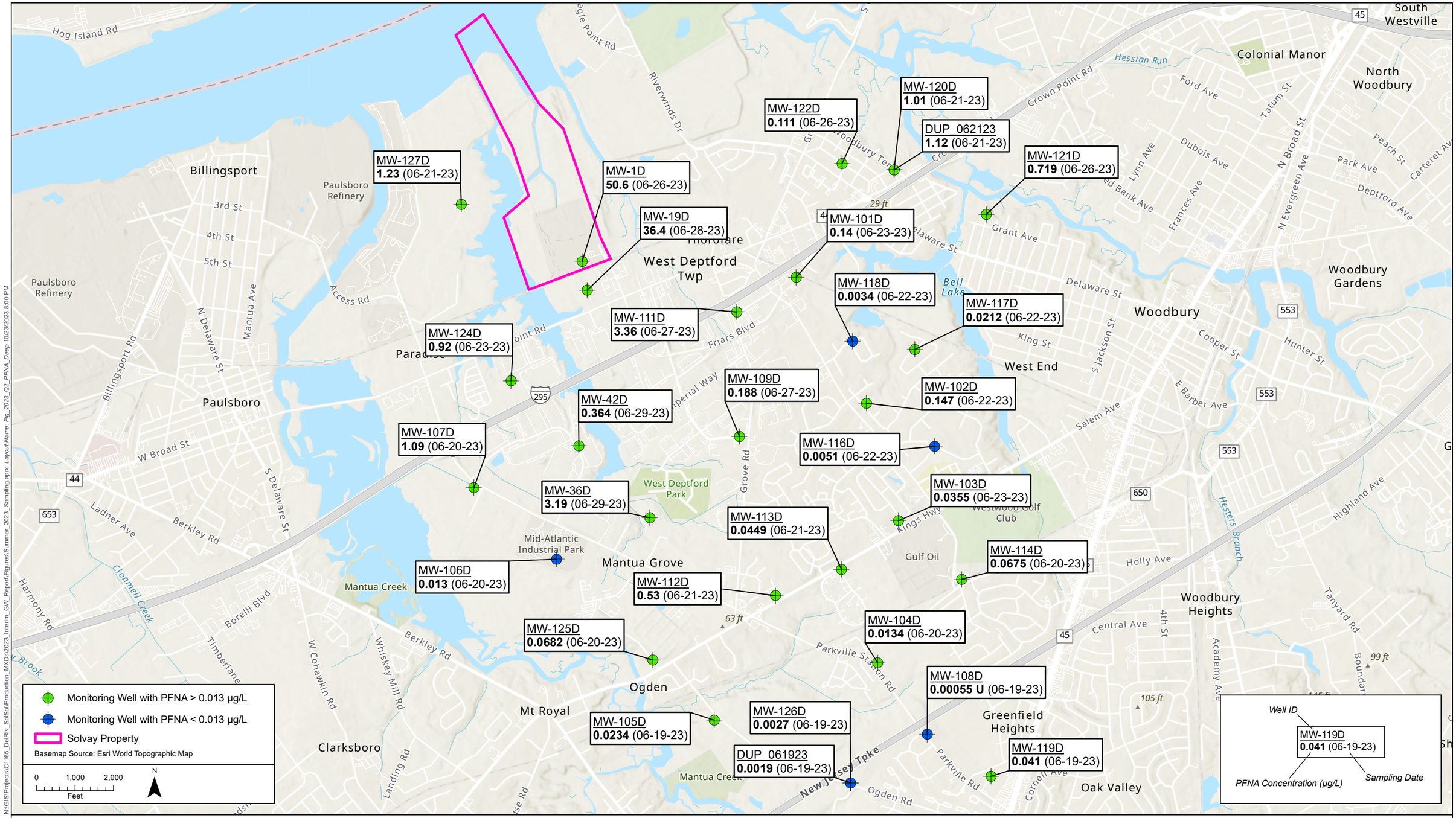


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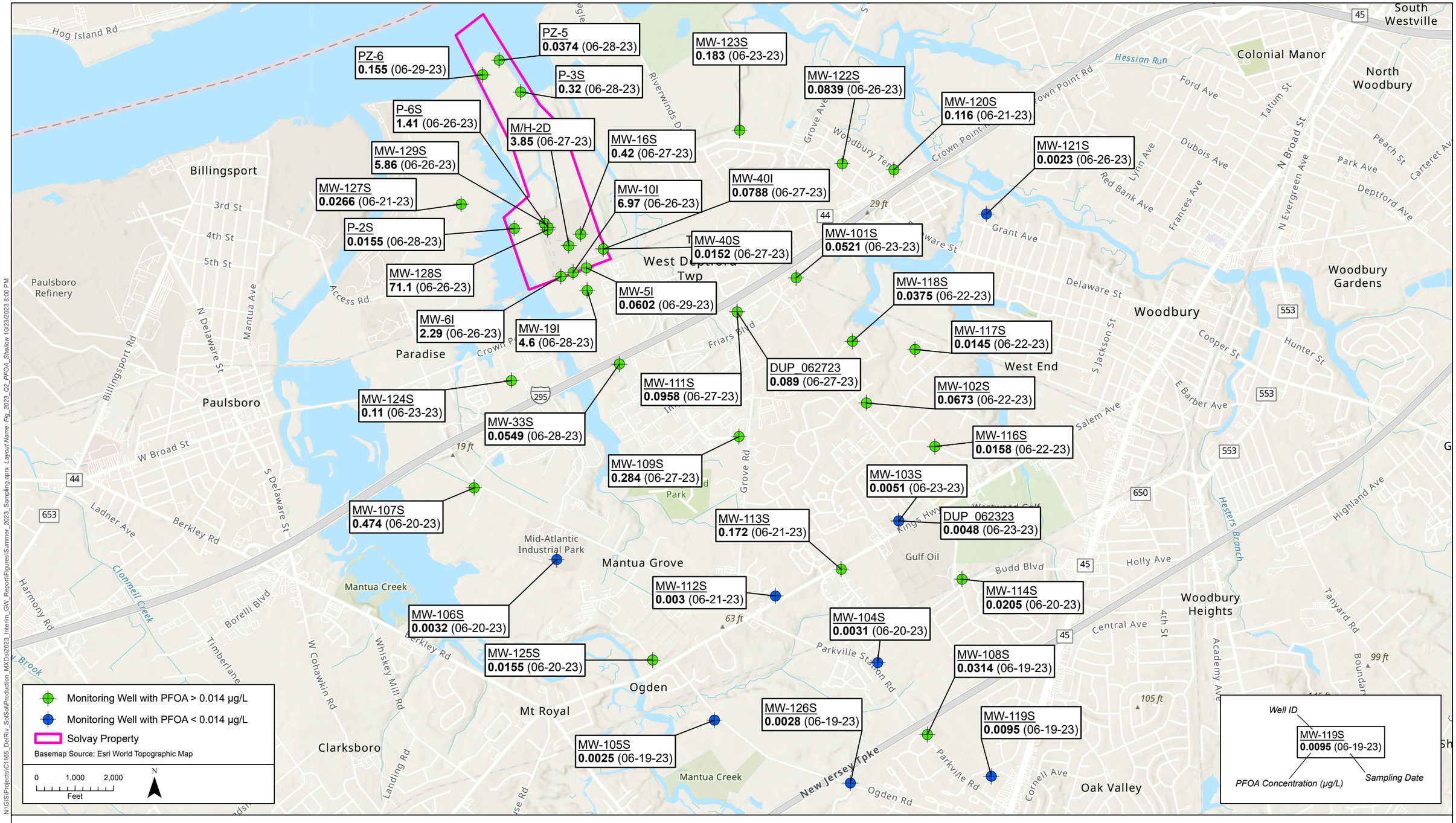
Notes:
1. PFNA concentrations shown in µg/L
3. J = estimated value
2. U = not detected

**Figure 3.**
Deep and Middle Wells (Upper and Middle PRM)
PFNA Concentrations in Groundwater (June 2023)

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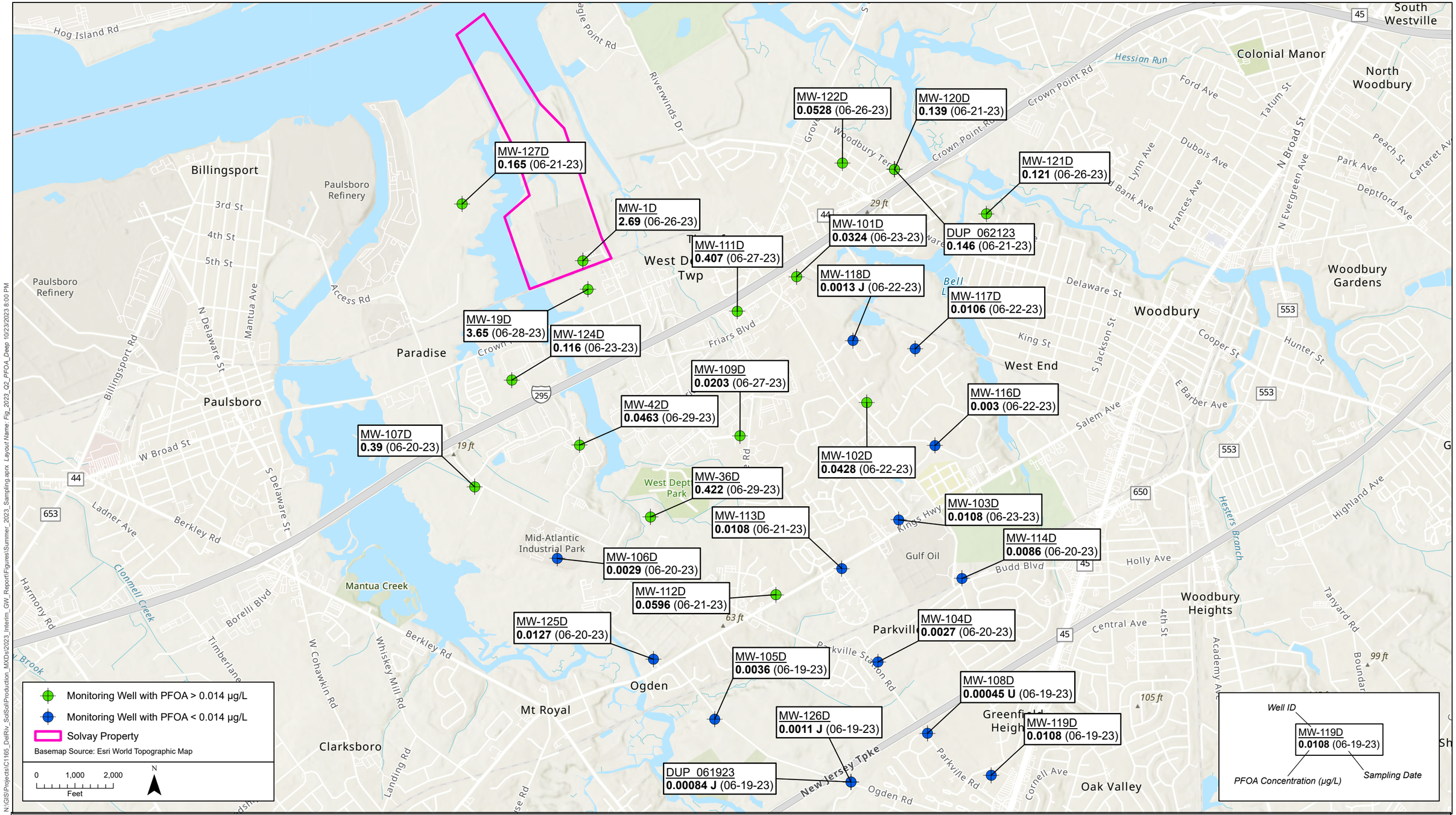
Notes:
1. PFOA concentrations shown in µg/L
3. J = estimated value
2. U = not detected

**Figure 4.**
Shallow and Intermediate Wells (Upper PRM)
PFOA Concentrations in Groundwater (June 2023)

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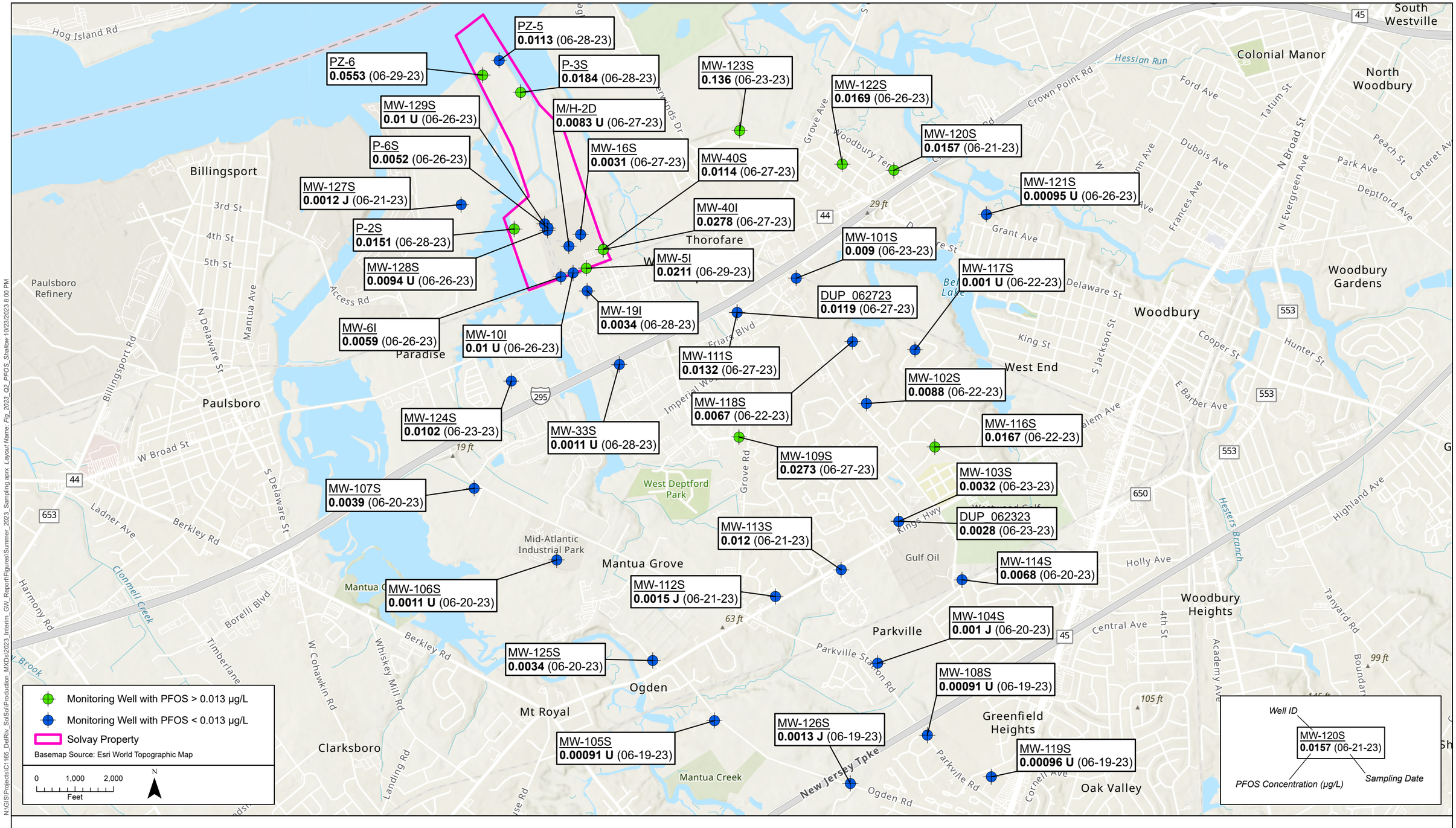
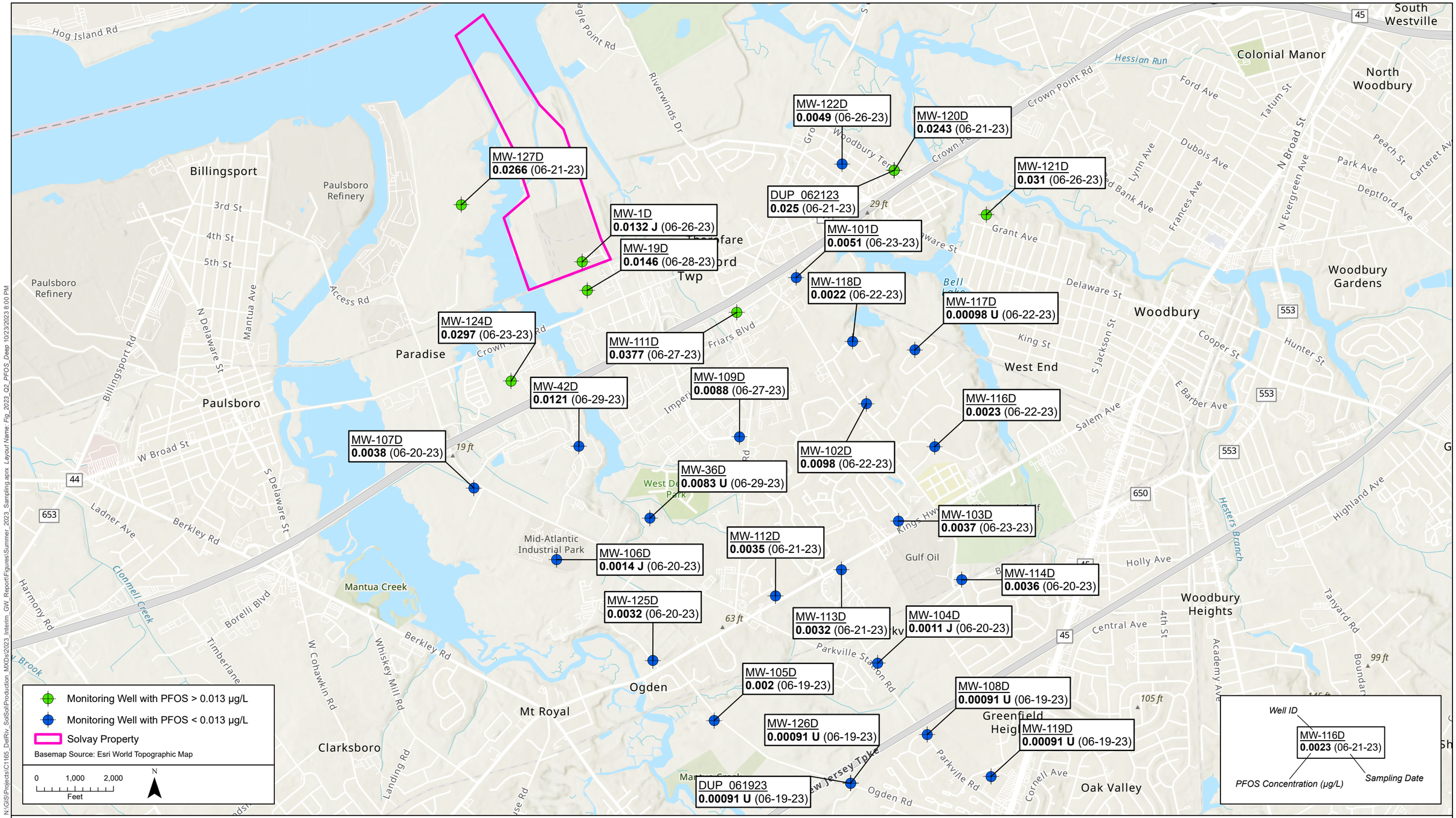
Notes:
1. PFOA concentrations shown in µg/L
3. J = estimated value
2. U = not detected

**Figure 5.**
Deep and Middle Wells (Upper and Middle PRM)
PFOA Concentrations in Groundwater (June 2023)




Notes:
1. PFOS concentrations shown in µg/L
3. J = estimated value
2. U = not detected

**Figure 6.**
Shallow and Intermediate Wells (Upper PRM)
PFOS Concentrations in Groundwater (June 2023)

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Notes:
1. PFOS concentrations shown in µg/L
3. J = estimated value
2. U = not detected

**Figure 7.**
Deep and Middle Wells (Upper and Middle PRM)
PFOS Concentrations in Groundwater (June 2023)

PZ-5
**0.361 J** (06-28-23)

PZ-6
**0.675 J** (06-29-23)

MW-129S
**22.9 J** (06-26-23)

MW-127S
**0.0041** (06-21-23)

P-2S
**0.5 J** (06-28-23)

M/H-2D
**113 J** (06-27-23)

MW-6I
**3.04 J** (06-26-23)

MW-10I
**107 J** (06-26-23)

P-3S
**7.16 J** (06-28-23)

MW-128S
**121 J** (06-26-23)

P-6S
**45.6 J** (06-26-23)

MW-16S
**14.5 J** (06-27-23)

MW-40S
**0.62 J** (06-27-23)

MW-40I
**2.48 J** (06-27-23)

MW-5I
**2.37 J** (06-29-23)

MW-19I
**0.296 J** (06-28-23)

MW-33S
**0.21029 J** (06-28-23)

MW-124S
**0.0928 J** (06-23-23)

MW-107S
**0.00085 J** (06-20-23)

MW-106S
**0.002** (06-20-23)

MW-125S
**ND** (06-20-23)

MW-105S
**0.00094** (06-19-23)

MW-123S
**0.14 J** (06-23-23)

MW-122S
**0.58** (06-26-23)

MW-120S
**0.033** (06-21-23)

MW-121S
**0.0057 J** (06-26-23)

MW-101S
**0.051** (06-23-23)

MW-118S
**ND** (06-22-23)

MW-117S
**ND** (06-22-23)

MW-111S
**1.01 J** (06-27-23)

DUP_062723
**0.9148** (06-27-23)

MW-102S
**0.0046** (06-22-23)

MW-116S
**ND** (06-22-23)

MW-109S
**1.82 J** (06-27-23)

MW-103S
**0.0601 J** (06-23-23)

DUP_062323
**0.0556** (06-23-23)

MW-113S
**0.002** (06-21-23)

MW-112S
**0.0194 J** (06-21-23)

MW-114S
**ND** (06-20-23)

MW-104S
**0.0147 J** (06-20-23)

MW-108S
**0.0254 J** (06-19-23)

MW-126S
**ND** (06-19-23)

MW-119S
**ND** (06-19-23)

Monitoring Well with MFS > 0.002 µg/L

Monitoring Well with MFS < 0.002 µg/L

Solvay Property

Basemap Source: Esri World Topographic Map

0 1,000 2,000 Feet

N

Well ID
MW-120S
**0.033** (06-21-23)
MFS Concentration (µg/L)
Sampling Date

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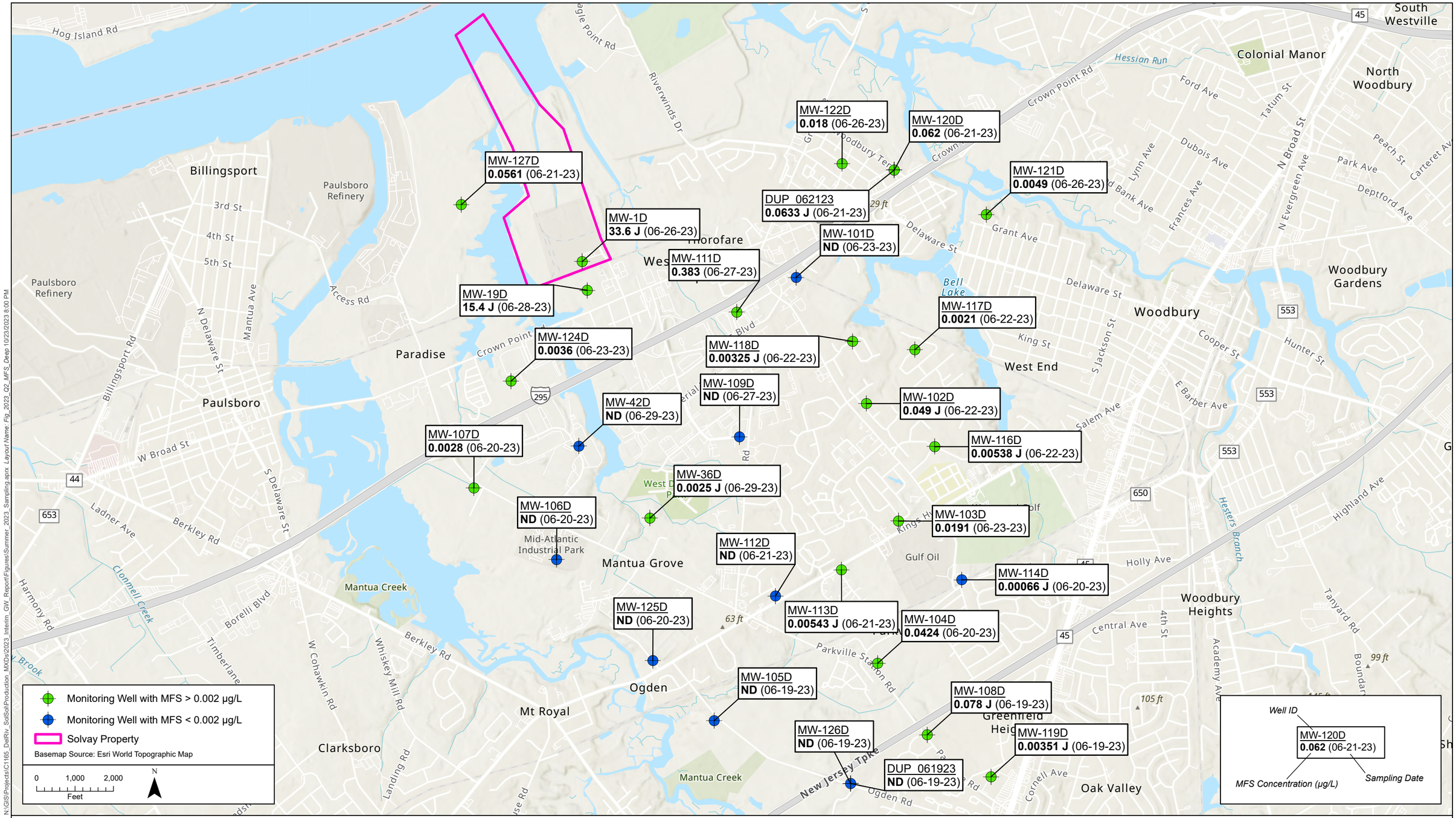
Notes:
1. Total MFS concentration shown in µg/L
2. J = estimated value
3. ND = not detected

**Figure 8.**
Shallow and Intermediate Wells (Upper PRM)
MFS Concentrations in Groundwater (June 2023)

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Notes:
1. Total MFS concentration shown in µg/L
2. J = estimated value
3. ND = not detected

**Figure 9.**
Deep and Middle Wells (Upper and Middle PRM)
MFS Concentrations in Groundwater (June 2023)

# Tables

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| M/H-1D | Main Plant Area | Deep | 03/13/2014 | GW0001_20140313 | **2460** | **2.46** | |
| M/H-1D | Main Plant Area | Deep | 03/20/2019 | MH-1D_20190320 | **1290** | **1.29** | |
| M/H-2D | Main Plant Area | Intermediate | 03/11/2014 | GW0002_20140311 | **482000** | **482** | J |
| M/H-2D | Main Plant Area | Intermediate | 03/20/2019 | MH-2D_20190320 | **113000** | **113** | |
| M/H-2D | Main Plant Area | Intermediate | 09/29/2020 | MH2D_092920 | **59300** | **59.3** | |
| M/H-2D | Main Plant Area | Intermediate | 10/20/2022 | M/H-2D | **192000** | **192** | |
| M/H-2D | Main Plant Area | Intermediate | 03/09/2023 | M/H-2D | **117000** | **117** | |
| M/H-2D | Main Plant Area | Intermediate | 06/27/2023 | M/H-2D | **114000** | **114** | |
| M/H-4 | Main Plant Area | Shallow | 03/14/2014 | GW0003_20140314 | **10300** | **10.3** | |
| M/H-4 | Main Plant Area | Shallow | 03/26/2019 | MH-4_20190326 | **5560** | **5.56** | |
| M/H-4D | Main Plant Area | Intermediate | 03/13/2014 | GW0004_20140313 | **12600** | **12.6** | |
| M/H-4D | Main Plant Area | Intermediate | 03/26/2019 | MH-4D_20190326 | **7640** | **7.64** | |
| M/H-6D | Main Plant Area | Intermediate | 03/14/2014 | GW0005_20140314 | **830** | **0.83** | |
| M/H-6D | Main Plant Area | Intermediate | 03/27/2019 | MH-6D_20190327 | **562** | **0.562** | |
| M/H-7D | Main Plant Area | Intermediate | 03/11/2014 | GW0006_20140311 | **7250** | **7.25** | |
| M/H-7D | Main Plant Area | Intermediate | 03/20/2019 | MH-7D_20190320 | **2640** | **2.64** | |
| MW-1 | Main Plant Area | Shallow | 03/12/2014 | GW0007_20140312 | **11300** | **11.3** | |
| MW-1 | Main Plant Area | Shallow | 03/21/2019 | MW-1_20190321 | **2330** | **2.33** | |
| MW-101D | Offsite Wells | Deep | 09/14/2016 | GW-124 | **49** | **0.049** | |
| MW-101D | Offsite Wells | Deep | 12/17/2018 | MW-101D-12172018 | **108** | **0.108** | |
| MW-101D | Offsite Wells | Deep | 09/25/2020 | MW-101D_092520 | **117** | **0.117** | |
| MW-101D | Offsite Wells | Deep | 01/11/2022 | MW-101D_RI2022 | **138** | **0.138** | |
| MW-101D | Offsite Wells | Deep | 06/23/2023 | MW-101D | **140** | **0.14** | |
| MW-101S | Offsite Wells | Shallow | 09/14/2016 | GW-123 | **80** | **0.08** | |
| MW-101S | Offsite Wells | Shallow | 12/17/2018 | MW-101S-12172018 | **96.5** | **0.0965** | |
| MW-101S | Offsite Wells | Shallow | 12/17/2018 | MW-101S-12172018-DUP | **93.3** | **0.0933** | |
| MW-101S | Offsite Wells | Shallow | 09/25/2020 | MW-101S_092520 | **77.7** | **0.0777** | |
| MW-101S | Offsite Wells | Shallow | 01/11/2022 | MW-101S_RI2022 | **79.9** | **0.0799** | |
| MW-101S | Offsite Wells | Shallow | 06/23/2023 | MW-101S | **112** | **0.112** | |
| MW-102D | Offsite Wells | Deep | 09/21/2016 | GW-171 | **240** | **0.24** | |
| MW-102D | Offsite Wells | Deep | 09/10/2018 | 102D-09102018-GW | **108** | **0.108** | |
| MW-102D | Offsite Wells | Deep | 12/20/2018 | MW-102D-12202018 | **154** | **0.154** | |
| MW-102D | Offsite Wells | Deep | 09/23/2020 | MW-102D_092320 | **272** | **0.272** | |
| MW-102D | Offsite Wells | Deep | 01/12/2022 | MW-102D_RI2022 | **260** | **0.26** | |
| MW-102D | Offsite Wells | Deep | 09/13/2022 | MW-102D | **286** | **0.286** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-102D | Offsite Wells | Deep | 03/07/2023 | MW-102D | **293** | **0.293** | |
| MW-102D | Offsite Wells | Deep | 06/22/2023 | MW-102D | **147** | **0.147** | |
| MW-102S | Offsite Wells | Shallow | 09/21/2016 | GW-170 | **370** | **0.37** | |
| MW-102S | Offsite Wells | Shallow | 09/10/2018 | 102S-09102018-GW | **443** | **0.443** | |
| MW-102S | Offsite Wells | Shallow | 12/20/2018 | MW-102S-12202018 | **359** | **0.359** | |
| MW-102S | Offsite Wells | Shallow | 09/23/2020 | MW-102S_092320 | **354** | **0.354** | |
| MW-102S | Offsite Wells | Shallow | 01/12/2022 | MW-102S_RI2022 | **394** | **0.394** | |
| MW-102S | Offsite Wells | Shallow | 09/13/2022 | MW-102S | **347** | **0.347** | |
| MW-102S | Offsite Wells | Shallow | 03/07/2023 | MW-102S | **368** | **0.368** | |
| MW-102S | Offsite Wells | Shallow | 06/22/2023 | MW-102S | **296** | **0.296** | |
| MW-102X | Offsite Wells | Middle PRM | 04/06/2023 | MW-102X | 0.73 | 0.00073 | J |
| MW-103D | Offsite Wells | Deep | 09/15/2016 | GW-110 | **71** | **0.071** | |
| MW-103D | Offsite Wells | Deep | 12/20/2018 | MW-103D12202018 | **30.2** | **0.0302** | |
| MW-103D | Offsite Wells | Deep | 09/24/2020 | MW-103D_092420 | **35.6** | **0.0356** | |
| MW-103D | Offsite Wells | Deep | 01/12/2022 | MW-103D_RI2022 | **38.2** | **0.0382** | |
| MW-103D | Offsite Wells | Deep | 09/14/2022 | MW-103D | **59.1** | **0.0591** | |
| MW-103D | Offsite Wells | Deep | 03/14/2023 | MW-103D | **47.7** | **0.0477** | |
| MW-103D | Offsite Wells | Deep | 06/23/2023 | MW-103D | **35.5** | **0.0355** | |
| MW-103S | Offsite Wells | Shallow | 09/15/2016 | GW-109 | **330** | **0.33** | |
| MW-103S | Offsite Wells | Shallow | 12/20/2018 | MW-103S-12202018 | **473** | **0.473** | |
| MW-103S | Offsite Wells | Shallow | 09/24/2020 | MW-103S_092420 | **338** | **0.338** | |
| MW-103S | Offsite Wells | Shallow | 01/12/2022 | MW-103S_RI2022 | **24.6** | **0.0246** | |
| MW-103S | Offsite Wells | Shallow | 09/14/2022 | DUP_09.14.2022 | **609** | **0.609** | |
| MW-103S | Offsite Wells | Shallow | 09/14/2022 | MW-103S | **701** | **0.701** | |
| MW-103S | Offsite Wells | Shallow | 03/14/2023 | MW-103S | **242** | **0.242** | |
| MW-103S | Offsite Wells | Shallow | 06/23/2023 | MW-103S | **19.6** | **0.0196** | |
| MW-103S | Offsite Wells | Shallow | 06/23/2023 | DUP_062323 | **16.9** | **0.0169** | |
| MW-104D | Offsite Wells | Deep | 09/15/2016 | GW-108 | **380** | **0.38** | |
| MW-104D | Offsite Wells | Deep | 12/20/2018 | MW-104D12202018 | **717** | **0.717** | |
| MW-104D | Offsite Wells | Deep | 09/24/2020 | MW-104D_092420 | **111** | **0.111** | |
| MW-104D | Offsite Wells | Deep | 01/14/2022 | MW-104D_RI2022 | **511** | **0.511** | |
| MW-104D | Offsite Wells | Deep | 09/13/2022 | MW-104D | **445** | **0.445** | |
| MW-104D | Offsite Wells | Deep | 11/08/2022 | MW-104D | **506** | **0.506** | |
| MW-104D | Offsite Wells | Deep | 03/08/2023 | MW-104D | **617** | **0.617** | |
| MW-104D | Offsite Wells | Deep | 06/20/2023 | MW-104D | **13.4** | **0.0134** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-104S | Offsite Wells | Shallow | 09/15/2016 | GW-107 | **680** | **0.68** | |
| MW-104S | Offsite Wells | Shallow | 12/20/2018 | MW-104S-12202018 | **614** | **0.614** | J |
| MW-104S | Offsite Wells | Shallow | 09/24/2020 | MW-104S_092420 | **499** | **0.499** | |
| MW-104S | Offsite Wells | Shallow | 01/14/2022 | MW-104S_RI2022 | **50.5** | **0.0505** | |
| MW-104S | Offsite Wells | Shallow | 09/13/2022 | MW-104S | **280** | **0.28** | |
| MW-104S | Offsite Wells | Shallow | 11/08/2022 | MW-104S | **241** | **0.241** | |
| MW-104S | Offsite Wells | Shallow | 03/08/2023 | MW-104S | **549** | **0.549** | |
| MW-104S | Offsite Wells | Shallow | 06/20/2023 | MW-104S | **22.1** | **0.0221** | |
| MW-105D | Offsite Wells | Deep | 09/14/2016 | GW-112 | 9.5 | 0.0095 | J |
| MW-105D | Offsite Wells | Deep | 12/19/2018 | MW-105D-12192018 | 6.76 | 0.00676 | J |
| MW-105D | Offsite Wells | Deep | 09/23/2020 | MW-105D_092320 | 8.1 | 0.0081 | |
| MW-105D | Offsite Wells | Deep | 09/12/2022 | MW-105D | **15.8** | **0.0158** | |
| MW-105D | Offsite Wells | Deep | 03/07/2023 | MW-105D | **23.2** | **0.0232** | |
| MW-105D | Offsite Wells | Deep | 06/19/2023 | MW-105D | **23.4** | **0.0234** | |
| MW-105S | Offsite Wells | Shallow | 09/16/2016 | GW-111 | 12 | 0.012 | |
| MW-105S | Offsite Wells | Shallow | 12/19/2018 | MW-105S-12192018 | **15** | **0.015** | |
| MW-105S | Offsite Wells | Shallow | 09/23/2020 | MW-105S_092320 | **18.3** | **0.0183** | |
| MW-105S | Offsite Wells | Shallow | 09/12/2022 | MW-105S | **21.9** | **0.0219** | |
| MW-105S | Offsite Wells | Shallow | 03/07/2023 | MW-105S | **25.8** | **0.0258** | |
| MW-105S | Offsite Wells | Shallow | 06/19/2023 | MW-105S | **13.5** | **0.0135** | |
| MW-106D | Offsite Wells | Deep | 12/19/2018 | MW-106D-12192018 | 5.46 | 0.00546 | J |
| MW-106D | Offsite Wells | Deep | 12/03/2020 | MW-106D_120320 | 7.1 | 0.0071 | |
| MW-106D | Offsite Wells | Deep | 01/27/2022 | MW-106D_RI2022 | 8.9 | 0.0089 | |
| MW-106D | Offsite Wells | Deep | 09/16/2022 | MW-106D | 9.4 | 0.0094 | |
| MW-106D | Offsite Wells | Deep | 11/09/2022 | MW-106D | 11.7 | 0.0117 | |
| MW-106D | Offsite Wells | Deep | 03/14/2023 | MW-106D | 8.7 | 0.0087 | |
| MW-106D | Offsite Wells | Deep | 06/20/2023 | MW-106D | 13 | 0.013 | |
| MW-106S | Offsite Wells | Shallow | 12/19/2018 | MW-106S-12192018 | 8.83 | 0.00883 | |
| MW-106S | Offsite Wells | Shallow | 09/23/2020 | MW-106S_092320 | 7.8 | 0.0078 | |
| MW-106S | Offsite Wells | Shallow | 01/27/2022 | DUP-1_012722_RI2022 | 4.7 | 0.0047 | |
| MW-106S | Offsite Wells | Shallow | 01/27/2022 | MW-106S_RI2022 | 4.3 | 0.0043 | |
| MW-106S | Offsite Wells | Shallow | 09/16/2022 | MW-106S | 6 | 0.006 | |
| MW-106S | Offsite Wells | Shallow | 11/09/2022 | MW-106S | 10.2 | 0.0102 | |
| MW-106S | Offsite Wells | Shallow | 03/14/2023 | MW-106S | 13.3 | 0.0133 | |
| MW-106S | Offsite Wells | Shallow | 06/20/2023 | MW-106S | **14.4** | **0.0144** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-107D | Offsite Wells | Deep | 09/20/2016 | GW-149 | **550** | **0.55** | |
| MW-107D | Offsite Wells | Deep | 12/18/2018 | MW-107D-12182018 | **415** | **0.415** | |
| MW-107D | Offsite Wells | Deep | 09/24/2020 | MW-107D_092420 | **394** | **0.394** | |
| MW-107D | Offsite Wells | Deep | 01/27/2022 | MW-107D_RI2022 | **1300** | **1.3** | |
| MW-107D | Offsite Wells | Deep | 09/19/2022 | MW-107D | **1130** | **1.13** | |
| MW-107D | Offsite Wells | Deep | 03/06/2023 | MW-107D | **1540** | **1.54** | |
| MW-107D | Offsite Wells | Deep | 06/20/2023 | MW-107D | **1090** | **1.09** | |
| MW-107S | Offsite Wells | Shallow | 09/20/2016 | GW-148 | **220** | **0.22** | |
| MW-107S | Offsite Wells | Shallow | 12/18/2018 | MW-107S-12182018 | **310** | **0.31** | |
| MW-107S | Offsite Wells | Shallow | 09/24/2020 | DUP-2_092420 | **378** | **0.378** | |
| MW-107S | Offsite Wells | Shallow | 09/24/2020 | MW-107S_092420 | **382** | **0.382** | |
| MW-107S | Offsite Wells | Shallow | 01/27/2022 | MW-107S_RI2022 | **482** | **0.482** | |
| MW-107S | Offsite Wells | Shallow | 09/19/2022 | MW-107S | **612** | **0.612** | |
| MW-107S | Offsite Wells | Shallow | 03/06/2023 | MW-107S | **782** | **0.782** | |
| MW-107S | Offsite Wells | Shallow | 06/20/2023 | MW-107S | **913** | **0.913** | |
| MW-108D | Offsite Wells | Middle PRM | 01/31/2017 | GW0002 | 0.51 | 0.00051 | U |
| MW-108D | Offsite Wells | Middle PRM | 01/31/2017 | GW0003 | 0.51 | 0.00051 | U |
| MW-108D | Offsite Wells | Middle PRM | 12/18/2018 | MW-108D12182018 | 2.1 | 0.0021 | U |
| MW-108D | Offsite Wells | Middle PRM | 10/02/2019 | MW108_10_2_2019 | 2 | 0.002 | U |
| MW-108D | Offsite Wells | Middle PRM | 09/22/2020 | MW-108D_092220 | 2.2 | 0.0022 | J |
| MW-108D | Offsite Wells | Middle PRM | 01/10/2022 | MW-108D | 2 | 0.002 | U |
| MW-108D | Offsite Wells | Middle PRM | 09/12/2022 | MW-108D | 2.3 | 0.0023 | U |
| MW-108D | Offsite Wells | Middle PRM | 11/07/2022 | MW-108D | 2 | 0.002 | U |
| MW-108D | Offsite Wells | Middle PRM | 06/19/2023 | MW-108D | 0.55 | 0.00055 | U |
| MW-108S | Offsite Wells | Shallow | 01/31/2017 | GW0001 | **22** | **0.022** | |
| MW-108S | Offsite Wells | Shallow | 12/17/2018 | MW108S-12172018 | **163** | **0.163** | |
| MW-108S | Offsite Wells | Shallow | 09/22/2020 | MW-108S_092220 | **57.9** | **0.0579** | |
| MW-108S | Offsite Wells | Shallow | 01/10/2022 | MW-108S | **94.3** | **0.0943** | |
| MW-108S | Offsite Wells | Shallow | 09/12/2022 | MW-108S | **154** | **0.154** | |
| MW-108S | Offsite Wells | Shallow | 11/07/2022 | MW-108S | **212** | **0.212** | |
| MW-108S | Offsite Wells | Shallow | 06/19/2023 | MW-108S | **249** | **0.249** | |
| MW-109D | Offsite Wells | Deep | 09/11/2018 | 109D-09112018-GW | **45.1** | **0.0451** | |
| MW-109D | Offsite Wells | Deep | 12/18/2018 | MW-109D12182018 | **42.2** | **0.0422** | |
| MW-109D | Offsite Wells | Deep | 01/13/2022 | MW-109D_RI2022 | **103** | **0.103** | |
| MW-109D | Offsite Wells | Deep | 09/15/2022 | MW-109D | **93.2** | **0.0932** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-109D | Offsite Wells | Deep | 03/11/2023 | MW-109D | **102** | **0.102** | |
| MW-109D | Offsite Wells | Deep | 06/27/2023 | MW-109D | **188** | **0.188** | |
| MW-109S | Offsite Wells | Shallow | 09/11/2018 | 109S-09112018-GW | **2510** | **2.51** | J |
| MW-109S | Offsite Wells | Shallow | 09/28/2020 | MW-109S_092820 | **1760** | **1.76** | |
| MW-109S | Offsite Wells | Shallow | 01/13/2022 | MW-109S_RI2022 | **2440** | **2.44** | |
| MW-109S | Offsite Wells | Shallow | 09/15/2022 | MW-109S | **2150** | **2.15** | |
| MW-109S | Offsite Wells | Shallow | 03/11/2023 | MW-109S | **3570** | **3.57** | |
| MW-109S | Offsite Wells | Shallow | 06/27/2023 | MW-109S | **4300** | **4.3** | |
| MW-10I | Main Plant Area | Intermediate | 03/13/2014 | GW0009_20140313 | **123000** | **123** | |
| MW-10I | Main Plant Area | Intermediate | 03/21/2019 | MW-10I_20190321 | **44400** | **44.4** | |
| MW-10I | Main Plant Area | Intermediate | 11/01/2022 | MW-10I | **57700** | **57.7** | |
| MW-10I | Main Plant Area | Intermediate | 03/13/2023 | MW-10I | **67800** | **67.8** | |
| MW-10I | Main Plant Area | Intermediate | 06/26/2023 | MW-10I | **80600** | **80.6** | |
| MW-10S | Main Plant Area | Shallow | 03/13/2014 | GW0010_20140313 | **3540** | **3.54** | |
| MW-10S | Main Plant Area | Shallow | 03/21/2019 | MW-10S_20190321 | **7960** | **7.96** | |
| MW-10X | Main Plant Area | Middle PRM | 03/12/2014 | GW0011_20140312 | **15** | **0.015** | U |
| MW-10X | Main Plant Area | Middle PRM | 09/19/2016 | GW-147 | **52** | **0.052** | |
| MW-10X | Main Plant Area | Middle PRM | 09/30/2019 | MW10X-093019 | **15.5** | **0.0155** | |
| MW-10X | Main Plant Area | Middle PRM | 04/04/2023 | MW-10X | **33.8** | **0.0338** | |
| MW-110D | Offsite Wells | Deep | 09/11/2018 | 110D-09112018-GW | **987** | **0.987** | |
| MW-110D | Offsite Wells | Deep | 09/28/2020 | MW-110D_092820 | **1240** | **1.24** | |
| MW-110D | Offsite Wells | Deep | 01/27/2022 | MW-110D_RI2022 | **1380** | **1.38** | |
| MW-110D | Offsite Wells | Deep | 09/13/2022 | MW-110D | **1570** | **1.57** | |
| MW-110S | Offsite Wells | Shallow | 09/11/2018 | 110S-09112018-GW | **2330** | **2.33** | |
| MW-110S | Offsite Wells | Shallow | 09/28/2020 | MW-110S_092820 | **1730** | **1.73** | |
| MW-110S | Offsite Wells | Shallow | 01/27/2022 | MW-110S_RI2022 | **1870** | **1.87** | |
| MW-110S | Offsite Wells | Shallow | 09/13/2022 | MW-110S | **2060** | **2.06** | |
| MW-111D | Offsite Wells | Deep | 12/20/2018 | MW-111D-12202018 | **1310** | **1.31** | |
| MW-111D | Offsite Wells | Deep | 10/01/2020 | MW-111D_100120 | **2340** | **2.34** | |
| MW-111D | Offsite Wells | Deep | 01/13/2022 | MW-111D_RI2022 | **2360** | **2.36** | |
| MW-111D | Offsite Wells | Deep | 09/13/2022 | MW-111D | **2360** | **2.36** | |
| MW-111D | Offsite Wells | Deep | 03/11/2023 | MW-111D | **3130** | **3.13** | |
| MW-111D | Offsite Wells | Deep | 06/27/2023 | MW-111D | **3360** | **3.36** | |
| MW-111S | Offsite Wells | Shallow | 12/20/2018 | DUP-12202018 | **834** | **0.834** | |
| MW-111S | Offsite Wells | Shallow | 12/20/2018 | MW-111S-12202018 | **728** | **0.728** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-111S | Offsite Wells | Shallow | 10/01/2020 | DUP-3_100120 | **563** | **0.563** | |
| MW-111S | Offsite Wells | Shallow | 10/01/2020 | MW-111S_100120 | **704** | **0.704** | |
| MW-111S | Offsite Wells | Shallow | 01/13/2022 | MW-111S_RI2022 | **562** | **0.562** | |
| MW-111S | Offsite Wells | Shallow | 09/13/2022 | MW-111S | **658** | **0.658** | |
| MW-111S | Offsite Wells | Shallow | 03/11/2023 | MW-111S | **696** | **0.696** | |
| MW-111S | Offsite Wells | Shallow | 06/27/2023 | MW-111S | **755** | **0.755** | |
| MW-111S | Offsite Wells | Shallow | 06/27/2023 | DUP_062723 | **803** | **0.803** | |
| MW-112D | Offsite Wells | Deep | 12/20/2018 | MW-112D-12202018 | **78.8** | **0.0788** | |
| MW-112D | Offsite Wells | Deep | 09/24/2020 | MW-112D_092420 | **579** | **0.579** | |
| MW-112D | Offsite Wells | Deep | 01/13/2022 | MW-112D_RI2022 | **667** | **0.667** | |
| MW-112D | Offsite Wells | Deep | 09/14/2022 | MW-112D | **612** | **0.612** | |
| MW-112D | Offsite Wells | Deep | 11/08/2022 | MW-112D | **499** | **0.499** | |
| MW-112D | Offsite Wells | Deep | 03/07/2023 | MW-112D | **532** | **0.532** | |
| MW-112D | Offsite Wells | Deep | 06/21/2023 | MW-112D | **530** | **0.53** | |
| MW-112S | Offsite Wells | Shallow | 12/20/2018 | MW-112S-12202018 | **1460** | **1.46** | |
| MW-112S | Offsite Wells | Shallow | 09/24/2020 | MW-112S_092420 | **1620** | **1.62** | |
| MW-112S | Offsite Wells | Shallow | 01/13/2022 | MW-112S_RI2022 | **1980** | **1.98** | |
| MW-112S | Offsite Wells | Shallow | 09/14/2022 | MW-112S | **2080** | **2.08** | |
| MW-112S | Offsite Wells | Shallow | 11/08/2022 | MW-112S | **1770** | **1.77** | |
| MW-112S | Offsite Wells | Shallow | 03/07/2023 | MW-112S | **1140** | **1.14** | |
| MW-112S | Offsite Wells | Shallow | 06/21/2023 | MW-112S | 4.5 | 0.0045 | |
| MW-113D | Offsite Wells | Deep | 12/19/2018 | MW-113D-12192018 | 5.84 | 0.00584 | J |
| MW-113D | Offsite Wells | Deep | 09/24/2020 | MW-113D_092420 | **15.7** | **0.0157** | |
| MW-113D | Offsite Wells | Deep | 01/13/2022 | DUP-2_RI2022 | **20.5** | **0.0205** | |
| MW-113D | Offsite Wells | Deep | 01/13/2022 | MW-113D_RI2022 | **36** | **0.036** | |
| MW-113D | Offsite Wells | Deep | 09/14/2022 | MW-113D | **21.1** | **0.0211** | |
| MW-113D | Offsite Wells | Deep | 03/07/2023 | MW-113D | **29.6** | **0.0296** | |
| MW-113D | Offsite Wells | Deep | 06/21/2023 | MW-113D | **44.9** | **0.0449** | |
| MW-113S | Offsite Wells | Shallow | 12/19/2018 | MW-113S-12192018 | **340** | **0.34** | |
| MW-113S | Offsite Wells | Shallow | 09/24/2020 | MW-113S_092420 | **706** | **0.706** | |
| MW-113S | Offsite Wells | Shallow | 01/13/2022 | MW-113S_RI2022 | **391** | **0.391** | |
| MW-113S | Offsite Wells | Shallow | 09/14/2022 | MW-113S | **633** | **0.633** | |
| MW-113S | Offsite Wells | Shallow | 03/07/2023 | MW-113S | **674** | **0.674** | |
| MW-113S | Offsite Wells | Shallow | 06/21/2023 | MW-113S | **574** | **0.574** | |
| MW-114D | Offsite Wells | Deep | 12/19/2018 | MW-114D-12192018 | **46** | **0.046** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-114D | Offsite Wells | Deep | 09/22/2020 | MW-114D_092220 | **36.6** | **0.0366** | |
| MW-114D | Offsite Wells | Deep | 01/11/2022 | MW-114D_RI2022 | **53.4** | **0.0534** | |
| MW-114D | Offsite Wells | Deep | 09/13/2022 | MW-114D | **62.1** | **0.0621** | |
| MW-114D | Offsite Wells | Deep | 06/20/2023 | MW-114D | **67.5** | **0.0675** | |
| MW-114S | Offsite Wells | Shallow | 12/19/2018 | MW-114S-12192018 | **162** | **0.162** | |
| MW-114S | Offsite Wells | Shallow | 09/22/2020 | MW-114S_092220 | **113** | **0.113** | |
| MW-114S | Offsite Wells | Shallow | 01/11/2022 | MW-114S_RI2022 | **199** | **0.199** | |
| MW-114S | Offsite Wells | Shallow | 09/13/2022 | MW-114S | **223** | **0.223** | |
| MW-114S | Offsite Wells | Shallow | 03/07/2023 | MW-114S | **165** | **0.165** | |
| MW-114S | Offsite Wells | Shallow | 06/20/2023 | MW-114S | **232** | **0.232** | |
| MW-114X | Offsite Wells | Lower PRM | 03/28/2023 | MW-114X | 1.4 | 0.0014 | J |
| MW-115X | Offsite Wells | Middle PRM | 05/06/2019 | MW115X-050619 | 1 | 0.001 | U |
| MW-115X | Offsite Wells | Middle PRM | 09/17/2019 | MW-115X_09_2019 | 1 | 0.001 | U |
| MW-115X | Offsite Wells | Middle PRM | 04/06/2023 | MW-115X | 5.1 | 0.0051 | U |
| MW-116D | Offsite Wells | Deep | 09/23/2020 | MW-116D_092320 | 5 | 0.005 | U |
| MW-116D | Offsite Wells | Deep | 01/12/2022 | MW-116D_RI2022 | **17** | **0.017** | U |
| MW-116D | Offsite Wells | Deep | 09/13/2022 | MW-116D | 6.6 | 0.0066 | |
| MW-116D | Offsite Wells | Deep | 03/06/2023 | MW-116D | 7.4 | 0.0074 | |
| MW-116D | Offsite Wells | Deep | 06/22/2023 | MW-116D | 5.1 | 0.0051 | |
| MW-116S | Offsite Wells | Shallow | 09/23/2020 | DUP-1_092320 | **35.2** | **0.0352** | |
| MW-116S | Offsite Wells | Shallow | 09/23/2020 | MW-116S_092320 | **33.8** | **0.0338** | |
| MW-116S | Offsite Wells | Shallow | 01/11/2022 | MW-116S_RI2022 | **53.9** | **0.0539** | |
| MW-116S | Offsite Wells | Shallow | 09/13/2022 | MW-116S | **54.2** | **0.0542** | |
| MW-116S | Offsite Wells | Shallow | 03/06/2023 | MW-116S | **54.6** | **0.0546** | |
| MW-116S | Offsite Wells | Shallow | 06/22/2023 | MW-116S | **59.5** | **0.0595** | |
| MW-117D | Offsite Wells | Deep | 09/23/2020 | MW-117D_092320 | **500** | **0.5** | U |
| MW-117D | Offsite Wells | Deep | 12/04/2020 | MW-117D_120420 | **17.9** | **0.0179** | |
| MW-117D | Offsite Wells | Deep | 01/13/2022 | MW-117D_RI2022 | **19.9** | **0.0199** | |
| MW-117D | Offsite Wells | Deep | 09/15/2022 | MW-117D | **16.2** | **0.0162** | |
| MW-117D | Offsite Wells | Deep | 03/06/2023 | MW-117D | **18.5** | **0.0185** | |
| MW-117D | Offsite Wells | Deep | 06/22/2023 | MW-117D | **21.2** | **0.0212** | |
| MW-117S | Offsite Wells | Shallow | 09/23/2020 | MW-117S_092320 | **500** | **0.5** | U |
| MW-117S | Offsite Wells | Shallow | 12/04/2020 | MW-117S_120420 | 10.2 | 0.0102 | J |
| MW-117S | Offsite Wells | Shallow | 01/13/2022 | MW-117S_RI2022 | **14.6** | **0.0146** | |
| MW-117S | Offsite Wells | Shallow | 09/15/2022 | MW-117S | **14.7** | **0.0147** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-117S | Offsite Wells | Shallow | 03/06/2023 | MW-117S | **14.3** | **0.0143** | |
| MW-117S | Offsite Wells | Shallow | 06/22/2023 | MW-117S | **14.8** | **0.0148** | |
| MW-118D | Offsite Wells | Deep | 09/24/2020 | MW-118D_092420 | **82.2** | **0.0822** | |
| MW-118D | Offsite Wells | Deep | 01/12/2022 | MW-118D_RI2022 | **105** | **0.105** | |
| MW-118D | Offsite Wells | Deep | 09/14/2022 | MW-118D | **133** | **0.133** | |
| MW-118D | Offsite Wells | Deep | 03/11/2023 | MW-118D | **70.8** | **0.0708** | |
| MW-118D | Offsite Wells | Deep | 06/22/2023 | MW-118D | 3.4 | 0.0034 | |
| MW-118S | Offsite Wells | Shallow | 09/24/2020 | MW-118S_092420 | **133** | **0.133** | |
| MW-118S | Offsite Wells | Shallow | 01/12/2022 | MW-118S_RI2022 | **143** | **0.143** | |
| MW-118S | Offsite Wells | Shallow | 09/14/2022 | MW-118S | **146** | **0.146** | |
| MW-118S | Offsite Wells | Shallow | 03/11/2023 | MW-118S | **149** | **0.149** | |
| MW-118S | Offsite Wells | Shallow | 06/22/2023 | MW-118S | **128** | **0.128** | |
| MW-119D | Offsite Wells | Deep | 09/22/2020 | MW-119D_092220 | 2.5 | 0.0025 | J |
| MW-119D | Offsite Wells | Deep | 01/10/2022 | DUP-1_RI2022 | **14.3** | **0.0143** | |
| MW-119D | Offsite Wells | Deep | 01/10/2022 | MW-119D_RI2022 | 10.2 | 0.0102 | |
| MW-119D | Offsite Wells | Deep | 09/12/2022 | MW-119D | **16.7** | **0.0167** | |
| MW-119D | Offsite Wells | Deep | 11/07/2022 | MW-119D | **16.5** | **0.0165** | |
| MW-119D | Offsite Wells | Deep | 03/08/2023 | MW-119D | **67.4** | **0.0674** | |
| MW-119D | Offsite Wells | Deep | 06/19/2023 | MW-119D | **41** | **0.041** | |
| MW-119S | Offsite Wells | Shallow | 09/22/2020 | MW-119S_092220 | 3.6 | 0.0036 | J |
| MW-119S | Offsite Wells | Shallow | 01/10/2022 | MW-119S_RI2022 | 6.7 | 0.0067 | |
| MW-119S | Offsite Wells | Shallow | 09/12/2022 | MW-119S | 13.3 | 0.0133 | |
| MW-119S | Offsite Wells | Shallow | 11/07/2022 | MW-119S | **15.8** | **0.0158** | |
| MW-119S | Offsite Wells | Shallow | 03/08/2023 | MW-119S | **19.8** | **0.0198** | |
| MW-119S | Offsite Wells | Shallow | 06/19/2023 | MW-119S | **33.9** | **0.0339** | |
| MW-11D | Main Plant Area | Intermediate | 03/12/2014 | GW0012_20140312 | **4330** | **4.33** | |
| MW-11D | Main Plant Area | Intermediate | 03/22/2019 | MW-11D_20190322 | **2320** | **2.32** | |
| MW-11DD | Main Plant Area | Deep | 03/12/2014 | GW0013_20140312 | **1380** | **1.38** | |
| MW-11DD | Main Plant Area | Deep | 03/22/2019 | MW-11DD_20190322 | **1540** | **1.54** | |
| MW-120D | Offsite Wells | Deep | 12/17/2018 | MW-120D-12172018 | **694** | **0.694** | |
| MW-120D | Offsite Wells | Deep | 09/28/2020 | MW-120D_092820 | **663** | **0.663** | |
| MW-120D | Offsite Wells | Deep | 01/13/2022 | MW-120D_RI2022 | **706** | **0.706** | |
| MW-120D | Offsite Wells | Deep | 09/15/2022 | MW-120D | **535** | **0.535** | |
| MW-120D | Offsite Wells | Deep | 03/13/2023 | MW-120D | **779** | **0.779** | |
| MW-120D | Offsite Wells | Deep | 06/21/2023 | MW-120D | **1010** | **1.01** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-120D | Offsite Wells | Deep | 06/21/2023 | DUP_062123 | **1120** | **1.12** | |
| MW-120S | Offsite Wells | Shallow | 12/17/2018 | MW-120S-12172018 | **446** | **0.446** | |
| MW-120S | Offsite Wells | Shallow | 09/28/2020 | MW-120S_092820 | **349** | **0.349** | |
| MW-120S | Offsite Wells | Shallow | 01/13/2022 | MW-120S_RI2022 | **370** | **0.37** | |
| MW-120S | Offsite Wells | Shallow | 09/15/2022 | MW-120S | **348** | **0.348** | |
| MW-120S | Offsite Wells | Shallow | 03/13/2023 | MW-120S | **442** | **0.442** | |
| MW-120S | Offsite Wells | Shallow | 06/21/2023 | MW-120S | **519** | **0.519** | |
| MW-121D | Offsite Wells | Deep | 12/20/2018 | MW-121D-12202018 | **412** | **0.412** | |
| MW-121D | Offsite Wells | Deep | 09/25/2020 | MW-121D_092520 | **436** | **0.436** | |
| MW-121D | Offsite Wells | Deep | 01/14/2022 | MW-121D_RI2022 | **481** | **0.481** | |
| MW-121D | Offsite Wells | Deep | 09/16/2022 | MW-121D | **424** | **0.424** | |
| MW-121D | Offsite Wells | Deep | 03/10/2023 | MW-121D | **534** | **0.534** | |
| MW-121D | Offsite Wells | Deep | 06/26/2023 | MW-121D | **719** | **0.719** | |
| MW-121S | Offsite Wells | Shallow | 12/20/2018 | MW-121S-12202018 | **807** | **0.807** | |
| MW-121S | Offsite Wells | Shallow | 09/25/2020 | MW-121S_092520 | **777** | **0.777** | |
| MW-121S | Offsite Wells | Shallow | 01/14/2022 | MW-121S_RI2022 | **758** | **0.758** | |
| MW-121S | Offsite Wells | Shallow | 09/16/2022 | MW-121S | **618** | **0.618** | |
| MW-121S | Offsite Wells | Shallow | 03/10/2023 | MW-121S | **1020** | **1.02** | |
| MW-121S | Offsite Wells | Shallow | 06/26/2023 | MW-121S | 6.6 | 0.0066 | |
| MW-122D | Offsite Wells | Deep | 09/28/2020 | MW-122D_092820 | **73.7** | **0.0737** | |
| MW-122D | Offsite Wells | Deep | 01/14/2022 | MW-122D_RI2022 | **81.9** | **0.0819** | |
| MW-122D | Offsite Wells | Deep | 09/16/2022 | MW-122D | **69** | **0.069** | |
| MW-122D | Offsite Wells | Deep | 11/09/2022 | MW-122D | **78.9** | **0.0789** | |
| MW-122D | Offsite Wells | Deep | 03/28/2023 | DUP_032823 | **115** | **0.115** | |
| MW-122D | Offsite Wells | Deep | 03/28/2023 | MW-122D | **109** | **0.109** | |
| MW-122D | Offsite Wells | Deep | 06/26/2023 | MW-122D | **111** | **0.111** | |
| MW-122S | Offsite Wells | Shallow | 09/28/2020 | MW-122S_092820 | **1240** | **1.24** | |
| MW-122S | Offsite Wells | Shallow | 01/14/2022 | MW-122S_RI2022 | **2220** | **2.22** | |
| MW-122S | Offsite Wells | Shallow | 09/16/2022 | MW-122S | **1370** | **1.37** | |
| MW-122S | Offsite Wells | Shallow | 11/09/2022 | DUP1-11.09.2022 | **1130** | **1.13** | |
| MW-122S | Offsite Wells | Shallow | 11/09/2022 | MW-122S | **1100** | **1.1** | |
| MW-122S | Offsite Wells | Shallow | 03/28/2023 | MW-122S | **865** | **0.865** | |
| MW-122S | Offsite Wells | Shallow | 06/26/2023 | MW-122S | **1230** | **1.23** | |
| MW-123D | Offsite Wells | Lower PRM | 09/28/2020 | MW-123D_092820 | 3.4 | 0.0034 | J |
| MW-123D | Offsite Wells | Lower PRM | 01/14/2022 | MW-123D_RI2022 | **446** | **0.446** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-123D | Offsite Wells | Lower PRM | 09/19/2022 | MW-123D | 5.2 | 0.0052 | |
| MW-123D | Offsite Wells | Lower PRM | 04/05/2023 | MW-123D | 5.1 | 0.0051 | U |
| MW-123I | Offsite Wells | Middle PRM | 09/28/2020 | MW-123I_092820 | **24.9** | **0.0249** | |
| MW-123I | Offsite Wells | Middle PRM | 01/14/2022 | MW-123I_RI2022 | **23.4** | **0.0234** | |
| MW-123I | Offsite Wells | Middle PRM | 09/19/2022 | MW-123I | **36.5** | **0.0365** | |
| MW-123I | Offsite Wells | Middle PRM | 04/05/2023 | MW-123I | **41.7** | **0.0417** | |
| MW-123S | Offsite Wells | Shallow | 09/28/2020 | MW-123S_092820 | **83** | **0.083** | |
| MW-123S | Offsite Wells | Shallow | 01/14/2022 | MW-123S_RI2022 | **87.7** | **0.0877** | |
| MW-123S | Offsite Wells | Shallow | 09/19/2022 | MW-123S | **104** | **0.104** | |
| MW-123S | Offsite Wells | Shallow | 03/13/2023 | MW-123S | **104** | **0.104** | |
| MW-123S | Offsite Wells | Shallow | 06/23/2023 | MW-123S | **108** | **0.108** | |
| MW-124D | Offsite Wells | Deep | 12/04/2020 | MW-124D_120420 | **505** | **0.505** | |
| MW-124D | Offsite Wells | Deep | 01/14/2022 | MW-124D_RI2022 | **711** | **0.711** | |
| MW-124D | Offsite Wells | Deep | 09/20/2022 | MW-124D | **914** | **0.914** | |
| MW-124D | Offsite Wells | Deep | 03/08/2023 | DUP_030823 | **961** | **0.961** | |
| MW-124D | Offsite Wells | Deep | 03/08/2023 | MW-124D | **910** | **0.91** | |
| MW-124D | Offsite Wells | Deep | 06/23/2023 | MW-124D | **920** | **0.92** | |
| MW-124S | Offsite Wells | Shallow | 12/04/2020 | DUP_120420 | **447** | **0.447** | |
| MW-124S | Offsite Wells | Shallow | 12/04/2020 | MW-124S_120420 | **428** | **0.428** | |
| MW-124S | Offsite Wells | Shallow | 01/14/2022 | MW-124S_RI2022 | **689** | **0.689** | |
| MW-124S | Offsite Wells | Shallow | 09/20/2022 | MW-124S | **880** | **0.88** | |
| MW-124S | Offsite Wells | Shallow | 03/08/2023 | MW-124S | **663** | **0.663** | |
| MW-124S | Offsite Wells | Shallow | 06/23/2023 | MW-124S | **730** | **0.73** | |
| MW-125D | Offsite Wells | Deep | 12/03/2020 | MW-125D_120320 | **40** | **0.04** | U |
| MW-125D | Offsite Wells | Deep | 12/03/2020 | MW-125D_120320B | 10 | 0.01 | U |
| MW-125D | Offsite Wells | Deep | 01/13/2022 | MW-125D_RI2022 | **18** | **0.018** | |
| MW-125D | Offsite Wells | Deep | 09/15/2022 | MW-125D | **55.5** | **0.0555** | |
| MW-125D | Offsite Wells | Deep | 03/09/2023 | MW-125D | **67.1** | **0.0671** | |
| MW-125D | Offsite Wells | Deep | 06/20/2023 | MW-125D | **68.2** | **0.0682** | |
| MW-125S | Offsite Wells | Shallow | 12/03/2020 | MW-125S_120320 | **24.4** | **0.0244** | |
| MW-125S | Offsite Wells | Shallow | 01/13/2022 | MW-125S_RI2022 | **35.7** | **0.0357** | |
| MW-125S | Offsite Wells | Shallow | 09/15/2022 | MW-125S | **53.2** | **0.0532** | |
| MW-125S | Offsite Wells | Shallow | 03/09/2023 | MW-125S | **72.4** | **0.0724** | |
| MW-125S | Offsite Wells | Shallow | 06/20/2023 | MW-125D | **78** | **0.078** | |
| MW-126D | Offsite Wells | Deep | 12/30/2021 | MW-126D | 2.1 | 0.0021 | U |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-126D | Offsite Wells | Deep | 09/12/2022 | DUP_09.12.2022 | 2 | 0.002 | U |
| MW-126D | Offsite Wells | Deep | 09/12/2022 | MW-126D | 2.1 | 0.0021 | U |
| MW-126D | Offsite Wells | Deep | 03/06/2023 | DUP_030623 | 0.57 | 0.00057 | U |
| MW-126D | Offsite Wells | Deep | 03/06/2023 | MW-126D | 1.8 | 0.0018 | J |
| MW-126D | Offsite Wells | Deep | 06/19/2023 | MW-126D | 2.7 | 0.0027 | |
| MW-126D | Offsite Wells | Deep | 06/19/2023 | DUP_061923 | 1.9 | 0.0019 | |
| MW-126S | Offsite Wells | Shallow | 12/30/2021 | MW-126S | 4.3 | 0.0043 | |
| MW-126S | Offsite Wells | Shallow | 09/12/2022 | MW-126S | 5.6 | 0.0056 | |
| MW-126S | Offsite Wells | Shallow | 03/06/2023 | MW-126S | 6.5 | 0.0065 | |
| MW-126S | Offsite Wells | Shallow | 06/19/2023 | MW-126S | 5.6 | 0.0056 | |
| MW-127D | Offsite Wells | Deep | 12/30/2021 | MW-127D | **1070** | **1.07** | |
| MW-127D | Offsite Wells | Deep | 09/19/2022 | DUP_09.19.2022 | **1150** | **1.15** | |
| MW-127D | Offsite Wells | Deep | 09/19/2022 | MW-127D | **1180** | **1.18** | |
| MW-127D | Offsite Wells | Deep | 03/08/2023 | MW-127D | **1220** | **1.22** | |
| MW-127D | Offsite Wells | Deep | 06/21/2023 | MW-127D | **1230** | **1.23** | |
| MW-127S | Offsite Wells | Shallow | 12/30/2021 | DUP1-123021 | **34.5** | **0.0345** | |
| MW-127S | Offsite Wells | Shallow | 12/30/2021 | MW-127S | **36.2** | **0.0362** | |
| MW-127S | Offsite Wells | Shallow | 09/19/2022 | MW-127S | **37.7** | **0.0377** | |
| MW-127S | Offsite Wells | Shallow | 03/08/2023 | MW-127S | **33.9** | **0.0339** | |
| MW-127S | Offsite Wells | Shallow | 06/21/2023 | MW-127S | **39.4** | **0.0394** | |
| MW-128S | Main Plant Area | Shallow | 03/10/2023 | MW-128S | **177000** | **177** | |
| MW-128S | Main Plant Area | Shallow | 06/26/2023 | MW-128S | **161000** | **161** | |
| MW-129S | Main Plant Area | Shallow | 03/10/2023 | MW-129S | **60200** | **60.2** | |
| MW-129S | Main Plant Area | Shallow | 06/26/2023 | MW-129S | **44800** | **44.8** | |
| MW-12S | Main Plant Area | Shallow | 03/25/2019 | MW-12S_20190325 | **16200** | **16.2** | |
| MW-14S | Main Plant Area | Shallow | 03/25/2019 | MW-14S_20190325 | **5420** | **5.42** | |
| MW-15S | Main Plant Area | Shallow | 03/13/2014 | GW0014_20140313 | **4770** | **4.77** | |
| MW-15S | Main Plant Area | Shallow | 03/25/2019 | MW-15S_20190325 | **2020** | **2.02** | |
| MW-16I | Main Plant Area | Intermediate | 09/20/2016 | GW-156 | **1200** | **1.2** | |
| MW-16I | Main Plant Area | Intermediate | 03/25/2019 | MW-16I_20190325 | **1820** | **1.82** | |
| MW-16S | Main Plant Area | Shallow | 09/22/2016 | GW-160 | **11000** | **11** | J |
| MW-16S | Main Plant Area | Shallow | 03/25/2019 | MW-16S_20190325 | **9000** | **9** | |
| MW-16S | Main Plant Area | Shallow | 11/02/2022 | MW-16S | **1890** | **1.89** | |
| MW-16S | Main Plant Area | Shallow | 03/09/2023 | MW-16S | **4240** | **4.24** | |
| MW-16S | Main Plant Area | Shallow | 06/27/2023 | MW-16S | **6320** | **6.32** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-17S | Main Plant Area | Shallow | 03/13/2014 | GW0015_20140313 | **4530** | **4.53** | |
| MW-17S | Main Plant Area | Shallow | 03/25/2019 | MW-17S_20190325 | **1760** | **1.76** | |
| MW-18D | Offsite Wells | Deep | 03/21/2014 | GW0034_20140321 | **1010** | **1.01** | |
| MW-18D | Offsite Wells | Deep | 09/16/2016 | GW-136 | **910** | **0.91** | |
| MW-18I | Offsite Wells | Intermediate | 03/21/2014 | GW0035_20140321 | **18000** | **18** | |
| MW-18I | Offsite Wells | Intermediate | 09/16/2016 | GW-137 | **23000** | **23** | |
| MW-18S | Offsite Wells | Shallow | 03/21/2014 | GW0036_20140321 | **3110** | **3.11** | |
| MW-19D | Offsite Wells | Deep | 03/21/2014 | GW0037_20140321 | **17000** | **17** | |
| MW-19D | Offsite Wells | Deep | 09/21/2016 | GW-150 | **73000** | **73** | |
| MW-19D | Offsite Wells | Deep | 09/23/2020 | MW-19D_092320 | **26000** | **26** | |
| MW-19D | Offsite Wells | Deep | 10/18/2022 | MW-19D | **41600** | **41.6** | |
| MW-19D | Offsite Wells | Deep | 03/14/2023 | MW-19D | **37000** | **37** | |
| MW-19D | Offsite Wells | Deep | 06/28/2023 | MW-19D | **36400** | **36.4** | |
| MW-19I | Offsite Wells | Intermediate | 03/21/2014 | GW0038_20140321 | **26800** | **26.8** | |
| MW-19I | Offsite Wells | Intermediate | 09/16/2016 | GW-125 | **25000** | **25** | |
| MW-19I | Offsite Wells | Intermediate | 10/01/2020 | MW-19I_100120 | **25300** | **25.3** | |
| MW-19I | Offsite Wells | Intermediate | 09/20/2022 | MW-19I | **26100** | **26.1** | |
| MW-19I | Offsite Wells | Intermediate | 03/14/2023 | MW-19I | **44000** | **44** | |
| MW-19I | Offsite Wells | Intermediate | 06/28/2023 | MW-19I | **29300** | **29.3** | |
| MW-19S | Offsite Wells | Shallow | 03/21/2014 | GW0039_20140321 | **3100** | **3.1** | |
| MW-19S | Offsite Wells | Shallow | 10/01/2020 | MW-19S_100120 | **3050** | **3.05** | |
| MW-19S | Offsite Wells | Shallow | 03/14/2023 | MW-19S | **15200** | **15.2** | |
| MW-19X | Offsite Wells | Middle PRM | 09/21/2016 | GW-151 | **18** | **0.018** | |
| MW-19X | Offsite Wells | Middle PRM | 10/28/2019 | MW19X-10282019 | **55.7** | **0.0557** | |
| MW-19X | Offsite Wells | Middle PRM | 04/05/2023 | MW-19X | **557** | **0.557** | |
| MW-1D | Main Plant Area | Deep | 03/12/2014 | GW0008_20140312 | **16500** | **16.5** | |
| MW-1D | Main Plant Area | Deep | 03/21/2019 | MW-1D_20190321 | **47500** | **47.5** | |
| MW-1D | Main Plant Area | Deep | 03/21/2019 | MW-1D_20190321FD | **44300** | **44.3** | |
| MW-1D | Main Plant Area | Deep | 10/20/2022 | MW-1D | **47100** | **47.1** | |
| MW-1D | Main Plant Area | Deep | 03/13/2023 | MW-1D | **43700** | **43.7** | |
| MW-1D | Main Plant Area | Deep | 06/26/2023 | MW-1D | **50600** | **50.6** | |
| MW-22X | Main Plant Area | Middle PRM | 04/04/2023 | MW-22X | **737** | **0.737** | |
| MW-24D | Dredge Spoil Area | Deep | 03/13/2014 | GW0016_20140313 | **1830** | **1.83** | |
| MW-24D | Dredge Spoil Area | Deep | 09/21/2016 | GW-154 | **1600** | **1.6** | J |
| MW-24D | Dredge Spoil Area | Deep | 09/28/2020 | MW-24D_092820 | **1920** | **1.92** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-24D | Dredge Spoil Area | Deep | 10/19/2022 | MW-24D | **2030** | **2.03** | |
| MW-24I | Dredge Spoil Area | Intermediate | 03/13/2014 | GW0017_20140313 | **1630** | **1.63** | J |
| MW-24I | Dredge Spoil Area | Intermediate | 09/21/2016 | GW-153 | **1400** | **1.4** | |
| MW-24I | Dredge Spoil Area | Intermediate | 09/28/2020 | MW-24I_092820 | **1440** | **1.44** | |
| MW-24I | Dredge Spoil Area | Intermediate | 10/19/2022 | MW-24I | **2160** | **2.16** | |
| MW-25D | Offsite Wells | Deep | 03/20/2014 | GW0044_20140320 | **1780** | **1.78** | U |
| MW-25IL | Offsite Wells | Intermediate | 03/20/2014 | GW0043_20140320 | **8380** | **8.38** | U |
| MW-25IL | Offsite Wells | Intermediate | 10/18/2022 | MW-25IL | **2730** | **2.73** | |
| MW-25IU | Offsite Wells | Intermediate | 03/20/2014 | GW0041_20140320 | **11600** | **11.6** | U |
| MW-25IU | Offsite Wells | Intermediate | 03/20/2014 | GW0042_20140320 | **12800** | **12.8** | U |
| MW-25IU | Offsite Wells | Intermediate | 11/01/2022 | MW-25IU | **3480** | **3.48** | |
| MW-25S | Offsite Wells | Shallow | 03/20/2014 | GW0040_20140320 | **1630** | **1.63** | U |
| MW-25S | Offsite Wells | Shallow | 10/18/2022 | MW-25S | **2780** | **2.78** | |
| MW-26D | Offsite Wells | Deep | 03/18/2014 | GW0048_20140318 | **1040** | **1.04** | |
| MW-26D | Offsite Wells | Deep | 10/17/2022 | MW-26D | **1550** | **1.55** | |
| MW-26IL | Offsite Wells | Intermediate | 03/12/2014 | GW0047_20140312 | **7030** | **7.03** | |
| MW-26IL | Offsite Wells | Intermediate | 10/17/2022 | MW-26IL | **3030** | **3.03** | |
| MW-26IU | Offsite Wells | Intermediate | 03/18/2014 | GW0046_20140318 | **6560** | **6.56** | |
| MW-26S | Offsite Wells | Shallow | 03/12/2014 | GW0045_20140312 | **1700** | **1.7** | |
| MW-26S | Offsite Wells | Shallow | 10/17/2022 | MW-26S | **978** | **0.978** | |
| MW-27IU | Offsite Wells | Intermediate | 03/17/2014 | GW0050_20140317 | **8990** | **8.99** | |
| MW-27IU | Offsite Wells | Intermediate | 10/10/2022 | MW-27IU | **17500** | **17.5** | |
| MW-27S | Offsite Wells | Shallow | 03/17/2014 | GW0049_20140317 | **15200** | **15.2** | |
| MW-27S | Offsite Wells | Shallow | 10/10/2022 | DUP_20221010 | **5600** | **5.6** | |
| MW-27S | Offsite Wells | Shallow | 10/10/2022 | MW-27S | **4950** | **4.95** | |
| MW-28IL | Offsite Wells | Intermediate | 04/17/2014 | GW0007_20140417 | **24600** | **24.6** | |
| MW-28IL | Offsite Wells | Intermediate | 04/17/2014 | GW0008_20140417 | **24200** | **24.2** | |
| MW-28IL | Offsite Wells | Intermediate | 10/11/2022 | MW-28IL | **17400** | **17.4** | |
| MW-28S | Offsite Wells | Shallow | 03/17/2014 | GW0051_20140317 | **6120** | **6.12** | |
| MW-28S | Offsite Wells | Shallow | 10/11/2022 | MW-28S | **922** | **0.922** | |
| MW-29IU | Offsite Wells | Intermediate | 03/17/2014 | GW0054_20140317 | **9810** | **9.81** | |
| MW-29IU | Offsite Wells | Intermediate | 10/11/2022 | MW-29IU | **5470** | **5.47** | |
| MW-29S | Offsite Wells | Shallow | 04/17/2014 | GW0009_20140417 | **1370** | **1.37** | J |
| MW-29S | Offsite Wells | Shallow | 10/11/2022 | MW-29S | **165** | **0.165** | |
| MW-2D | Main Plant Area | Deep | 03/26/2019 | MW-2D_20190326 | **1380** | **1.38** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-30D | Offsite Wells | Deep | 03/18/2014 | GW0058_20140318 | **870** | **0.87** | |
| MW-30D | Offsite Wells | Deep | 09/14/2016 | GW-104 | **2500** | **2.5** | |
| MW-30D | Offsite Wells | Deep | 10/12/2022 | MW-30D | **4480** | **4.48** | |
| MW-30IL | Offsite Wells | Intermediate | 03/18/2014 | GW0057_20140318 | **11700** | **11.7** | |
| MW-30IL | Offsite Wells | Intermediate | 09/14/2016 | GW-103 | **9800** | **9.8** | |
| MW-30IL | Offsite Wells | Intermediate | 10/12/2022 | MW-30IL | **19600** | **19.6** | |
| MW-30IU | Offsite Wells | Intermediate | 03/18/2014 | GW0056_20140318 | **9890** | **9.89** | |
| MW-30IU | Offsite Wells | Intermediate | 09/14/2016 | GW-100 | **4300** | **4.3** | |
| MW-30IU | Offsite Wells | Intermediate | 09/14/2016 | GW-101 | **4100** | **4.1** | |
| MW-30IU | Offsite Wells | Intermediate | 10/11/2022 | MW-30IU | **4200** | **4.2** | |
| MW-30S | Offsite Wells | Shallow | 03/18/2014 | GW0055_20140318 | **390** | **0.39** | |
| MW-30S | Offsite Wells | Shallow | 09/14/2016 | GW-102 | **500** | **0.5** | |
| MW-30S | Offsite Wells | Shallow | 10/11/2022 | MW-30S | **105** | **0.105** | |
| MW-31IU | Offsite Wells | Intermediate | 03/18/2014 | GW0060_20140318 | **2610** | **2.61** | |
| MW-31IU | Offsite Wells | Intermediate | 09/14/2016 | GW-106 | **2800** | **2.8** | |
| MW-31IU | Offsite Wells | Intermediate | 10/12/2022 | MW-31IU | **3190** | **3.19** | |
| MW-31S | Offsite Wells | Shallow | 03/18/2014 | GW0059_20140318 | **1100** | **1.1** | |
| MW-31S | Offsite Wells | Shallow | 09/14/2016 | GW-105 | **910** | **0.91** | J |
| MW-31S | Offsite Wells | Shallow | 10/12/2022 | MW-31S | **1440** | **1.44** | |
| MW-32IU | Offsite Wells | Intermediate | 03/20/2014 | GW0062_20140320 | **3880** | **3.88** | U |
| MW-32IU | Offsite Wells | Intermediate | 03/20/2014 | GW0063_20140320 | **3830** | **3.83** | U |
| MW-32IU | Offsite Wells | Intermediate | 09/20/2016 | GW-138 | **1200** | **1.2** | |
| MW-32S | Offsite Wells | Shallow | 03/20/2014 | GW0061_20140320 | **3730** | **3.73** | U |
| MW-32S | Offsite Wells | Shallow | 09/20/2016 | GW-139 | **3000** | **3** | J |
| MW-32S | Offsite Wells | Shallow | 10/19/2022 | MW-32S | **2590** | **2.59** | |
| MW-33S | Offsite Wells | Shallow | 04/17/2014 | GW0010_20140417 | **2490** | **2.49** | |
| MW-33S | Offsite Wells | Shallow | 09/15/2016 | GW-113 | **980** | **0.98** | |
| MW-33S | Offsite Wells | Shallow | 09/21/2020 | MW-33S_092120 | **460** | **0.46** | |
| MW-33S | Offsite Wells | Shallow | 03/10/2023 | MW-33S | **606** | **0.606** | |
| MW-33S | Offsite Wells | Shallow | 06/28/2023 | MW-33S | **614** | **0.614** | |
| MW-34D | Offsite Wells | Deep | 04/17/2014 | GW0012_20140417 | **5000** | **5** | |
| MW-34D | Offsite Wells | Deep | 09/16/2016 | GW-130 | **4800** | **4.8** | |
| MW-34D | Offsite Wells | Deep | 09/12/2018 | 34D-09122018-GW | **4300** | **4.3** | |
| MW-34D | Offsite Wells | Deep | 10/17/2022 | MW-34D | **5240** | **5.24** | |
| MW-34I | Offsite Wells | Intermediate | 04/17/2014 | GW0011_20140417 | **4320** | **4.32** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-34IL | Offsite Wells | Intermediate | 09/16/2016 | GW-129 | **3700** | **3.7** | |
| MW-34IL | Offsite Wells | Intermediate | 09/12/2018 | 34IL-09122018-GW | **1990** | **1.99** | |
| MW-34IL | Offsite Wells | Intermediate | 10/17/2022 | MW-34IL | **5080** | **5.08** | |
| MW-35D | Offsite Wells | Deep | 04/17/2014 | GW0014_20140417 | **4520** | **4.52** | |
| MW-35D | Offsite Wells | Deep | 09/15/2016 | GW-115 | **3100** | **3.1** | |
| MW-35D | Offsite Wells | Deep | 10/12/2022 | MW-35D | **4100** | **4.1** | |
| MW-35I | Offsite Wells | Intermediate | 04/17/2014 | GW0013_20140417 | **9870** | **9.87** | |
| MW-35I | Offsite Wells | Intermediate | 09/15/2016 | GW-114 | **10000** | **10** | |
| MW-35I | Offsite Wells | Intermediate | 10/12/2022 | MW-35I | **17900** | **17.9** | |
| MW-36D | Offsite Wells | Deep | 04/17/2014 | GW0015_20140417 | **2680** | **2.68** | |
| MW-36D | Offsite Wells | Deep | 09/15/2016 | GW-116 | **2500** | **2.5** | |
| MW-36D | Offsite Wells | Deep | 10/13/2022 | MW-36D | **3240** | **3.24** | |
| MW-36D | Offsite Wells | Deep | 03/09/2023 | MW-36D | **2480** | **2.48** | |
| MW-36D | Offsite Wells | Deep | 06/29/2023 | MW-36D | **3190** | **3.19** | |
| MW-37D | Offsite Wells | Deep | 09/15/2016 | GW-118 | **2200** | **2.2** | |
| MW-37D | Offsite Wells | Deep | 10/13/2022 | MW-37D | **9070** | **9.07** | |
| MW-37S | Offsite Wells | Shallow | 09/15/2016 | GW-117 | **2700** | **2.7** | |
| MW-37S | Offsite Wells | Shallow | 10/13/2022 | MW-37S | **2730** | **2.73** | |
| MW-38D | Offsite Wells | Deep | 09/16/2016 | GW-131 | **2600** | **2.6** | |
| MW-38D | Offsite Wells | Deep | 09/21/2020 | MW-38D_092120 | **3110** | **3.11** | |
| MW-38D | Offsite Wells | Deep | 10/13/2022 | MW-38D | **4180** | **4.18** | |
| MW-39D | Offsite Wells | Deep | 09/16/2016 | GW-142 | **470** | **0.47** | |
| MW-39D | Offsite Wells | Deep | 09/24/2020 | MW-39D_092420 | **597** | **0.597** | |
| MW-39D | Offsite Wells | Deep | 10/14/2022 | MW-39D | **790** | **0.79** | |
| MW-39I | Offsite Wells | Intermediate | 09/19/2016 | GW-140 | **570** | **0.57** | |
| MW-39I | Offsite Wells | Intermediate | 09/24/2020 | MW-39I_092420 | **1130** | **1.13** | |
| MW-39I | Offsite Wells | Intermediate | 10/14/2022 | MW-39I | **1100** | **1.1** | |
| MW-39S | Offsite Wells | Shallow | 09/19/2016 | GW-141 | **2400** | **2.4** | |
| MW-39S | Offsite Wells | Shallow | 09/24/2020 | MW-39S_092420 | **207** | **0.207** | |
| MW-39S | Offsite Wells | Shallow | 10/14/2022 | MW-39S | **200** | **0.2** | |
| MW-3D | Main Plant Area | Deep | 03/12/2014 | GW0018_20140312 | **180** | **0.18** | |
| MW-3D | Main Plant Area | Deep | 03/26/2019 | MW-3D_20190326 | **567** | **0.567** | |
| MW-4 | Main Plant Area | Shallow | 09/19/2016 | GW-145 | **27000** | **27** | J |
| MW-4 | Main Plant Area | Shallow | 03/27/2019 | MW-4_20190327 | **3800** | **3.8** | |
| MW-40I | Offsite Wells | Intermediate | 09/20/2016 | GW-158 | **2100** | **2.1** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-40I | Offsite Wells | Intermediate | 09/20/2016 | GW-159 | **2200** | **2.2** | J |
| MW-40I | Offsite Wells | Intermediate | 03/27/2019 | MW-40I_20190327 | **1140** | **1.14** | |
| MW-40I | Offsite Wells | Intermediate | 09/25/2020 | MW-40I_092520 | **940** | **0.94** | |
| MW-40I | Offsite Wells | Intermediate | 11/02/2022 | MW-40I | **838** | **0.838** | |
| MW-40I | Offsite Wells | Intermediate | 03/13/2023 | DUP_031323 | **1040** | **1.04** | |
| MW-40I | Offsite Wells | Intermediate | 03/13/2023 | MW-40I | **948** | **0.948** | |
| MW-40I | Offsite Wells | Intermediate | 06/27/2023 | MW-40I | **1020** | **1.02** | |
| MW-40S | Offsite Wells | Shallow | 09/22/2016 | GW-161 | **870** | **0.87** | |
| MW-40S | Offsite Wells | Shallow | 09/22/2016 | GW-161D | **1000** | **1** | |
| MW-40S | Offsite Wells | Shallow | 03/22/2019 | MW-40S_20190322 | **1430** | **1.43** | |
| MW-40S | Offsite Wells | Shallow | 09/25/2020 | MW-40S_092520 | **300** | **0.3** | |
| MW-40S | Offsite Wells | Shallow | 11/02/2022 | MW-40S | **461** | **0.461** | |
| MW-40S | Offsite Wells | Shallow | 03/13/2023 | MW-40S | **282** | **0.282** | |
| MW-40S | Offsite Wells | Shallow | 06/27/2023 | MW-40S | **442** | **0.442** | |
| MW-41D | Offsite Wells | Deep | 09/16/2016 | GW-132 | **700** | **0.7** | |
| MW-41D | Offsite Wells | Deep | 09/22/2020 | MW-41D_092220 | **928** | **0.928** | |
| MW-41D | Offsite Wells | Deep | 10/13/2022 | MW-41D | **1250** | **1.25** | |
| MW-42D | Offsite Wells | Deep | 09/16/2016 | GW-133 | **140** | **0.14** | |
| MW-42D | Offsite Wells | Deep | 09/22/2020 | MW-42D_092220 | **179** | **0.179** | |
| MW-42D | Offsite Wells | Deep | 10/13/2022 | MW-42D | **286** | **0.286** | |
| MW-42D | Offsite Wells | Deep | 03/09/2023 | MW-42D | **275** | **0.275** | |
| MW-42D | Offsite Wells | Deep | 06/29/2023 | MW-42D | **364** | **0.364** | |
| MW-43D | Offsite Wells | Deep | 09/19/2016 | GW-143 | **910** | **0.91** | J |
| MW-43D | Offsite Wells | Deep | 09/24/2020 | MW-43D_092420 | **1090** | **1.09** | |
| MW-43D | Offsite Wells | Deep | 10/14/2022 | MW-43D | **1490** | **1.49** | |
| MW-43I | Offsite Wells | Intermediate | 09/19/2016 | GW-144 | **1800** | **1.8** | |
| MW-43I | Offsite Wells | Intermediate | 09/24/2020 | MW-43I_092420 | **1840** | **1.84** | |
| MW-43I | Offsite Wells | Intermediate | 10/14/2022 | MW-43I | **2140** | **2.14** | |
| MW-44D | Offsite Wells | Deep | 09/16/2016 | GW-162 | **1400** | **1.4** | |
| MW-44D | Offsite Wells | Deep | 09/22/2020 | MW-44D_092220 | **1440** | **1.44** | |
| MW-44D | Offsite Wells | Deep | 10/14/2022 | DUP_2022.10.14 | **1800** | **1.8** | |
| MW-44D | Offsite Wells | Deep | 10/14/2022 | MW-44D | **1870** | **1.87** | |
| MW-5D | Main Plant Area | Intermediate | 03/11/2014 | GW0019_20140311 | **2970** | **2.97** | |
| MW-5D | Main Plant Area | Intermediate | 03/22/2019 | MW-5D_20190322 | **1910** | **1.91** | |
| MW-5D | Main Plant Area | Intermediate | 03/22/2019 | MW-5D_20190322FD | **2110** | **2.11** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-5DD | Main Plant Area | Deep | 03/11/2014 | GW0020_20140311 | **2730** | **2.73** | |
| MW-5DD | Main Plant Area | Deep | 03/11/2014 | GW0021_20140311 | **1950** | **1.95** | |
| MW-5DD | Main Plant Area | Deep | 03/22/2019 | MW-5DD_20190322 | **1840** | **1.84** | |
| MW-5I | Main Plant Area | Intermediate | 03/11/2014 | GW0022_20140311 | **3400** | **3.4** | |
| MW-5I | Main Plant Area | Intermediate | 03/22/2019 | MW-5I_20190322 | **2300** | **2.3** | |
| MW-5I | Main Plant Area | Intermediate | 10/20/2022 | MW-5I | **1390** | **1.39** | |
| MW-5I | Main Plant Area | Intermediate | 03/13/2023 | MW-5I | **1040** | **1.04** | |
| MW-5I | Main Plant Area | Intermediate | 06/29/2023 | MW-5I | **1320** | **1.32** | |
| MW-5X | Main Plant Area | Middle PRM | 03/12/2014 | GW0023_20140312 | **16** | **0.016** | U |
| MW-5X | Main Plant Area | Middle PRM | 09/19/2016 | GW-146 | 4.9 | 0.0049 | |
| MW-5X | Main Plant Area | Middle PRM | 09/30/2019 | DUP-093019 | 9.15 | 0.00915 | |
| MW-5X | Main Plant Area | Middle PRM | 09/30/2019 | MW5X-093019 | 9.81 | 0.00981 | |
| MW-5X | Main Plant Area | Middle PRM | 04/04/2023 | MW-5X | 10.4 | 0.0104 | |
| MW-6I | Main Plant Area | Intermediate | 03/12/2014 | GW0024_20140312 | **25800** | **25.8** | |
| MW-6I | Main Plant Area | Intermediate | 03/21/2019 | MW-6I_20190321 | **8690** | **8.69** | |
| MW-6I | Main Plant Area | Intermediate | 11/01/2022 | DUP_2022.11.01 | **11400** | **11.4** | |
| MW-6I | Main Plant Area | Intermediate | 11/01/2022 | MW-6I | **11500** | **11.5** | |
| MW-6I | Main Plant Area | Intermediate | 03/13/2023 | MW-6I | **10400** | **10.4** | |
| MW-6I | Main Plant Area | Intermediate | 06/26/2023 | MW-6I | **13500** | **13.5** | |
| MW-6S | Main Plant Area | Shallow | 03/12/2014 | GW0025_20140312 | **5180** | **5.18** | |
| P-2S | Main Plant Area | Shallow | 03/13/2014 | GW0026_20140313 | **1800** | **1.8** | |
| P-2S | Main Plant Area | Shallow | 03/28/2019 | P-2S_20190328 | **1630** | **1.63** | |
| P-2S | Main Plant Area | Shallow | 10/01/2020 | P-2S_100120 | **2770** | **2.77** | |
| P-2S | Main Plant Area | Shallow | 11/02/2022 | DUP_2022.11.02 | **436** | **0.436** | |
| P-2S | Main Plant Area | Shallow | 11/02/2022 | P-2S | **441** | **0.441** | |
| P-2S | Main Plant Area | Shallow | 03/09/2023 | P-2S | **363** | **0.363** | |
| P-2S | Main Plant Area | Shallow | 06/28/2023 | P-2S | **310** | **0.31** | |
| P-3D | Dredge Spoil Area | Lower PRM | 04/18/2014 | GW0004_20140418 | **18** | **0.018** | U |
| P-3D | Dredge Spoil Area | Lower PRM | 10/01/2020 | P-3D_100120 | 10 | 0.01 | |
| P-3D | Dredge Spoil Area | Lower PRM | 09/20/2022 | P-3D | **15.2** | **0.0152** | |
| P-3D | Dredge Spoil Area | Lower PRM | 03/10/2023 | DUP_031023 | 6.9 | 0.0069 | |
| P-3D | Dredge Spoil Area | Lower PRM | 03/10/2023 | P-3D | 5.9 | 0.0059 | |
| P-3I | Dredge Spoil Area | Middle PRM | 04/18/2014 | GW0005_20140418 | **240** | **0.24** | |
| P-3I | Dredge Spoil Area | Middle PRM | 10/01/2020 | P-3I_100120 | **233** | **0.233** | |
| P-3I | Dredge Spoil Area | Middle PRM | 09/20/2022 | P-3I | **199** | **0.199** | |

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| P-3I | Dredge Spoil Area | Middle PRM | 03/10/2023 | P-3I | **246** | **0.246** | |
| P-3S | Dredge Spoil Area | Shallow | 04/18/2014 | GW0006_20140418 | **1180** | **1.18** | |
| P-3S | Dredge Spoil Area | Shallow | 10/01/2020 | P-3S_100120 | **3610** | **3.61** | |
| P-3S | Dredge Spoil Area | Shallow | 03/10/2023 | P-3S | **2690** | **2.69** | |
| P-3S | Dredge Spoil Area | Shallow | 06/28/2023 | P-3S | **4090** | **4.09** | |
| P-5S | Main Plant Area | Shallow | 03/13/2014 | GW0027_20140313 | **60000** | **60** | |
| P-5S | Main Plant Area | Shallow | 03/26/2019 | P-5S_20190326 | **16400** | **16.4** | |
| P-6S | Main Plant Area | Shallow | 03/14/2014 | GW0028_20140314 | **30400** | **30.4** | |
| P-6S | Main Plant Area | Shallow | 03/28/2019 | P-6S_20190328 | **17800** | **17.8** | |
| P-6S | Main Plant Area | Shallow | 11/02/2022 | P-6S | **14200** | **14.2** | |
| P-6S | Main Plant Area | Shallow | 06/26/2023 | P-6S | **16100** | **16.1** | |
| P-7S | Main Plant Area | Shallow | 03/27/2019 | P-7S_20190327 | **2920** | **2.92** | |
| PW-1 | Main Plant Area | Intermediate | 09/30/2019 | PW-093019 | **37.5** | **0.0375** | |
| PW-1 | Main Plant Area | Intermediate | 10/28/2019 | PW-10282019 | **48.7** | **0.0487** | |
| PZ-5 | Dredge Spoil Area | Shallow | 04/18/2014 | GW0001_20140418 | **230** | **0.23** | |
| PZ-5 | Dredge Spoil Area | Shallow | 04/18/2014 | GW0002_20140418 | **270** | **0.27** | |
| PZ-5 | Dredge Spoil Area | Shallow | 10/01/2020 | PZ-5_100120 | **343** | **0.343** | |
| PZ-5 | Dredge Spoil Area | Shallow | 09/20/2022 | PZ-5 | **291** | **0.291** | |
| PZ-5 | Dredge Spoil Area | Shallow | 03/10/2023 | PZ-5 | **126** | **0.126** | |
| PZ-5 | Dredge Spoil Area | Shallow | 06/28/2023 | PZ-5 | **325** | **0.325** | |
| PZ-6 | Dredge Spoil Area | Shallow | 04/18/2014 | GW0003_20140418 | **180** | **0.18** | |
| PZ-6 | Dredge Spoil Area | Shallow | 11/03/2022 | PZ-6 | **201** | **0.201** | |
| PZ-6 | Dredge Spoil Area | Shallow | 03/10/2023 | PZ-6 | **283** | **0.283** | |
| PZ-6 | Dredge Spoil Area | Shallow | 06/29/2023 | PZ-6 | **301** | **0.301** | |
| PZ-8 | Dredge Spoil Area | Shallow | 09/21/2016 | GW-152 | **240** | **0.24** | |
| PZ-8 | Dredge Spoil Area | Shallow | 10/19/2022 | PZ-8 | **35.6** | **0.0356** | |

Notes:

**Bold/Boxed sample result indicates value exceeds NJDEP GWQS (13 ng/L, 0.013 µg/L).**

Definitions:
NJDEP GWQS = New Jersey Department of Environmental Protection Groundwater Quality Standard
ng/L = Nanograms per liter (or parts per trillion, ppt)
µg/L = Micrograms per liter (or parts per billion, ppb)
PRM = Potomac Raritan Magothy

Data Qualifiers:

Table 1. Perfluorononanoic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|

J = Indicates an estimated value
U = Analyte was not detected; the value reported is the method detection limit

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| M/H-1D | Main Plant Area | Deep | 03/13/2014 | GW0001_20140313 | **170** | **0.17** | |
| M/H-1D | Main Plant Area | Deep | 03/20/2019 | MH-1D_20190320 | **180** | **0.18** | |
| M/H-2D | Main Plant Area | Intermediate | 03/11/2014 | GW0002_20140311 | **16200** | **16.2** | J |
| M/H-2D | Main Plant Area | Intermediate | 03/20/2019 | MH-2D_20190320 | **6160** | **6.16** | |
| M/H-2D | Main Plant Area | Intermediate | 09/29/2020 | MH2D_092920 | **4920** | **4.92** | |
| M/H-2D | Main Plant Area | Intermediate | 10/20/2022 | M/H-2D | **6380** | **6.38** | |
| M/H-2D | Main Plant Area | Intermediate | 03/09/2023 | M/H-2D | **4580** | **4.58** | |
| M/H-2D | Main Plant Area | Intermediate | 06/27/2023 | M/H-2D | **3850** | **3.85** | |
| M/H-4 | Main Plant Area | Shallow | 03/14/2014 | GW0003_20140314 | **2580** | **2.58** | |
| M/H-4 | Main Plant Area | Shallow | 03/26/2019 | MH-4_20190326 | **1130** | **1.13** | |
| M/H-4D | Main Plant Area | Intermediate | 03/13/2014 | GW0004_20140313 | **1160** | **1.16** | |
| M/H-4D | Main Plant Area | Intermediate | 03/26/2019 | MH-4D_20190326 | **514** | **0.514** | |
| M/H-6D | Main Plant Area | Intermediate | 03/14/2014 | GW0005_20140314 | **43** | **0.043** | |
| M/H-6D | Main Plant Area | Intermediate | 03/27/2019 | MH-6D_20190327 | **76.9** | **0.0769** | |
| M/H-7D | Main Plant Area | Intermediate | 03/11/2014 | GW0006_20140311 | **330** | **0.33** | |
| M/H-7D | Main Plant Area | Intermediate | 03/20/2019 | MH-7D_20190320 | **704** | **0.704** | |
| MW-1 | Main Plant Area | Shallow | 03/12/2014 | GW0007_20140312 | **260** | **0.26** | |
| MW-1 | Main Plant Area | Shallow | 03/21/2019 | MW-1_20190321 | **21.6** | **0.0216** | |
| MW-101D | Offsite Wells | Deep | 09/14/2016 | GW-124 | **15** | **0.015** | |
| MW-101D | Offsite Wells | Deep | 12/17/2018 | MW-101D-12172018 | **27.5** | **0.0275** | |
| MW-101D | Offsite Wells | Deep | 09/25/2020 | MW-101D_092520 | **30.4** | **0.0304** | |
| MW-101D | Offsite Wells | Deep | 01/11/2022 | MW-101D_RI2022 | **36.5** | **0.0365** | |
| MW-101D | Offsite Wells | Deep | 06/23/2023 | MW-101D | **32.4** | **0.0324** | |
| MW-101S | Offsite Wells | Shallow | 09/14/2016 | GW-123 | **45** | **0.045** | |
| MW-101S | Offsite Wells | Shallow | 12/17/2018 | MW-101S-12172018 | **48.6** | **0.0486** | |
| MW-101S | Offsite Wells | Shallow | 12/17/2018 | MW-101S-12172018-DUP | **45.9** | **0.0459** | |
| MW-101S | Offsite Wells | Shallow | 09/25/2020 | MW-101S_092520 | **44.8** | **0.0448** | |
| MW-101S | Offsite Wells | Shallow | 01/11/2022 | MW-101S_RI2022 | **43.7** | **0.0437** | |
| MW-101S | Offsite Wells | Shallow | 06/23/2023 | MW-101S | **52.1** | **0.0521** | |
| MW-102D | Offsite Wells | Deep | 09/21/2016 | GW-171 | **62** | **0.062** | |
| MW-102D | Offsite Wells | Deep | 09/10/2018 | 102D-09102018-GW | **37.1** | **0.0371** | |
| MW-102D | Offsite Wells | Deep | 12/20/2018 | MW-102D-12202018 | **51.3** | **0.0513** | |
| MW-102D | Offsite Wells | Deep | 09/23/2020 | MW-102D_092320 | **92.7** | **0.0927** | |
| MW-102D | Offsite Wells | Deep | 01/12/2022 | MW-102D_RI2022 | **88.5** | **0.0885** | |
| MW-102D | Offsite Wells | Deep | 09/13/2022 | MW-102D | **95.3** | **0.0953** | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-102D | Offsite Wells | Deep | 03/07/2023 | MW-102D | **77.7** | **0.0777** | |
| MW-102D | Offsite Wells | Deep | 06/22/2023 | MW-102D | **42.8** | **0.0428** | |
| MW-102S | Offsite Wells | Shallow | 09/21/2016 | GW-170 | **100** | **0.1** | |
| MW-102S | Offsite Wells | Shallow | 09/10/2018 | 102S-09102018-GW | **117** | **0.117** | |
| MW-102S | Offsite Wells | Shallow | 12/20/2018 | MW-102S-12202018 | **102** | **0.102** | |
| MW-102S | Offsite Wells | Shallow | 09/23/2020 | MW-102S_092320 | **104** | **0.104** | |
| MW-102S | Offsite Wells | Shallow | 01/12/2022 | MW-102S_RI2022 | **111** | **0.111** | |
| MW-102S | Offsite Wells | Shallow | 09/13/2022 | MW-102S | **92.9** | **0.0929** | |
| MW-102S | Offsite Wells | Shallow | 03/07/2023 | MW-102S | **75.5** | **0.0755** | |
| MW-102S | Offsite Wells | Shallow | 06/22/2023 | MW-102S | **67.3** | **0.0673** | |
| MW-102X | Offsite Wells | Middle PRM | 04/06/2023 | MW-102X | 0.44 | 0.00044 | U |
| MW-103D | Offsite Wells | Deep | 09/15/2016 | GW-110 | 12 | 0.012 | |
| MW-103D | Offsite Wells | Deep | 12/20/2018 | MW-103D12202018 | 9.06 | 0.00906 | |
| MW-103D | Offsite Wells | Deep | 09/24/2020 | MW-103D_092420 | 14 | 0.014 | |
| MW-103D | Offsite Wells | Deep | 01/12/2022 | MW-103D_RI2022 | 10.3 | 0.0103 | |
| MW-103D | Offsite Wells | Deep | 09/14/2022 | MW-103D | 10.3 | 0.0103 | |
| MW-103D | Offsite Wells | Deep | 03/14/2023 | MW-103D | 7.7 | 0.0077 | |
| MW-103D | Offsite Wells | Deep | 06/23/2023 | MW-103D | 10.8 | 0.0108 | |
| MW-103S | Offsite Wells | Shallow | 09/15/2016 | GW-109 | **60** | **0.06** | |
| MW-103S | Offsite Wells | Shallow | 12/20/2018 | MW-103S-12202018 | **89.7** | **0.0897** | |
| MW-103S | Offsite Wells | Shallow | 09/24/2020 | MW-103S_092420 | **104** | **0.104** | |
| MW-103S | Offsite Wells | Shallow | 01/12/2022 | MW-103S_RI2022 | 7.8 | 0.0078 | |
| MW-103S | Offsite Wells | Shallow | 09/14/2022 | DUP_09.14.2022 | **187** | **0.187** | |
| MW-103S | Offsite Wells | Shallow | 09/14/2022 | MW-103S | **211** | **0.211** | |
| MW-103S | Offsite Wells | Shallow | 03/14/2023 | MW-103S | **83.6** | **0.0836** | |
| MW-103S | Offsite Wells | Shallow | 06/23/2023 | MW-103S | 5.1 | 0.0051 | |
| MW-103S | Offsite Wells | Shallow | 06/23/2023 | DUP_062323 | 4.8 | 0.0048 | |
| MW-104D | Offsite Wells | Deep | 09/15/2016 | GW-108 | **51** | **0.051** | |
| MW-104D | Offsite Wells | Deep | 12/20/2018 | MW-104D12202018 | **73.5** | **0.0735** | |
| MW-104D | Offsite Wells | Deep | 09/24/2020 | MW-104D_092420 | 11.8 | 0.0118 | |
| MW-104D | Offsite Wells | Deep | 01/14/2022 | MW-104D_RI2022 | **52.1** | **0.0521** | |
| MW-104D | Offsite Wells | Deep | 09/13/2022 | MW-104D | **53.1** | **0.0531** | |
| MW-104D | Offsite Wells | Deep | 11/08/2022 | MW-104D | **56.2** | **0.0562** | |
| MW-104D | Offsite Wells | Deep | 03/08/2023 | MW-104D | **64.7** | **0.0647** | |
| MW-104D | Offsite Wells | Deep | 06/20/2023 | MW-104D | 2.7 | 0.0027 | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-104S | Offsite Wells | Shallow | 09/15/2016 | GW-107 | **76** | **0.076** | |
| MW-104S | Offsite Wells | Shallow | 12/20/2018 | MW-104S-12202018 | **63** | **0.063** | |
| MW-104S | Offsite Wells | Shallow | 09/24/2020 | MW-104S_092420 | **49.7** | **0.0497** | |
| MW-104S | Offsite Wells | Shallow | 01/14/2022 | MW-104S_RI2022 | 13.6 | 0.0136 | |
| MW-104S | Offsite Wells | Shallow | 09/13/2022 | MW-104S | **32.3** | **0.0323** | |
| MW-104S | Offsite Wells | Shallow | 11/08/2022 | MW-104S | **25.3** | **0.0253** | |
| MW-104S | Offsite Wells | Shallow | 03/08/2023 | MW-104S | **63.5** | **0.0635** | |
| MW-104S | Offsite Wells | Shallow | 06/20/2023 | MW-104S | 3.1 | 0.0031 | |
| MW-105D | Offsite Wells | Deep | 09/14/2016 | GW-112 | 3.8 | 0.0038 | J |
| MW-105D | Offsite Wells | Deep | 12/19/2018 | MW-105D-12192018 | 2 | 0.002 | U |
| MW-105D | Offsite Wells | Deep | 09/23/2020 | MW-105D_092320 | 2.8 | 0.0028 | J |
| MW-105D | Offsite Wells | Deep | 09/12/2022 | MW-105D | 3.5 | 0.0035 | J |
| MW-105D | Offsite Wells | Deep | 03/07/2023 | MW-105D | 3.8 | 0.0038 | |
| MW-105D | Offsite Wells | Deep | 06/19/2023 | MW-105D | 3.6 | 0.0036 | |
| MW-105S | Offsite Wells | Shallow | 09/16/2016 | GW-111 | 4.6 | 0.0046 | J |
| MW-105S | Offsite Wells | Shallow | 12/19/2018 | MW-105S-12192018 | 4.83 | 0.00483 | J |
| MW-105S | Offsite Wells | Shallow | 09/23/2020 | MW-105S_092320 | 4.3 | 0.0043 | |
| MW-105S | Offsite Wells | Shallow | 09/12/2022 | MW-105S | 4.7 | 0.0047 | |
| MW-105S | Offsite Wells | Shallow | 03/07/2023 | MW-105S | 4.2 | 0.0042 | U |
| MW-105S | Offsite Wells | Shallow | 06/19/2023 | MW-105S | 2.5 | 0.0025 | |
| MW-106D | Offsite Wells | Deep | 09/15/2016 | GW-121 | 4.3 | 0.0043 | |
| MW-106D | Offsite Wells | Deep | 09/15/2016 | GW-122 | 4.2 | 0.0042 | |
| MW-106D | Offsite Wells | Deep | 12/19/2018 | MW-106D-12192018 | 2.2 | 0.0022 | U |
| MW-106D | Offsite Wells | Deep | 12/03/2020 | MW-106D_120320 | 3 | 0.003 | J |
| MW-106D | Offsite Wells | Deep | 01/27/2022 | MW-106D_RI2022 | 2.9 | 0.0029 | J |
| MW-106D | Offsite Wells | Deep | 09/16/2022 | MW-106D | 3.1 | 0.0031 | J |
| MW-106D | Offsite Wells | Deep | 11/09/2022 | MW-106D | 3.4 | 0.0034 | J |
| MW-106D | Offsite Wells | Deep | 03/14/2023 | MW-106D | 3.2 | 0.0032 | |
| MW-106D | Offsite Wells | Deep | 06/20/2023 | MW-106D | 2.9 | 0.0029 | |
| MW-106S | Offsite Wells | Shallow | 09/15/2016 | GW-120 | 4 | 0.004 | J |
| MW-106S | Offsite Wells | Shallow | 12/19/2018 | MW-106S-12192018 | 8.5 | 0.0085 | |
| MW-106S | Offsite Wells | Shallow | 09/23/2020 | MW-106S_092320 | 3.1 | 0.0031 | J |
| MW-106S | Offsite Wells | Shallow | 01/27/2022 | DUP-1_012722_RI2022 | 2.3 | 0.0023 | J |
| MW-106S | Offsite Wells | Shallow | 01/27/2022 | MW-106S_RI2022 | 2.3 | 0.0023 | J |
| MW-106S | Offsite Wells | Shallow | 09/16/2022 | MW-106S | 2.5 | 0.0025 | J |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-106S | Offsite Wells | Shallow | 11/09/2022 | MW-106S | 3.4 | 0.0034 | J |
| MW-106S | Offsite Wells | Shallow | 03/14/2023 | MW-106S | 3.6 | 0.0036 | |
| MW-106S | Offsite Wells | Shallow | 06/20/2023 | MW-106S | 3.2 | 0.0032 | |
| MW-107D | Offsite Wells | Deep | 09/20/2016 | GW-149 | **190** | **0.19** | |
| MW-107D | Offsite Wells | Deep | 12/18/2018 | MW-107D-12182018 | **177** | **0.177** | J |
| MW-107D | Offsite Wells | Deep | 09/24/2020 | MW-107D_092420 | **200** | **0.2** | |
| MW-107D | Offsite Wells | Deep | 01/27/2022 | MW-107D_RI2022 | **649** | **0.649** | |
| MW-107D | Offsite Wells | Deep | 09/19/2022 | MW-107D | **566** | **0.566** | |
| MW-107D | Offsite Wells | Deep | 03/06/2023 | MW-107D | **570** | **0.57** | |
| MW-107D | Offsite Wells | Deep | 06/20/2023 | MW-107D | **390** | **0.39** | |
| MW-107S | Offsite Wells | Shallow | 09/20/2016 | GW-148 | **41** | **0.041** | |
| MW-107S | Offsite Wells | Shallow | 12/18/2018 | MW-107S-12182018 | **98.1** | **0.0981** | |
| MW-107S | Offsite Wells | Shallow | 09/24/2020 | DUP-2_092420 | **148** | **0.148** | |
| MW-107S | Offsite Wells | Shallow | 09/24/2020 | MW-107S_092420 | **151** | **0.151** | |
| MW-107S | Offsite Wells | Shallow | 01/27/2022 | MW-107S_RI2022 | **234** | **0.234** | |
| MW-107S | Offsite Wells | Shallow | 09/19/2022 | MW-107S | **326** | **0.326** | |
| MW-107S | Offsite Wells | Shallow | 03/06/2023 | MW-107S | **354** | **0.354** | |
| MW-107S | Offsite Wells | Shallow | 06/20/2023 | MW-107S | **474** | **0.474** | |
| MW-108D | Offsite Wells | Middle PRM | 12/14/2016 | GW0025 | 4.7 | 0.0047 | |
| MW-108D | Offsite Wells | Middle PRM | 12/14/2016 | GW0026 | 6.6 | 0.0066 | |
| MW-108D | Offsite Wells | Middle PRM | 12/16/2016 | GW0027 | 5.5 | 0.0055 | |
| MW-108D | Offsite Wells | Middle PRM | 12/24/2016 | GW0030 | 14 | 0.014 | |
| MW-108D | Offsite Wells | Middle PRM | 12/18/2018 | MW-108D12182018 | 2.1 | 0.0021 | UJ |
| MW-108D | Offsite Wells | Middle PRM | 09/22/2020 | MW-108D_092220 | 2.2 | 0.0022 | J |
| MW-108D | Offsite Wells | Middle PRM | 01/10/2022 | MW-108D | 2 | 0.002 | U |
| MW-108D | Offsite Wells | Middle PRM | 09/12/2022 | MW-108D | 2.3 | 0.0023 | U |
| MW-108D | Offsite Wells | Middle PRM | 11/07/2022 | MW-108D | 2 | 0.002 | U |
| MW-108D | Offsite Wells | Middle PRM | 06/19/2023 | MW-108D | 0.45 | 0.00045 | U |
| MW-108S | Offsite Wells | Shallow | 01/31/2017 | GW0001 | 9.6 | 0.0096 | |
| MW-108S | Offsite Wells | Shallow | 12/17/2018 | MW108S-12172018 | **30** | **0.03** | |
| MW-108S | Offsite Wells | Shallow | 09/22/2020 | MW-108S_092220 | 11.9 | 0.0119 | |
| MW-108S | Offsite Wells | Shallow | 01/10/2022 | MW-108S | **22.3** | **0.0223** | |
| MW-108S | Offsite Wells | Shallow | 09/12/2022 | MW-108S | **28.8** | **0.0288** | |
| MW-108S | Offsite Wells | Shallow | 11/07/2022 | MW-108S | **32.2** | **0.0322** | |
| MW-108S | Offsite Wells | Shallow | 06/19/2023 | MW-108S | **31.4** | **0.0314** | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-109D | Offsite Wells | Deep | 09/11/2018 | 109D-09112018-GW | 7.03 | 0.00703 | |
| MW-109D | Offsite Wells | Deep | 12/18/2018 | MW-109D12182018 | 7.03 | 0.00703 | J |
| MW-109D | Offsite Wells | Deep | 01/13/2022 | MW-109D_RI2022 | 14 | 0.014 | |
| MW-109D | Offsite Wells | Deep | 09/15/2022 | MW-109D | 12.5 | 0.0125 | |
| MW-109D | Offsite Wells | Deep | 03/11/2023 | MW-109D | **14.5** | **0.0145** | |
| MW-109D | Offsite Wells | Deep | 06/27/2023 | MW-109D | **20.3** | **0.0203** | |
| MW-109S | Offsite Wells | Shallow | 09/11/2018 | 109S-09112018-GW | **391** | **0.391** | J |
| MW-109S | Offsite Wells | Shallow | 09/28/2020 | MW-109S_092820 | **321** | **0.321** | |
| MW-109S | Offsite Wells | Shallow | 01/13/2022 | MW-109S_RI2022 | **321** | **0.321** | |
| MW-109S | Offsite Wells | Shallow | 09/15/2022 | MW-109S | **245** | **0.245** | |
| MW-109S | Offsite Wells | Shallow | 03/11/2023 | MW-109S | **297** | **0.297** | |
| MW-109S | Offsite Wells | Shallow | 06/27/2023 | MW-109S | **284** | **0.284** | |
| MW-10I | Main Plant Area | Intermediate | 03/13/2014 | GW0009_20140313 | **29300** | **29.3** | |
| MW-10I | Main Plant Area | Intermediate | 03/21/2019 | MW-10I_20190321 | **7380** | **7.38** | |
| MW-10I | Main Plant Area | Intermediate | 11/01/2022 | MW-10I | **7460** | **7.46** | |
| MW-10I | Main Plant Area | Intermediate | 03/13/2023 | MW-10I | **5180** | **5.18** | |
| MW-10I | Main Plant Area | Intermediate | 06/26/2023 | MW-10I | **6970** | **6.97** | |
| MW-10S | Main Plant Area | Shallow | 03/13/2014 | GW0010_20140313 | **400** | **0.4** | |
| MW-10S | Main Plant Area | Shallow | 03/21/2019 | MW-10S_20190321 | **291** | **0.291** | |
| MW-10X | Main Plant Area | Middle PRM | 03/12/2014 | GW0011_20140312 | 8.6 | 0.0086 | U |
| MW-10X | Main Plant Area | Middle PRM | 09/19/2016 | GW-147 | 4.7 | 0.0047 | |
| MW-10X | Main Plant Area | Middle PRM | 09/30/2019 | MW10X-093019 | 3.55 | 0.00355 | J |
| MW-10X | Main Plant Area | Middle PRM | 04/04/2023 | MW-10X | 7.1 | 0.0071 | |
| MW-110D | Offsite Wells | Deep | 09/11/2018 | 110D-09112018-GW | **213** | **0.213** | |
| MW-110D | Offsite Wells | Deep | 09/28/2020 | MW-110D_092820 | **367** | **0.367** | |
| MW-110D | Offsite Wells | Deep | 01/27/2022 | MW-110D_RI2022 | **373** | **0.373** | |
| MW-110D | Offsite Wells | Deep | 09/13/2022 | MW-110D | **428** | **0.428** | |
| MW-110S | Offsite Wells | Shallow | 09/11/2018 | 110S-09112018-GW | **453** | **0.453** | |
| MW-110S | Offsite Wells | Shallow | 09/28/2020 | MW-110S_092820 | **335** | **0.335** | |
| MW-110S | Offsite Wells | Shallow | 01/27/2022 | MW-110S_RI2022 | **328** | **0.328** | |
| MW-110S | Offsite Wells | Shallow | 09/13/2022 | MW-110S | **344** | **0.344** | |
| MW-111D | Offsite Wells | Deep | 12/20/2018 | MW-111D-12202018 | **248** | **0.248** | J |
| MW-111D | Offsite Wells | Deep | 10/01/2020 | MW-111D_100120 | **416** | **0.416** | |
| MW-111D | Offsite Wells | Deep | 01/13/2022 | MW-111D_RI2022 | **374** | **0.374** | |
| MW-111D | Offsite Wells | Deep | 09/13/2022 | MW-111D | **305** | **0.305** | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-111D | Offsite Wells | Deep | 03/11/2023 | MW-111D | **388** | **0.388** | |
| MW-111D | Offsite Wells | Deep | 06/27/2023 | MW-111D | **407** | **0.407** | |
| MW-111S | Offsite Wells | Shallow | 12/20/2018 | DUP-12202018 | **81.6** | **0.0816** | |
| MW-111S | Offsite Wells | Shallow | 12/20/2018 | MW-111S-12202018 | **78** | **0.078** | |
| MW-111S | Offsite Wells | Shallow | 10/01/2020 | DUP-3_100120 | **88.2** | **0.0882** | |
| MW-111S | Offsite Wells | Shallow | 10/01/2020 | MW-111S_100120 | **90.6** | **0.0906** | |
| MW-111S | Offsite Wells | Shallow | 01/13/2022 | MW-111S_RI2022 | **84** | **0.084** | |
| MW-111S | Offsite Wells | Shallow | 09/13/2022 | MW-111S | **73** | **0.073** | |
| MW-111S | Offsite Wells | Shallow | 03/11/2023 | MW-111S | **79.2** | **0.0792** | |
| MW-111S | Offsite Wells | Shallow | 06/27/2023 | MW-111S | **95.8** | **0.0958** | |
| MW-111S | Offsite Wells | Shallow | 06/27/2023 | DUP_062723 | **89** | **0.089** | |
| MW-112D | Offsite Wells | Deep | 12/20/2018 | MW-112D-12202018 | 14 | 0.014 | |
| MW-112D | Offsite Wells | Deep | 09/24/2020 | MW-112D_092420 | **60.3** | **0.0603** | |
| MW-112D | Offsite Wells | Deep | 01/13/2022 | MW-112D_RI2022 | **70.7** | **0.0707** | |
| MW-112D | Offsite Wells | Deep | 09/14/2022 | MW-112D | **75.1** | **0.0751** | |
| MW-112D | Offsite Wells | Deep | 11/08/2022 | MW-112D | **61** | **0.061** | |
| MW-112D | Offsite Wells | Deep | 03/07/2023 | MW-112D | **55.9** | **0.0559** | |
| MW-112D | Offsite Wells | Deep | 06/21/2023 | MW-112D | **59.6** | **0.0596** | |
| MW-112S | Offsite Wells | Shallow | 12/20/2018 | MW-112S-12202018 | **133** | **0.133** | |
| MW-112S | Offsite Wells | Shallow | 09/24/2020 | MW-112S_092420 | **153** | **0.153** | |
| MW-112S | Offsite Wells | Shallow | 01/13/2022 | MW-112S_RI2022 | **213** | **0.213** | |
| MW-112S | Offsite Wells | Shallow | 09/14/2022 | MW-112S | **248** | **0.248** | |
| MW-112S | Offsite Wells | Shallow | 11/08/2022 | MW-112S | **219** | **0.219** | |
| MW-112S | Offsite Wells | Shallow | 03/07/2023 | MW-112S | **144** | **0.144** | |
| MW-112S | Offsite Wells | Shallow | 06/21/2023 | MW-112S | 3 | 0.003 | |
| MW-113D | Offsite Wells | Deep | 12/19/2018 | MW-113D-12192018 | 4.45 | 0.00445 | J |
| MW-113D | Offsite Wells | Deep | 09/24/2020 | MW-113D_092420 | 7.2 | 0.0072 | |
| MW-113D | Offsite Wells | Deep | 01/13/2022 | DUP-2_RI2022 | 7.3 | 0.0073 | |
| MW-113D | Offsite Wells | Deep | 01/13/2022 | MW-113D_RI2022 | 10.7 | 0.0107 | |
| MW-113D | Offsite Wells | Deep | 09/14/2022 | MW-113D | 6.4 | 0.0064 | |
| MW-113D | Offsite Wells | Deep | 03/07/2023 | MW-113D | 8.6 | 0.0086 | |
| MW-113D | Offsite Wells | Deep | 06/21/2023 | MW-113D | 10.8 | 0.0108 | |
| MW-113S | Offsite Wells | Shallow | 12/19/2018 | MW-113S-12192018 | **77.4** | **0.0774** | J |
| MW-113S | Offsite Wells | Shallow | 09/24/2020 | MW-113S_092420 | **190** | **0.19** | |
| MW-113S | Offsite Wells | Shallow | 01/13/2022 | MW-113S_RI2022 | **99** | **0.099** | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-113S | Offsite Wells | Shallow | 09/14/2022 | MW-113S | **160** | **0.16** | |
| MW-113S | Offsite Wells | Shallow | 03/07/2023 | MW-113S | **130** | **0.13** | |
| MW-113S | Offsite Wells | Shallow | 06/21/2023 | MW-113S | **172** | **0.172** | |
| MW-114D | Offsite Wells | Deep | 12/19/2018 | MW-114D-12192018 | 8.54 | 0.00854 | J |
| MW-114D | Offsite Wells | Deep | 09/22/2020 | MW-114D_092220 | 7.3 | 0.0073 | |
| MW-114D | Offsite Wells | Deep | 01/11/2022 | MW-114D_RI2022 | 9.9 | 0.0099 | |
| MW-114D | Offsite Wells | Deep | 09/13/2022 | MW-114D | 10.5 | 0.0105 | |
| MW-114D | Offsite Wells | Deep | 06/20/2023 | MW-114D | 8.6 | 0.0086 | |
| MW-114S | Offsite Wells | Shallow | 12/19/2018 | MW-114S-12192018 | **21.3** | **0.0213** | |
| MW-114S | Offsite Wells | Shallow | 09/22/2020 | MW-114S_092220 | 14.4 | 0.0144 | |
| MW-114S | Offsite Wells | Shallow | 01/11/2022 | MW-114S_RI2022 | **23.4** | **0.0234** | |
| MW-114S | Offsite Wells | Shallow | 09/13/2022 | MW-114S | **26.2** | **0.0262** | |
| MW-114S | Offsite Wells | Shallow | 03/07/2023 | MW-114S | **16.3** | **0.0163** | |
| MW-114S | Offsite Wells | Shallow | 06/20/2023 | MW-114S | **20.5** | **0.0205** | |
| MW-114X | Offsite Wells | Lower PRM | 03/28/2023 | MW-114X | 1.7 | 0.0017 | J |
| MW-115X | Offsite Wells | Middle PRM | 05/06/2019 | MW115X-050619 | 1.29 | 0.00129 | J |
| MW-115X | Offsite Wells | Middle PRM | 04/06/2023 | MW-115X | 4.2 | 0.0042 | U |
| MW-116D | Offsite Wells | Deep | 09/23/2020 | MW-116D_092320 | 5 | 0.005 | U |
| MW-116D | Offsite Wells | Deep | 01/12/2022 | MW-116D_RI2022 | **17** | **0.017** | U |
| MW-116D | Offsite Wells | Deep | 09/13/2022 | MW-116D | 4.5 | 0.0045 | |
| MW-116D | Offsite Wells | Deep | 03/06/2023 | MW-116D | 3.6 | 0.0036 | |
| MW-116D | Offsite Wells | Deep | 06/22/2023 | MW-116D | 3 | 0.003 | |
| MW-116S | Offsite Wells | Shallow | 09/23/2020 | DUP-1_092320 | 10 | 0.01 | U |
| MW-116S | Offsite Wells | Shallow | 09/23/2020 | MW-116S_092320 | 10 | 0.01 | U |
| MW-116S | Offsite Wells | Shallow | 01/11/2022 | MW-116S_RI2022 | **25.4** | **0.0254** | |
| MW-116S | Offsite Wells | Shallow | 09/13/2022 | MW-116S | **17.3** | **0.0173** | |
| MW-116S | Offsite Wells | Shallow | 03/06/2023 | MW-116S | 11.2 | 0.0112 | |
| MW-116S | Offsite Wells | Shallow | 06/22/2023 | MW-116S | **15.8** | **0.0158** | |
| MW-117D | Offsite Wells | Deep | 09/23/2020 | MW-117D_092320 | **500** | **0.5** | U |
| MW-117D | Offsite Wells | Deep | 12/04/2020 | MW-117D_120420 | 11.7 | 0.0117 | J |
| MW-117D | Offsite Wells | Deep | 01/13/2022 | MW-117D_RI2022 | 12.3 | 0.0123 | |
| MW-117D | Offsite Wells | Deep | 09/15/2022 | MW-117D | 9.6 | 0.0096 | |
| MW-117D | Offsite Wells | Deep | 03/06/2023 | MW-117D | 8.2 | 0.0082 | |
| MW-117D | Offsite Wells | Deep | 06/22/2023 | MW-117D | 10.6 | 0.0106 | |
| MW-117S | Offsite Wells | Shallow | 09/23/2020 | MW-117S_092320 | **500** | **0.5** | U |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-117S | Offsite Wells | Shallow | 12/04/2020 | MW-117S_120420 | 8.9 | 0.0089 | J |
| MW-117S | Offsite Wells | Shallow | 01/13/2022 | MW-117S_RI2022 | **15.4** | **0.0154** | |
| MW-117S | Offsite Wells | Shallow | 09/15/2022 | MW-117S | 14.2 | 0.0142 | |
| MW-117S | Offsite Wells | Shallow | 03/06/2023 | MW-117S | 11.1 | 0.0111 | |
| MW-117S | Offsite Wells | Shallow | 06/22/2023 | MW-117S | **14.5** | **0.0145** | |
| MW-118D | Offsite Wells | Deep | 09/24/2020 | MW-118D_092420 | **15.1** | **0.0151** | |
| MW-118D | Offsite Wells | Deep | 01/12/2022 | MW-118D_RI2022 | **21.2** | **0.0212** | |
| MW-118D | Offsite Wells | Deep | 09/14/2022 | MW-118D | **30.1** | **0.0301** | |
| MW-118D | Offsite Wells | Deep | 03/11/2023 | MW-118D | **15.1** | **0.0151** | |
| MW-118D | Offsite Wells | Deep | 06/22/2023 | MW-118D | 1.3 | 0.0013 | J |
| MW-118S | Offsite Wells | Shallow | 09/24/2020 | MW-118S_092420 | **41.4** | **0.0414** | |
| MW-118S | Offsite Wells | Shallow | 01/12/2022 | MW-118S_RI2022 | **45.2** | **0.0452** | |
| MW-118S | Offsite Wells | Shallow | 09/14/2022 | MW-118S | **47** | **0.047** | |
| MW-118S | Offsite Wells | Shallow | 03/11/2023 | MW-118S | **41.7** | **0.0417** | |
| MW-118S | Offsite Wells | Shallow | 06/22/2023 | MW-118S | **37.5** | **0.0375** | |
| MW-119D | Offsite Wells | Deep | 09/22/2020 | MW-119D_092220 | 3.7 | 0.0037 | J |
| MW-119D | Offsite Wells | Deep | 01/10/2022 | DUP-1_RI2022 | 5.6 | 0.0056 | |
| MW-119D | Offsite Wells | Deep | 01/10/2022 | MW-119D_RI2022 | 4.6 | 0.0046 | |
| MW-119D | Offsite Wells | Deep | 09/12/2022 | MW-119D | 6.7 | 0.0067 | |
| MW-119D | Offsite Wells | Deep | 11/07/2022 | MW-119D | 5.7 | 0.0057 | |
| MW-119D | Offsite Wells | Deep | 03/08/2023 | MW-119D | 14.1 | 0.0141 | J |
| MW-119D | Offsite Wells | Deep | 06/19/2023 | MW-119D | 10.8 | 0.0108 | |
| MW-119S | Offsite Wells | Shallow | 09/22/2020 | MW-119S_092220 | 3.1 | 0.0031 | J |
| MW-119S | Offsite Wells | Shallow | 01/10/2022 | MW-119S_RI2022 | 4 | 0.004 | J |
| MW-119S | Offsite Wells | Shallow | 09/12/2022 | MW-119S | 6.1 | 0.0061 | |
| MW-119S | Offsite Wells | Shallow | 11/07/2022 | MW-119S | 5.9 | 0.0059 | |
| MW-119S | Offsite Wells | Shallow | 03/08/2023 | MW-119S | 6.5 | 0.0065 | |
| MW-119S | Offsite Wells | Shallow | 06/19/2023 | MW-119S | 9.5 | 0.0095 | |
| MW-11D | Main Plant Area | Intermediate | 03/12/2014 | GW0012_20140312 | **460** | **0.46** | |
| MW-11D | Main Plant Area | Intermediate | 03/22/2019 | MW-11D_20190322 | **270** | **0.27** | |
| MW-11DD | Main Plant Area | Deep | 03/12/2014 | GW0013_20140312 | **210** | **0.21** | |
| MW-11DD | Main Plant Area | Deep | 03/22/2019 | MW-11DD_20190322 | **230** | **0.23** | |
| MW-120D | Offsite Wells | Deep | 12/17/2018 | MW-120D-12172018 | **196** | **0.196** | |
| MW-120D | Offsite Wells | Deep | 09/28/2020 | MW-120D_092820 | **159** | **0.159** | |
| MW-120D | Offsite Wells | Deep | 01/13/2022 | MW-120D_RI2022 | **150** | **0.15** | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-120D | Offsite Wells | Deep | 09/15/2022 | MW-120D | **111** | **0.111** | |
| MW-120D | Offsite Wells | Deep | 03/13/2023 | MW-120D | **130** | **0.13** | |
| MW-120D | Offsite Wells | Deep | 06/21/2023 | MW-120D | **139** | **0.139** | |
| MW-120D | Offsite Wells | Deep | 06/21/2023 | DUP_062123 | **146** | **0.146** | |
| MW-120S | Offsite Wells | Shallow | 12/17/2018 | MW-120S-12172018 | **93.1** | **0.0931** | |
| MW-120S | Offsite Wells | Shallow | 09/28/2020 | MW-120S_092820 | **98** | **0.098** | |
| MW-120S | Offsite Wells | Shallow | 01/13/2022 | MW-120S_RI2022 | **95.8** | **0.0958** | |
| MW-120S | Offsite Wells | Shallow | 09/15/2022 | MW-120S | **76.8** | **0.0768** | |
| MW-120S | Offsite Wells | Shallow | 03/13/2023 | MW-120S | **78.7** | **0.0787** | |
| MW-120S | Offsite Wells | Shallow | 06/21/2023 | MW-120S | **116** | **0.116** | |
| MW-121D | Offsite Wells | Deep | 12/20/2018 | MW-121D-12202018 | **70.1** | **0.0701** | |
| MW-121D | Offsite Wells | Deep | 09/25/2020 | MW-121D_092520 | **75.8** | **0.0758** | |
| MW-121D | Offsite Wells | Deep | 01/14/2022 | MW-121D_RI2022 | **96.5** | **0.0965** | |
| MW-121D | Offsite Wells | Deep | 09/16/2022 | MW-121D | **91.6** | **0.0916** | |
| MW-121D | Offsite Wells | Deep | 03/10/2023 | MW-121D | **77.4** | **0.0774** | |
| MW-121D | Offsite Wells | Deep | 06/26/2023 | MW-121D | **121** | **0.121** | |
| MW-121S | Offsite Wells | Shallow | 12/20/2018 | MW-121S-12202018 | **165** | **0.165** | |
| MW-121S | Offsite Wells | Shallow | 09/25/2020 | MW-121S_092520 | **166** | **0.166** | |
| MW-121S | Offsite Wells | Shallow | 01/14/2022 | MW-121S_RI2022 | **164** | **0.164** | |
| MW-121S | Offsite Wells | Shallow | 09/16/2022 | MW-121S | **133** | **0.133** | |
| MW-121S | Offsite Wells | Shallow | 03/10/2023 | MW-121S | **168** | **0.168** | |
| MW-121S | Offsite Wells | Shallow | 06/26/2023 | MW-121S | 2.3 | 0.0023 | |
| MW-122D | Offsite Wells | Deep | 09/28/2020 | MW-122D_092820 | **52.9** | **0.0529** | |
| MW-122D | Offsite Wells | Deep | 01/14/2022 | MW-122D_RI2022 | **51.2** | **0.0512** | |
| MW-122D | Offsite Wells | Deep | 09/16/2022 | MW-122D | **43.1** | **0.0431** | |
| MW-122D | Offsite Wells | Deep | 11/09/2022 | MW-122D | **44.2** | **0.0442** | |
| MW-122D | Offsite Wells | Deep | 03/28/2023 | DUP_032823 | **56.6** | **0.0566** | |
| MW-122D | Offsite Wells | Deep | 03/28/2023 | MW-122D | **58.1** | **0.0581** | |
| MW-122D | Offsite Wells | Deep | 06/26/2023 | MW-122D | **52.8** | **0.0528** | |
| MW-122S | Offsite Wells | Shallow | 09/28/2020 | MW-122S_092820 | **161** | **0.161** | |
| MW-122S | Offsite Wells | Shallow | 01/14/2022 | MW-122S_RI2022 | **186** | **0.186** | |
| MW-122S | Offsite Wells | Shallow | 09/16/2022 | MW-122S | **92.6** | **0.0926** | |
| MW-122S | Offsite Wells | Shallow | 11/09/2022 | DUP1-11.09.2022 | **78.2** | **0.0782** | |
| MW-122S | Offsite Wells | Shallow | 11/09/2022 | MW-122S | **78.2** | **0.0782** | |
| MW-122S | Offsite Wells | Shallow | 03/28/2023 | MW-122S | **79** | **0.079** | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-122S | Offsite Wells | Shallow | 06/26/2023 | MW-122S | **83.9** | **0.0839** | |
| MW-123D | Offsite Wells | Lower PRM | 09/28/2020 | MW-123D_092820 | 5.3 | 0.0053 | |
| MW-123D | Offsite Wells | Lower PRM | 01/14/2022 | MW-123D_RI2022 | **44.2** | **0.0442** | |
| MW-123D | Offsite Wells | Lower PRM | 09/19/2022 | MW-123D | 6.7 | 0.0067 | |
| MW-123D | Offsite Wells | Lower PRM | 04/05/2023 | MW-123D | 8.6 | 0.0086 | J |
| MW-123I | Offsite Wells | Middle PRM | 09/28/2020 | MW-123I_092820 | **137** | **0.137** | |
| MW-123I | Offsite Wells | Middle PRM | 01/14/2022 | MW-123I_RI2022 | **135** | **0.135** | |
| MW-123I | Offsite Wells | Middle PRM | 09/19/2022 | MW-123I | **166** | **0.166** | |
| MW-123I | Offsite Wells | Middle PRM | 04/05/2023 | MW-123I | **190** | **0.19** | |
| MW-123S | Offsite Wells | Shallow | 09/28/2020 | MW-123S_092820 | **180** | **0.18** | |
| MW-123S | Offsite Wells | Shallow | 01/14/2022 | MW-123S_RI2022 | **199** | **0.199** | |
| MW-123S | Offsite Wells | Shallow | 09/19/2022 | MW-123S | **223** | **0.223** | |
| MW-123S | Offsite Wells | Shallow | 03/13/2023 | MW-123S | **180** | **0.18** | |
| MW-123S | Offsite Wells | Shallow | 06/23/2023 | MW-123S | **183** | **0.183** | |
| MW-124D | Offsite Wells | Deep | 12/04/2020 | MW-124D_120420 | **71** | **0.071** | |
| MW-124D | Offsite Wells | Deep | 01/14/2022 | MW-124D_RI2022 | **103** | **0.103** | |
| MW-124D | Offsite Wells | Deep | 09/20/2022 | MW-124D | **142** | **0.142** | |
| MW-124D | Offsite Wells | Deep | 03/08/2023 | DUP_030823 | **153** | **0.153** | |
| MW-124D | Offsite Wells | Deep | 03/08/2023 | MW-124D | **132** | **0.132** | |
| MW-124D | Offsite Wells | Deep | 06/23/2023 | MW-124D | **116** | **0.116** | |
| MW-124S | Offsite Wells | Shallow | 12/04/2020 | DUP_120420 | **99.7** | **0.0997** | |
| MW-124S | Offsite Wells | Shallow | 12/04/2020 | MW-124S_120420 | **96.5** | **0.0965** | |
| MW-124S | Offsite Wells | Shallow | 01/14/2022 | MW-124S_RI2022 | **126** | **0.126** | |
| MW-124S | Offsite Wells | Shallow | 09/20/2022 | MW-124S | **134** | **0.134** | |
| MW-124S | Offsite Wells | Shallow | 03/08/2023 | MW-124S | **107** | **0.107** | |
| MW-124S | Offsite Wells | Shallow | 06/23/2023 | MW-124S | **110** | **0.11** | |
| MW-125D | Offsite Wells | Deep | 12/03/2020 | MW-125D_120320 | **40** | **0.04** | U |
| MW-125D | Offsite Wells | Deep | 12/03/2020 | MW-125D_120320B | 10 | 0.01 | U |
| MW-125D | Offsite Wells | Deep | 01/13/2022 | MW-125D_RI2022 | 4.3 | 0.0043 | |
| MW-125D | Offsite Wells | Deep | 09/15/2022 | MW-125D | 13.2 | 0.0132 | |
| MW-125D | Offsite Wells | Deep | 03/09/2023 | MW-125D | 13.7 | 0.0137 | |
| MW-125D | Offsite Wells | Deep | 06/20/2023 | MW-125D | 12.7 | 0.0127 | |
| MW-125S | Offsite Wells | Shallow | 12/03/2020 | MW-125S_120320 | 6.9 | 0.0069 | |
| MW-125S | Offsite Wells | Shallow | 01/13/2022 | MW-125S_RI2022 | 8.7 | 0.0087 | |
| MW-125S | Offsite Wells | Shallow | 09/15/2022 | MW-125S | 12.9 | 0.0129 | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-125S | Offsite Wells | Shallow | 03/09/2023 | MW-125S | **15.8** | **0.0158** | |
| MW-125S | Offsite Wells | Shallow | 06/20/2023 | MW-125S | **15.5** | **0.0155** | |
| MW-126D | Offsite Wells | Deep | 12/30/2021 | MW-126D | 2.2 | 0.0022 | J |
| MW-126D | Offsite Wells | Deep | 09/12/2022 | DUP_09.12.2022 | 2 | 0.002 | U |
| MW-126D | Offsite Wells | Deep | 09/12/2022 | MW-126D | 2.1 | 0.0021 | U |
| MW-126D | Offsite Wells | Deep | 03/06/2023 | DUP_030623 | 1.3 | 0.0013 | J |
| MW-126D | Offsite Wells | Deep | 03/06/2023 | MW-126D | 1.1 | 0.0011 | J |
| MW-126D | Offsite Wells | Deep | 06/19/2023 | MW-126D | 1.1 | 0.0011 | J |
| MW-126D | Offsite Wells | Deep | 06/19/2023 | DUP_061923 | 0.84 | 0.00084 | J |
| MW-126S | Offsite Wells | Shallow | 12/30/2021 | MW-126S | 3.3 | 0.0033 | J |
| MW-126S | Offsite Wells | Shallow | 09/12/2022 | MW-126S | 4.2 | 0.0042 | |
| MW-126S | Offsite Wells | Shallow | 03/06/2023 | MW-126S | 2.9 | 0.0029 | |
| MW-126S | Offsite Wells | Shallow | 06/19/2023 | MW-126S | 2.8 | 0.0028 | |
| MW-127D | Offsite Wells | Deep | 12/30/2021 | MW-127D | **173** | **0.173** | |
| MW-127D | Offsite Wells | Deep | 09/19/2022 | DUP_09.19.2022 | **158** | **0.158** | |
| MW-127D | Offsite Wells | Deep | 09/19/2022 | MW-127D | **182** | **0.182** | |
| MW-127D | Offsite Wells | Deep | 03/08/2023 | MW-127D | **182** | **0.182** | |
| MW-127D | Offsite Wells | Deep | 06/21/2023 | MW-127D | **165** | **0.165** | |
| MW-127S | Offsite Wells | Shallow | 12/30/2021 | DUP1-123021 | **21.8** | **0.0218** | |
| MW-127S | Offsite Wells | Shallow | 12/30/2021 | MW-127S | **21.8** | **0.0218** | |
| MW-127S | Offsite Wells | Shallow | 09/19/2022 | MW-127S | **34.1** | **0.0341** | |
| MW-127S | Offsite Wells | Shallow | 03/08/2023 | MW-127S | **25.7** | **0.0257** | |
| MW-127S | Offsite Wells | Shallow | 06/21/2023 | MW-127S | **26.6** | **0.0266** | |
| MW-128S | Main Plant Area | Shallow | 03/10/2023 | MW-128S | **54200** | **54.2** | |
| MW-128S | Main Plant Area | Shallow | 06/26/2023 | MW-128S | **71100** | **71.1** | |
| MW-129S | Main Plant Area | Shallow | 03/10/2023 | MW-129S | **10200** | **10.2** | |
| MW-129S | Main Plant Area | Shallow | 06/26/2023 | MW-129S | **5860** | **5.86** | |
| MW-12S | Main Plant Area | Shallow | 03/25/2019 | MW-12S_20190325 | **242** | **0.242** | |
| MW-14S | Main Plant Area | Shallow | 03/25/2019 | MW-14S_20190325 | **343** | **0.343** | |
| MW-15S | Main Plant Area | Shallow | 03/13/2014 | GW0014_20140313 | **270** | **0.27** | |
| MW-15S | Main Plant Area | Shallow | 03/25/2019 | MW-15S_20190325 | **238** | **0.238** | |
| MW-16I | Main Plant Area | Intermediate | 09/20/2016 | GW-156 | **230** | **0.23** | |
| MW-16I | Main Plant Area | Intermediate | 03/25/2019 | MW-16I_20190325 | **184** | **0.184** | |
| MW-16S | Main Plant Area | Shallow | 09/22/2016 | GW-160 | **680** | **0.68** | |
| MW-16S | Main Plant Area | Shallow | 03/25/2019 | MW-16S_20190325 | **263** | **0.263** | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-16S | Main Plant Area | Shallow | 11/02/2022 | MW-16S | **87** | **0.087** | |
| MW-16S | Main Plant Area | Shallow | 03/09/2023 | MW-16S | **155** | **0.155** | |
| MW-16S | Main Plant Area | Shallow | 06/27/2023 | MW-16S | **420** | **0.42** | |
| MW-17S | Main Plant Area | Shallow | 03/13/2014 | GW0015_20140313 | **800** | **0.8** | |
| MW-17S | Main Plant Area | Shallow | 03/25/2019 | MW-17S_20190325 | **88.7** | **0.0887** | |
| MW-18D | Offsite Wells | Deep | 03/21/2014 | GW0034_20140321 | **70** | **0.07** | |
| MW-18D | Offsite Wells | Deep | 09/16/2016 | GW-136 | **150** | **0.15** | |
| MW-18I | Offsite Wells | Intermediate | 03/21/2014 | GW0035_20140321 | **24600** | **24.6** | |
| MW-18I | Offsite Wells | Intermediate | 09/16/2016 | GW-137 | **27000** | **27** | |
| MW-18S | Offsite Wells | Shallow | 03/21/2014 | GW0036_20140321 | **310** | **0.31** | |
| MW-19D | Offsite Wells | Deep | 03/21/2014 | GW0037_20140321 | **2220** | **2.22** | |
| MW-19D | Offsite Wells | Deep | 09/21/2016 | GW-150 | **4900** | **4.9** | |
| MW-19D | Offsite Wells | Deep | 09/23/2020 | MW-19D_092320 | **2630** | **2.63** | |
| MW-19D | Offsite Wells | Deep | 10/18/2022 | MW-19D | **4370** | **4.37** | |
| MW-19D | Offsite Wells | Deep | 03/14/2023 | MW-19D | **4260** | **4.26** | |
| MW-19D | Offsite Wells | Deep | 06/28/2023 | MW-19D | **3650** | **3.65** | |
| MW-19I | Offsite Wells | Intermediate | 03/21/2014 | GW0038_20140321 | **4090** | **4.09** | |
| MW-19I | Offsite Wells | Intermediate | 09/16/2016 | GW-125 | **3700** | **3.7** | |
| MW-19I | Offsite Wells | Intermediate | 10/01/2020 | MW-19I_100120 | **4320** | **4.32** | |
| MW-19I | Offsite Wells | Intermediate | 09/20/2022 | MW-19I | **8350** | **8.35** | |
| MW-19I | Offsite Wells | Intermediate | 03/14/2023 | MW-19I | **6050** | **6.05** | |
| MW-19I | Offsite Wells | Intermediate | 06/28/2023 | MW-19I | **4600** | **4.6** | |
| MW-19S | Offsite Wells | Shallow | 03/21/2014 | GW0039_20140321 | **470** | **0.47** | |
| MW-19S | Offsite Wells | Shallow | 10/01/2020 | MW-19S_100120 | **77.8** | **0.0778** | |
| MW-19S | Offsite Wells | Shallow | 03/14/2023 | MW-19S | **368** | **0.368** | |
| MW-19X | Offsite Wells | Middle PRM | 09/21/2016 | GW-151 | 6.9 | 0.0069 | |
| MW-19X | Offsite Wells | Middle PRM | 10/28/2019 | MW19X-10282019 | 12 | 0.012 | |
| MW-19X | Offsite Wells | Middle PRM | 04/05/2023 | MW-19X | **135** | **0.135** | |
| MW-1D | Main Plant Area | Deep | 03/12/2014 | GW0008_20140312 | **930** | **0.93** | |
| MW-1D | Main Plant Area | Deep | 03/21/2019 | MW-1D_20190321 | **2900** | **2.9** | |
| MW-1D | Main Plant Area | Deep | 03/21/2019 | MW-1D_20190321FD | **2810** | **2.81** | |
| MW-1D | Main Plant Area | Deep | 10/20/2022 | MW-1D | **2390** | **2.39** | |
| MW-1D | Main Plant Area | Deep | 03/13/2023 | MW-1D | **1790** | **1.79** | |
| MW-1D | Main Plant Area | Deep | 06/26/2023 | MW-1D | **2690** | **2.69** | |
| MW-22X | Main Plant Area | Middle PRM | 04/04/2023 | MW-22X | **98.1** | **0.0981** | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-24D | Dredge Spoil Area | Deep | 03/13/2014 | GW0016_20140313 | **280** | **0.28** | |
| MW-24D | Dredge Spoil Area | Deep | 09/21/2016 | GW-154 | **320** | **0.32** | |
| MW-24D | Dredge Spoil Area | Deep | 09/28/2020 | MW-24D_092820 | **201** | **0.201** | |
| MW-24D | Dredge Spoil Area | Deep | 10/19/2022 | MW-24D | **227** | **0.227** | |
| MW-24I | Dredge Spoil Area | Intermediate | 03/13/2014 | GW0017_20140313 | **200** | **0.2** | |
| MW-24I | Dredge Spoil Area | Intermediate | 09/21/2016 | GW-153 | **170** | **0.17** | |
| MW-24I | Dredge Spoil Area | Intermediate | 09/28/2020 | MW-24I_092820 | **169** | **0.169** | |
| MW-24I | Dredge Spoil Area | Intermediate | 10/19/2022 | MW-24I | **140** | **0.14** | |
| MW-25D | Offsite Wells | Deep | 03/20/2014 | GW0044_20140320 | **200** | **0.2** | U |
| MW-25IL | Offsite Wells | Intermediate | 03/20/2014 | GW0043_20140320 | **290** | **0.29** | |
| MW-25IL | Offsite Wells | Intermediate | 10/18/2022 | MW-25IL | **104** | **0.104** | |
| MW-25IU | Offsite Wells | Intermediate | 03/20/2014 | GW0041_20140320 | **300** | **0.3** | J |
| MW-25IU | Offsite Wells | Intermediate | 03/20/2014 | GW0042_20140320 | **350** | **0.35** | |
| MW-25IU | Offsite Wells | Intermediate | 11/01/2022 | MW-25IU | **100** | **0.1** | |
| MW-25S | Offsite Wells | Shallow | 03/20/2014 | GW0040_20140320 | **270** | **0.27** | |
| MW-25S | Offsite Wells | Shallow | 10/18/2022 | MW-25S | **75.5** | **0.0755** | |
| MW-26D | Offsite Wells | Deep | 03/18/2014 | GW0048_20140318 | **170** | **0.17** | |
| MW-26D | Offsite Wells | Deep | 10/17/2022 | MW-26D | **205** | **0.205** | |
| MW-26IL | Offsite Wells | Intermediate | 03/12/2014 | GW0047_20140312 | **370** | **0.37** | |
| MW-26IL | Offsite Wells | Intermediate | 10/17/2022 | MW-26IL | **161** | **0.161** | |
| MW-26IU | Offsite Wells | Intermediate | 03/18/2014 | GW0046_20140318 | **390** | **0.39** | |
| MW-26S | Offsite Wells | Shallow | 03/12/2014 | GW0045_20140312 | **140** | **0.14** | |
| MW-26S | Offsite Wells | Shallow | 10/17/2022 | MW-26S | **48.4** | **0.0484** | |
| MW-27IU | Offsite Wells | Intermediate | 03/17/2014 | GW0050_20140317 | **820** | **0.82** | |
| MW-27IU | Offsite Wells | Intermediate | 10/10/2022 | MW-27IU | **847** | **0.847** | |
| MW-27S | Offsite Wells | Shallow | 03/17/2014 | GW0049_20140317 | **350** | **0.35** | |
| MW-27S | Offsite Wells | Shallow | 10/10/2022 | DUP_20221010 | **225** | **0.225** | |
| MW-27S | Offsite Wells | Shallow | 10/10/2022 | MW-27S | **199** | **0.199** | |
| MW-28IL | Offsite Wells | Intermediate | 04/17/2014 | GW0007_20140417 | **1100** | **1.1** | |
| MW-28IL | Offsite Wells | Intermediate | 04/17/2014 | GW0008_20140417 | **1070** | **1.07** | |
| MW-28IL | Offsite Wells | Intermediate | 10/11/2022 | MW-28IL | **534** | **0.534** | |
| MW-28S | Offsite Wells | Shallow | 03/17/2014 | GW0051_20140317 | **560** | **0.56** | |
| MW-28S | Offsite Wells | Shallow | 10/11/2022 | MW-28S | **45.7** | **0.0457** | |
| MW-29IU | Offsite Wells | Intermediate | 03/17/2014 | GW0054_20140317 | **1440** | **1.44** | |
| MW-29IU | Offsite Wells | Intermediate | 10/11/2022 | MW-29IU | **843** | **0.843** | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-29S | Offsite Wells | Shallow | 04/17/2014 | GW0009_20140417 | **150** | **0.15** | |
| MW-29S | Offsite Wells | Shallow | 10/11/2022 | MW-29S | **23.5** | **0.0235** | |
| MW-2D | Main Plant Area | Deep | 03/26/2019 | MW-2D_20190326 | **142** | **0.142** | |
| MW-30D | Offsite Wells | Deep | 03/18/2014 | GW0058_20140318 | **1000** | **1** | |
| MW-30D | Offsite Wells | Deep | 09/14/2016 | GW-104 | **3300** | **3.3** | |
| MW-30D | Offsite Wells | Deep | 10/12/2022 | MW-30D | **1380** | **1.38** | |
| MW-30IL | Offsite Wells | Intermediate | 03/18/2014 | GW0057_20140318 | **28600** | **28.6** | |
| MW-30IL | Offsite Wells | Intermediate | 09/14/2016 | GW-103 | **34000** | **34** | |
| MW-30IL | Offsite Wells | Intermediate | 10/12/2022 | MW-30IL | **18400** | **18.4** | |
| MW-30IU | Offsite Wells | Intermediate | 03/18/2014 | GW0056_20140318 | **5810** | **5.81** | |
| MW-30IU | Offsite Wells | Intermediate | 09/14/2016 | GW-100 | **3600** | **3.6** | |
| MW-30IU | Offsite Wells | Intermediate | 09/14/2016 | GW-101 | **4000** | **4** | |
| MW-30IU | Offsite Wells | Intermediate | 10/11/2022 | MW-30IU | **1800** | **1.8** | |
| MW-30S | Offsite Wells | Shallow | 03/18/2014 | GW0055_20140318 | **22** | **0.022** | |
| MW-30S | Offsite Wells | Shallow | 09/14/2016 | GW-102 | **120** | **0.12** | |
| MW-30S | Offsite Wells | Shallow | 10/11/2022 | MW-30S | 13.4 | 0.0134 | |
| MW-31IU | Offsite Wells | Intermediate | 03/18/2014 | GW0060_20140318 | **340** | **0.34** | |
| MW-31IU | Offsite Wells | Intermediate | 09/14/2016 | GW-106 | **350** | **0.35** | |
| MW-31IU | Offsite Wells | Intermediate | 10/12/2022 | MW-31IU | **180** | **0.18** | |
| MW-31S | Offsite Wells | Shallow | 03/18/2014 | GW0059_20140318 | **250** | **0.25** | |
| MW-31S | Offsite Wells | Shallow | 09/14/2016 | GW-105 | **190** | **0.19** | |
| MW-31S | Offsite Wells | Shallow | 10/12/2022 | MW-31S | **150** | **0.15** | |
| MW-32IU | Offsite Wells | Intermediate | 03/20/2014 | GW0062_20140320 | **370** | **0.37** | J |
| MW-32IU | Offsite Wells | Intermediate | 03/20/2014 | GW0063_20140320 | **360** | **0.36** | |
| MW-32IU | Offsite Wells | Intermediate | 09/20/2016 | GW-138 | **120** | **0.12** | |
| MW-32S | Offsite Wells | Shallow | 03/20/2014 | GW0061_20140320 | **260** | **0.26** | |
| MW-32S | Offsite Wells | Shallow | 09/20/2016 | GW-139 | **240** | **0.24** | |
| MW-32S | Offsite Wells | Shallow | 10/19/2022 | MW-32S | **65.5** | **0.0655** | |
| MW-33S | Offsite Wells | Shallow | 04/17/2014 | GW0010_20140417 | **150** | **0.15** | |
| MW-33S | Offsite Wells | Shallow | 09/15/2016 | GW-113 | **120** | **0.12** | |
| MW-33S | Offsite Wells | Shallow | 09/21/2020 | MW-33S_092120 | **44.3** | **0.0443** | |
| MW-33S | Offsite Wells | Shallow | 03/10/2023 | MW-33S | **37.6** | **0.0376** | |
| MW-33S | Offsite Wells | Shallow | 06/28/2023 | MW-33S | **54.9** | **0.0549** | |
| MW-33S | Offsite Wells | Shallow | 04/17/2014 | GW0012_20140417 | **700** | **0.7** | |
| MW-34D | Offsite Wells | Deep | 09/16/2016 | GW-130 | **770** | **0.77** | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-34D | Offsite Wells | Deep | 09/12/2018 | 34D-09122018-GW | **749** | **0.749** | |
| MW-34D | Offsite Wells | Deep | 10/17/2022 | MW-34D | **509** | **0.509** | |
| MW-34I | Offsite Wells | Intermediate | 04/17/2014 | GW0011_20140417 | **910** | **0.91** | |
| MW-34IL | Offsite Wells | Intermediate | 09/16/2016 | GW-129 | **900** | **0.9** | |
| MW-34IL | Offsite Wells | Intermediate | 09/12/2018 | 34IL-09122018-GW | **356** | **0.356** | |
| MW-34IL | Offsite Wells | Intermediate | 10/17/2022 | MW-34IL | **572** | **0.572** | |
| MW-35D | Offsite Wells | Deep | 04/17/2014 | GW0014_20140417 | **400** | **0.4** | |
| MW-35D | Offsite Wells | Deep | 09/15/2016 | GW-115 | **450** | **0.45** | |
| MW-35D | Offsite Wells | Deep | 10/12/2022 | MW-35D | **1480** | **1.48** | |
| MW-35I | Offsite Wells | Intermediate | 04/17/2014 | GW0013_20140417 | **4780** | **4.78** | |
| MW-35I | Offsite Wells | Intermediate | 09/15/2016 | GW-114 | **9500** | **9.5** | |
| MW-35I | Offsite Wells | Intermediate | 10/12/2022 | MW-35I | **18700** | **18.7** | |
| MW-36D | Offsite Wells | Deep | 04/17/2014 | GW0015_20140417 | **120** | **0.12** | |
| MW-36D | Offsite Wells | Deep | 09/15/2016 | GW-116 | **190** | **0.19** | |
| MW-36D | Offsite Wells | Deep | 10/13/2022 | MW-36D | **476** | **0.476** | |
| MW-36D | Offsite Wells | Deep | 03/09/2023 | MW-36D | **372** | **0.372** | |
| MW-36D | Offsite Wells | Deep | 06/29/2023 | MW-36D | **422** | **0.422** | |
| MW-37D | Offsite Wells | Deep | 09/15/2016 | GW-118 | **380** | **0.38** | |
| MW-37D | Offsite Wells | Deep | 10/13/2022 | MW-37D | **750** | **0.75** | |
| MW-37S | Offsite Wells | Shallow | 09/15/2016 | GW-117 | **660** | **0.66** | |
| MW-37S | Offsite Wells | Shallow | 10/13/2022 | MW-37S | **422** | **0.422** | |
| MW-38D | Offsite Wells | Deep | 09/16/2016 | GW-131 | **310** | **0.31** | |
| MW-38D | Offsite Wells | Deep | 09/21/2020 | MW-38D_092120 | **555** | **0.555** | |
| MW-38D | Offsite Wells | Deep | 10/13/2022 | MW-38D | **780** | **0.78** | |
| MW-39D | Offsite Wells | Deep | 09/16/2016 | GW-142 | **71** | **0.071** | |
| MW-39D | Offsite Wells | Deep | 09/24/2020 | MW-39D_092420 | **125** | **0.125** | |
| MW-39D | Offsite Wells | Deep | 10/14/2022 | MW-39D | **161** | **0.161** | |
| MW-39I | Offsite Wells | Intermediate | 09/19/2016 | GW-140 | **47** | **0.047** | |
| MW-39I | Offsite Wells | Intermediate | 09/24/2020 | MW-39I_092420 | **119** | **0.119** | |
| MW-39I | Offsite Wells | Intermediate | 10/14/2022 | MW-39I | **128** | **0.128** | |
| MW-39S | Offsite Wells | Shallow | 09/19/2016 | GW-141 | **190** | **0.19** | |
| MW-39S | Offsite Wells | Shallow | 09/24/2020 | MW-39S_092420 | **18** | **0.018** | |
| MW-39S | Offsite Wells | Shallow | 10/14/2022 | MW-39S | **16.6** | **0.0166** | |
| MW-3D | Main Plant Area | Deep | 03/12/2014 | GW0018_20140312 | **17** | **0.017** | U |
| MW-3D | Main Plant Area | Deep | 03/26/2019 | MW-3D_20190326 | **105** | **0.105** | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-4 | Main Plant Area | Shallow | 09/19/2016 | GW-145 | **970** | **0.97** | |
| MW-4 | Main Plant Area | Shallow | 03/27/2019 | MW-4_20190327 | **172** | **0.172** | |
| MW-40I | Offsite Wells | Intermediate | 09/20/2016 | GW-158 | **150** | **0.15** | |
| MW-40I | Offsite Wells | Intermediate | 09/20/2016 | GW-159 | **150** | **0.15** | |
| MW-40I | Offsite Wells | Intermediate | 03/27/2019 | MW-40I_20190327 | **79.6** | **0.0796** | |
| MW-40I | Offsite Wells | Intermediate | 09/25/2020 | MW-40I_092520 | **69.1** | **0.0691** | |
| MW-40I | Offsite Wells | Intermediate | 11/02/2022 | MW-40I | **69** | **0.069** | |
| MW-40I | Offsite Wells | Intermediate | 03/13/2023 | DUP_031323 | **64.2** | **0.0642** | |
| MW-40I | Offsite Wells | Intermediate | 03/13/2023 | MW-40I | **65.5** | **0.0655** | |
| MW-40I | Offsite Wells | Intermediate | 06/27/2023 | MW-40I | **78.8** | **0.0788** | |
| MW-40S | Offsite Wells | Shallow | 09/22/2016 | GW-161 | **42** | **0.042** | |
| MW-40S | Offsite Wells | Shallow | 09/22/2016 | GW-161D | **47** | **0.047** | |
| MW-40S | Offsite Wells | Shallow | 03/22/2019 | MW-40S_20190322 | **65.8** | **0.0658** | |
| MW-40S | Offsite Wells | Shallow | 09/25/2020 | MW-40S_092520 | **14.9** | **0.0149** | |
| MW-40S | Offsite Wells | Shallow | 11/02/2022 | MW-40S | **15.8** | **0.0158** | |
| MW-40S | Offsite Wells | Shallow | 03/13/2023 | MW-40S | 10.4 | 0.0104 | |
| MW-40S | Offsite Wells | Shallow | 06/27/2023 | MW-40S | **15.2** | **0.0152** | |
| MW-41D | Offsite Wells | Deep | 09/16/2016 | GW-132 | **140** | **0.14** | |
| MW-41D | Offsite Wells | Deep | 09/22/2020 | MW-41D_092220 | **168** | **0.168** | |
| MW-41D | Offsite Wells | Deep | 10/13/2022 | MW-41D | **221** | **0.221** | |
| MW-42D | Offsite Wells | Deep | 09/16/2016 | GW-133 | **21** | **0.021** | |
| MW-42D | Offsite Wells | Deep | 09/22/2020 | MW-42D_092220 | **24.9** | **0.0249** | |
| MW-42D | Offsite Wells | Deep | 10/13/2022 | MW-42D | **42.9** | **0.0429** | |
| MW-42D | Offsite Wells | Deep | 03/09/2023 | MW-42D | **39.2** | **0.0392** | |
| MW-42D | Offsite Wells | Deep | 06/29/2023 | MW-42D | **46.3** | **0.0463** | |
| MW-43D | Offsite Wells | Deep | 09/19/2016 | GW-143 | **180** | **0.18** | |
| MW-43D | Offsite Wells | Deep | 09/24/2020 | MW-43D_092420 | **216** | **0.216** | |
| MW-43D | Offsite Wells | Deep | 10/14/2022 | MW-43D | **293** | **0.293** | |
| MW-43I | Offsite Wells | Intermediate | 09/19/2016 | GW-144 | **390** | **0.39** | |
| MW-43I | Offsite Wells | Intermediate | 09/24/2020 | MW-43I_092420 | **320** | **0.32** | |
| MW-43I | Offsite Wells | Intermediate | 10/14/2022 | MW-43I | **333** | **0.333** | |
| MW-44D | Offsite Wells | Deep | 09/16/2016 | GW-162 | **69** | **0.069** | |
| MW-44D | Offsite Wells | Deep | 09/22/2020 | MW-44D_092220 | **89.7** | **0.0897** | |
| MW-44D | Offsite Wells | Deep | 10/14/2022 | DUP_2022.10.14 | **139** | **0.139** | |
| MW-44D | Offsite Wells | Deep | 10/14/2022 | MW-44D | **147** | **0.147** | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-5D | Main Plant Area | Intermediate | 03/11/2014 | GW0019_20140311 | **150** | **0.15** | |
| MW-5D | Main Plant Area | Intermediate | 03/22/2019 | MW-5D_20190322 | **100** | **0.1** | |
| MW-5D | Main Plant Area | Intermediate | 03/22/2019 | MW-5D_20190322FD | **112** | **0.112** | |
| MW-5DD | Main Plant Area | Deep | 03/11/2014 | GW0020_20140311 | **250** | **0.25** | |
| MW-5DD | Main Plant Area | Deep | 03/11/2014 | GW0021_20140311 | **240** | **0.24** | |
| MW-5DD | Main Plant Area | Deep | 03/22/2019 | MW-5DD_20190322 | **217** | **0.217** | |
| MW-5I | Main Plant Area | Intermediate | 03/11/2014 | GW0022_20140311 | **170** | **0.17** | |
| MW-5I | Main Plant Area | Intermediate | 03/22/2019 | MW-5I_20190322 | **110** | **0.11** | |
| MW-5I | Main Plant Area | Intermediate | 10/20/2022 | MW-5I | **89.2** | **0.0892** | |
| MW-5I | Main Plant Area | Intermediate | 03/13/2023 | MW-5I | **52.6** | **0.0526** | |
| MW-5I | Main Plant Area | Intermediate | 06/29/2023 | MW-5I | **60.2** | **0.0602** | |
| MW-5X | Main Plant Area | Middle PRM | 03/12/2014 | GW0023_20140312 | 8.8 | 0.0088 | U |
| MW-5X | Main Plant Area | Middle PRM | 09/19/2016 | GW-146 | 2.8 | 0.0028 | J |
| MW-5X | Main Plant Area | Middle PRM | 09/30/2019 | DUP-093019 | 2.47 | 0.00247 | J |
| MW-5X | Main Plant Area | Middle PRM | 09/30/2019 | MW5X-093019 | 2.53 | 0.00253 | J |
| MW-5X | Main Plant Area | Middle PRM | 04/04/2023 | MW-5X | 3.3 | 0.0033 | |
| MW-6I | Main Plant Area | Intermediate | 03/12/2014 | GW0024_20140312 | **4420** | **4.42** | |
| MW-6I | Main Plant Area | Intermediate | 03/21/2019 | MW-6I_20190321 | **1840** | **1.84** | |
| MW-6I | Main Plant Area | Intermediate | 11/01/2022 | DUP_2022.11.01 | **1840** | **1.84** | |
| MW-6I | Main Plant Area | Intermediate | 11/01/2022 | MW-6I | **1780** | **1.78** | |
| MW-6I | Main Plant Area | Intermediate | 03/13/2023 | MW-6I | **1490** | **1.49** | |
| MW-6I | Main Plant Area | Intermediate | 06/26/2023 | MW-6I | **2290** | **2.29** | |
| MW-6S | Main Plant Area | Shallow | 03/12/2014 | GW0025_20140312 | **180** | **0.18** | |
| P-2S | Main Plant Area | Shallow | 03/13/2014 | GW0026_20140313 | **47** | **0.047** | |
| P-2S | Main Plant Area | Shallow | 03/28/2019 | P-2S_20190328 | **51.5** | **0.0515** | |
| P-2S | Main Plant Area | Shallow | 10/01/2020 | P-2S_100120 | **72.9** | **0.0729** | |
| P-2S | Main Plant Area | Shallow | 11/02/2022 | DUP_2022.11.02 | **16.9** | **0.0169** | |
| P-2S | Main Plant Area | Shallow | 11/02/2022 | P-2S | **16.6** | **0.0166** | |
| P-2S | Main Plant Area | Shallow | 03/09/2023 | P-2S | **21** | **0.021** | |
| P-2S | Main Plant Area | Shallow | 06/28/2023 | P-2S | **15.5** | **0.0155** | |
| P-3D | Dredge Spoil Area | Lower PRM | 04/18/2014 | GW0004_20140418 | 9.9 | 0.0099 | U |
| P-3D | Dredge Spoil Area | Lower PRM | 10/01/2020 | P-3D_100120 | 3.5 | 0.0035 | J |
| P-3D | Dredge Spoil Area | Lower PRM | 09/20/2022 | P-3D | 5.6 | 0.0056 | |
| P-3D | Dredge Spoil Area | Lower PRM | 03/10/2023 | DUP_031023 | 2.7 | 0.0027 | |
| P-3D | Dredge Spoil Area | Lower PRM | 03/10/2023 | P-3D | 2.6 | 0.0026 | |

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| P-3I | Dredge Spoil Area | Middle PRM | 04/18/2014 | GW0005_20140418 | **35** | **0.035** | |
| P-3I | Dredge Spoil Area | Middle PRM | 10/01/2020 | P-3I_100120 | **43.4** | **0.0434** | |
| P-3I | Dredge Spoil Area | Middle PRM | 09/20/2022 | P-3I | **50** | **0.05** | |
| P-3I | Dredge Spoil Area | Middle PRM | 03/10/2023 | P-3I | **53.9** | **0.0539** | |
| P-3S | Dredge Spoil Area | Shallow | 04/18/2014 | GW0006_20140418 | **160** | **0.16** | |
| P-3S | Dredge Spoil Area | Shallow | 10/01/2020 | P-3S_100120 | **526** | **0.526** | |
| P-3S | Dredge Spoil Area | Shallow | 03/10/2023 | P-3S | **360** | **0.36** | |
| P-3S | Dredge Spoil Area | Shallow | 06/28/2023 | P-3S | **320** | **0.32** | |
| P-5S | Main Plant Area | Shallow | 03/13/2014 | GW0027_20140313 | **23500** | **23.5** | |
| P-5S | Main Plant Area | Shallow | 03/26/2019 | P-5S_20190326 | **5830** | **5.83** | |
| P-6S | Main Plant Area | Shallow | 03/14/2014 | GW0028_20140314 | **1400** | **1.4** | J |
| P-6S | Main Plant Area | Shallow | 03/28/2019 | P-6S_20190328 | **705** | **0.705** | |
| P-6S | Main Plant Area | Shallow | 11/02/2022 | P-6S | **6260** | **6.26** | |
| P-6S | Main Plant Area | Shallow | 06/26/2023 | P-6S | **1410** | **1.41** | |
| P-7S | Main Plant Area | Shallow | 03/27/2019 | P-7S_20190327 | **895** | **0.895** | |
| PW-1 | Main Plant Area | Intermediate | 09/30/2019 | PW-093019 | 4.67 | 0.00467 | |
| PW-1 | Main Plant Area | Intermediate | 10/28/2019 | PW-10282019 | 6.27 | 0.00627 | |
| PZ-5 | Dredge Spoil Area | Shallow | 04/18/2014 | GW0001_20140418 | **39** | **0.039** | |
| PZ-5 | Dredge Spoil Area | Shallow | 04/18/2014 | GW0002_20140418 | **51** | **0.051** | |
| PZ-5 | Dredge Spoil Area | Shallow | 10/01/2020 | PZ-5_100120 | **49** | **0.049** | |
| PZ-5 | Dredge Spoil Area | Shallow | 09/20/2022 | PZ-5 | **64.9** | **0.0649** | |
| PZ-5 | Dredge Spoil Area | Shallow | 03/10/2023 | PZ-5 | **14.8** | **0.0148** | |
| PZ-5 | Dredge Spoil Area | Shallow | 06/28/2023 | PZ-5 | **37.4** | **0.0374** | |
| PZ-6 | Dredge Spoil Area | Shallow | 04/18/2014 | GW0003_20140418 | **97** | **0.097** | |
| PZ-6 | Dredge Spoil Area | Shallow | 11/03/2022 | PZ-6 | **142** | **0.142** | |
| PZ-6 | Dredge Spoil Area | Shallow | 03/10/2023 | PZ-6 | **140** | **0.14** | |
| PZ-6 | Dredge Spoil Area | Shallow | 06/29/2023 | PZ-6 | **155** | **0.155** | |
| PZ-8 | Dredge Spoil Area | Shallow | 09/21/2016 | GW-152 | 13 | 0.013 | |
| PZ-8 | Dredge Spoil Area | Shallow | 10/19/2022 | PZ-8 | 5.7 | 0.0057 | |

Notes:

**Bold/Boxed sample result indicates value exceeds NJDEP GWQS (14 ng/L, 0.014 µg/L).**

Definitions:
NJDEP GWQS = New Jersey Department of Environmental Protection Groundwater Quality Standard
ng/L = Nanograms per liter (or parts per trillion, ppt)

Table 2. Perfluorooctanioc Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|

µg/L = Micrograms per liter (or parts per billion, ppb)
PRM = Potomac Raritan Magothy

Data Qualifiers:
J = Indicates an estimated value
U = Analyte was not detected; the value reported is the method detection limit

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| M/H-1D | Main Plant Area | Deep | 03/13/2014 | GW0001_20140313 | **36** | **0.036** | J |
| M/H-1D | Main Plant Area | Deep | 03/20/2019 | MH-1D_20190320 | **16.9** | **0.0169** | |
| M/H-2D | Main Plant Area | Intermediate | 03/11/2014 | GW0002_20140311 | **43** | **0.043** | J |
| M/H-2D | Main Plant Area | Intermediate | 03/20/2019 | MH-2D_20190320 | **80** | **0.08** | U |
| M/H-2D | Main Plant Area | Intermediate | 09/29/2020 | MH2D_092920 | **23** | **0.023** | U |
| M/H-2D | Main Plant Area | Intermediate | 10/20/2022 | M/H-2D | **20** | **0.02** | U |
| M/H-2D | Main Plant Area | Intermediate | 03/09/2023 | M/H-2D | 8.5 | 0.0085 | |
| M/H-2D | Main Plant Area | Intermediate | 06/27/2023 | M/H-2D | 8.3 | 0.0083 | U |
| M/H-4 | Main Plant Area | Shallow | 03/14/2014 | GW0003_20140314 | 12 | 0.012 | U |
| M/H-4 | Main Plant Area | Shallow | 03/26/2019 | MH-4_20190326 | 4.82 | 0.00482 | J |
| M/H-4D | Main Plant Area | Intermediate | 03/13/2014 | GW0004_20140313 | **26** | **0.026** | J |
| M/H-4D | Main Plant Area | Intermediate | 03/26/2019 | MH-4D_20190326 | 13.4 | 0.0134 | |
| M/H-6D | Main Plant Area | Intermediate | 03/14/2014 | GW0005_20140314 | **14** | **0.014** | J |
| M/H-6D | Main Plant Area | Intermediate | 03/27/2019 | MH-6D_20190327 | 8.23 | 0.00823 | |
| M/H-7D | Main Plant Area | Intermediate | 03/11/2014 | GW0006_20140311 | 13 | 0.013 | U |
| M/H-7D | Main Plant Area | Intermediate | 03/20/2019 | MH-7D_20190320 | 8.71 | 0.00871 | |
| MW-1 | Main Plant Area | Shallow | 03/12/2014 | GW0007_20140312 | 12 | 0.012 | U |
| MW-1 | Main Plant Area | Shallow | 03/21/2019 | MW-1_20190321 | 3.82 | 0.00382 | J |
| MW-101D | Offsite Wells | Deep | 09/14/2016 | GW-124 | 3.9 | 0.0039 | J |
| MW-101D | Offsite Wells | Deep | 12/17/2018 | MW-101D-12172018 | 6.96 | 0.00696 | J |
| MW-101D | Offsite Wells | Deep | 09/25/2020 | MW-101D_092520 | 6.4 | 0.0064 | |
| MW-101D | Offsite Wells | Deep | 01/11/2022 | MW-101D_RI2022 | 6.4 | 0.0064 | |
| MW-101D | Offsite Wells | Deep | 06/23/2023 | MW-101D | 5.1 | 0.0051 | |
| MW-101S | Offsite Wells | Shallow | 09/14/2016 | GW-123 | 5.7 | 0.0057 | J |
| MW-101S | Offsite Wells | Shallow | 12/17/2018 | MW-101S-12172018 | 7.19 | 0.00719 | J |
| MW-101S | Offsite Wells | Shallow | 12/17/2018 | MW-101S-12172018-DUP | 7.37 | 0.00737 | J |
| MW-101S | Offsite Wells | Shallow | 09/25/2020 | MW-101S_092520 | 8 | 0.008 | |
| MW-101S | Offsite Wells | Shallow | 01/11/2022 | MW-101S_RI2022 | 6.6 | 0.0066 | |
| MW-101S | Offsite Wells | Shallow | 06/23/2023 | MW-101S | 9 | 0.009 | |
| MW-102D | Offsite Wells | Deep | 09/21/2016 | GW-171 | **16** | **0.016** | |
| MW-102D | Offsite Wells | Deep | 09/10/2018 | 102D-09102018-GW | 7.1 | 0.0071 | |
| MW-102D | Offsite Wells | Deep | 12/20/2018 | MW-102D-12202018 | 8.74 | 0.00874 | |
| MW-102D | Offsite Wells | Deep | 09/23/2020 | MW-102D_092320 | **14.3** | **0.0143** | |
| MW-102D | Offsite Wells | Deep | 01/12/2022 | MW-102D_RI2022 | **13.8** | **0.0138** | |
| MW-102D | Offsite Wells | Deep | 09/13/2022 | MW-102D | **14.7** | **0.0147** | |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-102D | Offsite Wells | Deep | 03/07/2023 | MW-102D | 13 | 0.013 | |
| MW-102D | Offsite Wells | Deep | 06/22/2023 | MW-102D | 9.8 | 0.0098 | |
| MW-102S | Offsite Wells | Shallow | 09/21/2016 | GW-170 | **19** | **0.019** | |
| MW-102S | Offsite Wells | Shallow | 09/10/2018 | 102S-09102018-GW | **18.1** | **0.0181** | |
| MW-102S | Offsite Wells | Shallow | 12/20/2018 | MW-102S-12202018 | **14** | **0.014** | |
| MW-102S | Offsite Wells | Shallow | 09/23/2020 | MW-102S_092320 | **15.7** | **0.0157** | |
| MW-102S | Offsite Wells | Shallow | 01/12/2022 | MW-102S_RI2022 | **15.5** | **0.0155** | |
| MW-102S | Offsite Wells | Shallow | 09/13/2022 | MW-102S | **14.8** | **0.0148** | |
| MW-102S | Offsite Wells | Shallow | 03/07/2023 | MW-102S | 10.2 | 0.0102 | |
| MW-102S | Offsite Wells | Shallow | 06/22/2023 | MW-102S | 8.8 | 0.0088 | |
| MW-102X | Offsite Wells | Middle PRM | 04/06/2023 | MW-102X | 0.88 | 0.00088 | U |
| MW-103D | Offsite Wells | Deep | 09/15/2016 | GW-110 | 4 | 0.004 | J |
| MW-103D | Offsite Wells | Deep | 12/20/2018 | MW-103D12202018 | 8.1 | 0.0081 | |
| MW-103D | Offsite Wells | Deep | 09/24/2020 | MW-103D_092420 | 4.6 | 0.0046 | |
| MW-103D | Offsite Wells | Deep | 01/12/2022 | MW-103D_RI2022 | 2.7 | 0.0027 | J |
| MW-103D | Offsite Wells | Deep | 09/14/2022 | MW-103D | 3.5 | 0.0035 | J |
| MW-103D | Offsite Wells | Deep | 03/14/2023 | MW-103D | 2.8 | 0.0028 | |
| MW-103D | Offsite Wells | Deep | 06/23/2023 | MW-103D | 3.7 | 0.0037 | |
| MW-103S | Offsite Wells | Shallow | 09/15/2016 | GW-109 | **14** | **0.014** | |
| MW-103S | Offsite Wells | Shallow | 12/20/2018 | MW-103S-12202018 | **13.8** | **0.0138** | |
| MW-103S | Offsite Wells | Shallow | 09/24/2020 | MW-103S_092420 | 12.6 | 0.0126 | |
| MW-103S | Offsite Wells | Shallow | 01/12/2022 | MW-103S_RI2022 | 4.6 | 0.0046 | |
| MW-103S | Offsite Wells | Shallow | 09/14/2022 | DUP_09.14.2022 | **19.3** | **0.0193** | |
| MW-103S | Offsite Wells | Shallow | 09/14/2022 | MW-103S | **22** | **0.022** | |
| MW-103S | Offsite Wells | Shallow | 03/14/2023 | MW-103S | 6 | 0.006 | |
| MW-103S | Offsite Wells | Shallow | 06/23/2023 | MW-103S | 3.2 | 0.0032 | |
| MW-103S | Offsite Wells | Shallow | 06/23/2023 | DUP_062323 | 2.8 | 0.0028 | |
| MW-104D | Offsite Wells | Deep | 09/15/2016 | GW-108 | 1.8 | 0.0018 | J |
| MW-104D | Offsite Wells | Deep | 12/20/2018 | MW-104D12202018 | 3.1 | 0.0031 | U |
| MW-104D | Offsite Wells | Deep | 09/24/2020 | MW-104D_092420 | 3.3 | 0.0033 | J |
| MW-104D | Offsite Wells | Deep | 01/14/2022 | MW-104D_RI2022 | 2 | 0.002 | U |
| MW-104D | Offsite Wells | Deep | 09/13/2022 | MW-104D | 2.9 | 0.0029 | J |
| MW-104D | Offsite Wells | Deep | 11/08/2022 | MW-104D | 2.7 | 0.0027 | J |
| MW-104D | Offsite Wells | Deep | 03/08/2023 | MW-104D | 2.8 | 0.0028 | |
| MW-104D | Offsite Wells | Deep | 06/20/2023 | MW-104D | 1.1 | 0.0011 | J |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-104S | Offsite Wells | Shallow | 09/15/2016 | GW-107 | 0.89 | 0.00089 | J |
| MW-104S | Offsite Wells | Shallow | 09/24/2020 | MW-104S_092420 | 2.4 | 0.0024 | J |
| MW-104S | Offsite Wells | Shallow | 01/14/2022 | MW-104S_RI2022 | 2 | 0.002 | U |
| MW-104S | Offsite Wells | Shallow | 09/13/2022 | MW-104S | 2 | 0.002 | U |
| MW-104S | Offsite Wells | Shallow | 11/08/2022 | MW-104S | 2 | 0.002 | U |
| MW-104S | Offsite Wells | Shallow | 03/08/2023 | MW-104S | 2.1 | 0.0021 | |
| MW-104S | Offsite Wells | Shallow | 06/20/2023 | MW-104S | 1 | 0.001 | J |
| MW-105D | Offsite Wells | Deep | 09/14/2016 | GW-112 | 1.6 | 0.0016 | J |
| MW-105D | Offsite Wells | Deep | 12/19/2018 | MW-105D-12192018 | 3 | 0.003 | U |
| MW-105D | Offsite Wells | Deep | 09/23/2020 | MW-105D_092320 | 2.3 | 0.0023 | J |
| MW-105D | Offsite Wells | Deep | 09/12/2022 | MW-105D | 2.1 | 0.0021 | J |
| MW-105D | Offsite Wells | Deep | 03/07/2023 | MW-105D | 1.9 | 0.0019 | |
| MW-105D | Offsite Wells | Deep | 06/19/2023 | MW-105D | 2 | 0.002 | |
| MW-105S | Offsite Wells | Shallow | 09/16/2016 | GW-111 | 2.3 | 0.0023 | J |
| MW-105S | Offsite Wells | Shallow | 12/19/2018 | MW-105S-12192018 | 3.2 | 0.0032 | U |
| MW-105S | Offsite Wells | Shallow | 09/23/2020 | MW-105S_092320 | 2.2 | 0.0022 | J |
| MW-105S | Offsite Wells | Shallow | 09/12/2022 | MW-105S | 2.3 | 0.0023 | U |
| MW-105S | Offsite Wells | Shallow | 03/07/2023 | MW-105S | 8.3 | 0.0083 | U |
| MW-105S | Offsite Wells | Shallow | 06/19/2023 | MW-105S | 0.91 | 0.00091 | U |
| MW-106D | Offsite Wells | Deep | 09/15/2016 | GW-121 | 2 | 0.002 | J |
| MW-106D | Offsite Wells | Deep | 09/15/2016 | GW-122 | 1.5 | 0.0015 | J |
| MW-106D | Offsite Wells | Deep | 12/19/2018 | MW-106D-12192018 | **210** | **0.21** | |
| MW-106D | Offsite Wells | Deep | 12/03/2020 | MW-106D_120320 | 2.1 | 0.0021 | U |
| MW-106D | Offsite Wells | Deep | 01/27/2022 | MW-106D_RI2022 | 2.1 | 0.0021 | U |
| MW-106D | Offsite Wells | Deep | 09/16/2022 | MW-106D | 2.1 | 0.0021 | U |
| MW-106D | Offsite Wells | Deep | 11/09/2022 | MW-106D | 2 | 0.002 | U |
| MW-106D | Offsite Wells | Deep | 03/14/2023 | MW-106D | 0.94 | 0.00094 | U |
| MW-106D | Offsite Wells | Deep | 06/20/2023 | MW-106D | 1.4 | 0.0014 | J |
| MW-106S | Offsite Wells | Shallow | 09/15/2016 | GW-120 | 0.98 | 0.00098 | J |
| MW-106S | Offsite Wells | Shallow | 12/19/2018 | MW-106S-12192018 | **17.1** | **0.0171** | |
| MW-106S | Offsite Wells | Shallow | 09/23/2020 | MW-106S_092320 | 1.9 | 0.0019 | U |
| MW-106S | Offsite Wells | Shallow | 01/27/2022 | DUP-1_012722_RI2022 | 6.5 | 0.0065 | |
| MW-106S | Offsite Wells | Shallow | 01/27/2022 | MW-106S_RI2022 | 2.1 | 0.0021 | U |
| MW-106S | Offsite Wells | Shallow | 09/16/2022 | MW-106S | 2 | 0.002 | U |
| MW-106S | Offsite Wells | Shallow | 11/09/2022 | MW-106S | 2 | 0.002 | U |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-106S | Offsite Wells | Shallow | 03/14/2023 | MW-106S | 1 | 0.001 | J |
| MW-106S | Offsite Wells | Shallow | 06/20/2023 | MW-106S | 1.1 | 0.0011 | U |
| MW-107D | Offsite Wells | Deep | 09/20/2016 | GW-149 | 6.9 | 0.0069 | |
| MW-107D | Offsite Wells | Deep | 12/18/2018 | MW-107D-12182018 | 2.8 | 0.0028 | U |
| MW-107D | Offsite Wells | Deep | 09/24/2020 | MW-107D_092420 | 4 | 0.004 | J |
| MW-107D | Offsite Wells | Deep | 01/27/2022 | MW-107D_RI2022 | **16** | **0.016** | |
| MW-107D | Offsite Wells | Deep | 09/19/2022 | MW-107D | 4.9 | 0.0049 | |
| MW-107D | Offsite Wells | Deep | 03/06/2023 | MW-107D | 4.5 | 0.0045 | |
| MW-107D | Offsite Wells | Deep | 06/20/2023 | MW-107D | 3.8 | 0.0038 | |
| MW-107S | Offsite Wells | Shallow | 09/20/2016 | GW-148 | 2 | 0.002 | J |
| MW-107S | Offsite Wells | Shallow | 12/18/2018 | MW-107S-12182018 | 3 | 0.003 | U |
| MW-107S | Offsite Wells | Shallow | 09/24/2020 | DUP-2_092420 | 3.8 | 0.0038 | J |
| MW-107S | Offsite Wells | Shallow | 09/24/2020 | MW-107S_092420 | 3.4 | 0.0034 | J |
| MW-107S | Offsite Wells | Shallow | 01/27/2022 | MW-107S_RI2022 | 3.9 | 0.0039 | J |
| MW-107S | Offsite Wells | Shallow | 09/19/2022 | MW-107S | 3.7 | 0.0037 | J |
| MW-107S | Offsite Wells | Shallow | 03/06/2023 | MW-107S | 3.1 | 0.0031 | |
| MW-107S | Offsite Wells | Shallow | 06/20/2023 | MW-107S | 3.9 | 0.0039 | |
| MW-108D | Offsite Wells | Middle PRM | 12/14/2016 | GW0025 | 0.6 | 0.0006 | U |
| MW-108D | Offsite Wells | Middle PRM | 12/14/2016 | GW0026 | 3.3 | 0.0033 | J |
| MW-108D | Offsite Wells | Middle PRM | 12/19/2016 | GW0028 | 0.6 | 0.0006 | U |
| MW-108D | Offsite Wells | Middle PRM | 12/20/2016 | GW0029 | 0.6 | 0.0006 | UJ |
| MW-108D | Offsite Wells | Middle PRM | 12/24/2016 | GW0030 | 2.8 | 0.0028 | J |
| MW-108D | Offsite Wells | Middle PRM | 01/31/2017 | GW0002 | 0.6 | 0.0006 | U |
| MW-108D | Offsite Wells | Middle PRM | 01/31/2017 | GW0003 | 0.75 | 0.00075 | J |
| MW-108D | Offsite Wells | Middle PRM | 12/18/2018 | MW-108D12182018 | 3.1 | 0.0031 | U |
| MW-108D | Offsite Wells | Middle PRM | 09/22/2020 | MW-108D_092220 | 1.9 | 0.0019 | U |
| MW-108D | Offsite Wells | Middle PRM | 01/10/2022 | MW-108D | 2 | 0.002 | U |
| MW-108D | Offsite Wells | Middle PRM | 09/12/2022 | MW-108D | 2.3 | 0.0023 | U |
| MW-108D | Offsite Wells | Middle PRM | 11/07/2022 | MW-108D | 2 | 0.002 | U |
| MW-108D | Offsite Wells | Middle PRM | 06/19/2023 | MW-108D | 0.91 | 0.00091 | U |
| MW-108S | Offsite Wells | Shallow | 01/31/2017 | GW0001 | 0.6 | 0.0006 | U |
| MW-108S | Offsite Wells | Shallow | 12/17/2018 | MW108S-12172018 | 3.1 | 0.0031 | U |
| MW-108S | Offsite Wells | Shallow | 09/22/2020 | MW-108S_092220 | 1.9 | 0.0019 | U |
| MW-108S | Offsite Wells | Shallow | 01/10/2022 | MW-108S | 2 | 0.002 | U |
| MW-108S | Offsite Wells | Shallow | 09/12/2022 | MW-108S | 2.3 | 0.0023 | U |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-108S | Offsite Wells | Shallow | 11/07/2022 | MW-108S | 2 | 0.002 | U |
| MW-108S | Offsite Wells | Shallow | 06/19/2023 | MW-108S | 0.91 | 0.00091 | U |
| MW-109D | Offsite Wells | Deep | 09/11/2018 | 109D-09112018-GW | 4.57 | 0.00457 | J |
| MW-109D | Offsite Wells | Deep | 12/18/2018 | MW-109D12182018 | 3 | 0.003 | U |
| MW-109D | Offsite Wells | Deep | 01/13/2022 | MW-109D_RI2022 | 5.8 | 0.0058 | |
| MW-109D | Offsite Wells | Deep | 09/15/2022 | MW-109D | 5.8 | 0.0058 | |
| MW-109D | Offsite Wells | Deep | 03/11/2023 | MW-109D | 3.8 | 0.0038 | |
| MW-109D | Offsite Wells | Deep | 06/27/2023 | MW-109D | 8.8 | 0.0088 | |
| MW-109S | Offsite Wells | Shallow | 09/11/2018 | 109S-09112018-GW | **56.2** | **0.0562** | J |
| MW-109S | Offsite Wells | Shallow | 09/28/2020 | MW-109S_092820 | **36.6** | **0.0366** | |
| MW-109S | Offsite Wells | Shallow | 01/13/2022 | MW-109S_RI2022 | **30** | **0.03** | |
| MW-109S | Offsite Wells | Shallow | 09/15/2022 | MW-109S | **25.5** | **0.0255** | |
| MW-109S | Offsite Wells | Shallow | 03/11/2023 | MW-109S | **20.4** | **0.0204** | |
| MW-109S | Offsite Wells | Shallow | 06/27/2023 | MW-109S | **27.3** | **0.0273** | |
| MW-10I | Main Plant Area | Intermediate | 03/13/2014 | GW0009_20140313 | 12 | 0.012 | UJ |
| MW-10I | Main Plant Area | Intermediate | 03/21/2019 | MW-10I_20190321 | **80** | **0.08** | U |
| MW-10I | Main Plant Area | Intermediate | 11/01/2022 | MW-10I | **20** | **0.02** | U |
| MW-10I | Main Plant Area | Intermediate | 03/13/2023 | MW-10I | 5.7 | 0.0057 | |
| MW-10I | Main Plant Area | Intermediate | 06/26/2023 | MW-10I | 10 | 0.01 | U |
| MW-10S | Main Plant Area | Shallow | 03/13/2014 | GW0010_20140313 | 12 | 0.012 | U |
| MW-10S | Main Plant Area | Shallow | 03/21/2019 | MW-10S_20190321 | 6.05 | 0.00605 | J |
| MW-10X | Main Plant Area | Middle PRM | 03/12/2014 | GW0011_20140312 | 12 | 0.012 | U |
| MW-10X | Main Plant Area | Middle PRM | 09/19/2016 | GW-147 | 3.4 | 0.0034 | J |
| MW-10X | Main Plant Area | Middle PRM | 09/30/2019 | MW10X-093019 | 3.85 | 0.00385 | J |
| MW-10X | Main Plant Area | Middle PRM | 04/04/2023 | MW-10X | 4.7 | 0.0047 | |
| MW-110D | Offsite Wells | Deep | 09/11/2018 | 110D-09112018-GW | **27.5** | **0.0275** | |
| MW-110D | Offsite Wells | Deep | 09/28/2020 | MW-110D_092820 | **34.1** | **0.0341** | |
| MW-110D | Offsite Wells | Deep | 01/27/2022 | MW-110D_RI2022 | **25.1** | **0.0251** | |
| MW-110D | Offsite Wells | Deep | 09/13/2022 | MW-110D | **34.7** | **0.0347** | |
| MW-110S | Offsite Wells | Shallow | 09/11/2018 | 110S-09112018-GW | **42.1** | **0.0421** | |
| MW-110S | Offsite Wells | Shallow | 09/28/2020 | MW-110S_092820 | **33.8** | **0.0338** | |
| MW-110S | Offsite Wells | Shallow | 01/27/2022 | MW-110S_RI2022 | **30.1** | **0.0301** | |
| MW-110S | Offsite Wells | Shallow | 09/13/2022 | MW-110S | **35.6** | **0.0356** | |
| MW-111D | Offsite Wells | Deep | 12/20/2018 | MW-111D-12202018 | **24.7** | **0.0247** | |
| MW-111D | Offsite Wells | Deep | 10/01/2020 | MW-111D_100120 | **40.6** | **0.0406** | |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-111D | Offsite Wells | Deep | 01/13/2022 | MW-111D_RI2022 | **39.4** | **0.0394** | |
| MW-111D | Offsite Wells | Deep | 09/13/2022 | MW-111D | **39.8** | **0.0398** | |
| MW-111D | Offsite Wells | Deep | 03/11/2023 | MW-111D | **36.1** | **0.0361** | |
| MW-111D | Offsite Wells | Deep | 06/27/2023 | MW-111D | **37.7** | **0.0377** | |
| MW-111S | Offsite Wells | Shallow | 12/20/2018 | DUP-12202018 | **17.5** | **0.0175** | |
| MW-111S | Offsite Wells | Shallow | 12/20/2018 | MW-111S-12202018 | **14.7** | **0.0147** | |
| MW-111S | Offsite Wells | Shallow | 10/01/2020 | DUP-3_100120 | 12 | 0.012 | |
| MW-111S | Offsite Wells | Shallow | 10/01/2020 | MW-111S_100120 | **17.6** | **0.0176** | |
| MW-111S | Offsite Wells | Shallow | 01/13/2022 | MW-111S_RI2022 | 9.9 | 0.0099 | |
| MW-111S | Offsite Wells | Shallow | 09/13/2022 | MW-111S | **15.2** | **0.0152** | |
| MW-111S | Offsite Wells | Shallow | 03/11/2023 | MW-111S | 9.7 | 0.0097 | |
| MW-111S | Offsite Wells | Shallow | 06/27/2023 | MW-111S | 13.2 | 0.0132 | |
| MW-111S | Offsite Wells | Shallow | 06/27/2023 | DUP-062723 | 11.9 | 0.0119 | |
| MW-112D | Offsite Wells | Deep | 12/20/2018 | MW-112D-12202018 | 2.5 | 0.0025 | J |
| MW-112D | Offsite Wells | Deep | 09/24/2020 | MW-112D_092420 | 4.3 | 0.0043 | |
| MW-112D | Offsite Wells | Deep | 01/13/2022 | MW-112D_RI2022 | 2.8 | 0.0028 | J |
| MW-112D | Offsite Wells | Deep | 09/14/2022 | MW-112D | 3.8 | 0.0038 | J |
| MW-112D | Offsite Wells | Deep | 11/08/2022 | MW-112D | 3.5 | 0.0035 | J |
| MW-112D | Offsite Wells | Deep | 03/07/2023 | MW-112D | 3.2 | 0.0032 | |
| MW-112D | Offsite Wells | Deep | 06/21/2023 | MW-112D | 3.5 | 0.0035 | |
| MW-112S | Offsite Wells | Shallow | 12/20/2018 | MW-112S-12202018 | 1.3 | 0.0013 | U |
| MW-112S | Offsite Wells | Shallow | 09/24/2020 | MW-112S_092420 | 2.1 | 0.0021 | U |
| MW-112S | Offsite Wells | Shallow | 01/13/2022 | MW-112S_RI2022 | 2.1 | 0.0021 | U |
| MW-112S | Offsite Wells | Shallow | 09/14/2022 | MW-112S | 2 | 0.002 | U |
| MW-112S | Offsite Wells | Shallow | 11/08/2022 | MW-112S | 2 | 0.002 | U |
| MW-112S | Offsite Wells | Shallow | 03/07/2023 | MW-112S | 8.3 | 0.0083 | U |
| MW-112S | Offsite Wells | Shallow | 06/21/2023 | MW-112S | 1.5 | 0.0015 | J |
| MW-113D | Offsite Wells | Deep | 12/19/2018 | MW-113D-12192018 | 2.9 | 0.0029 | U |
| MW-113D | Offsite Wells | Deep | 09/24/2020 | MW-113D_092420 | 2.9 | 0.0029 | J |
| MW-113D | Offsite Wells | Deep | 01/13/2022 | DUP-2_RI2022 | 2 | 0.002 | U |
| MW-113D | Offsite Wells | Deep | 01/13/2022 | MW-113D_RI2022 | 3.2 | 0.0032 | J |
| MW-113D | Offsite Wells | Deep | 09/14/2022 | MW-113D | 3.8 | 0.0038 | J |
| MW-113D | Offsite Wells | Deep | 03/07/2023 | MW-113D | 2.2 | 0.0022 | |
| MW-113D | Offsite Wells | Deep | 06/21/2023 | MW-113D | 3.2 | 0.0032 | |
| MW-113S | Offsite Wells | Shallow | 12/19/2018 | MW-113S-12192018 | 12.1 | 0.0121 | |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-113S | Offsite Wells | Shallow | 09/24/2020 | MW-113S_092420 | **24.6** | **0.0246** | |
| MW-113S | Offsite Wells | Shallow | 01/13/2022 | MW-113S_RI2022 | **13.8** | **0.0138** | |
| MW-113S | Offsite Wells | Shallow | 09/14/2022 | MW-113S | 11.2 | 0.0112 | |
| MW-113S | Offsite Wells | Shallow | 03/07/2023 | MW-113S | **16.1** | **0.0161** | |
| MW-113S | Offsite Wells | Shallow | 06/21/2023 | MW-113S | 12 | 0.012 | |
| MW-114D | Offsite Wells | Deep | 12/19/2018 | MW-114D-12192018 | 3.3 | 0.0033 | U |
| MW-114D | Offsite Wells | Deep | 09/22/2020 | MW-114D_092220 | 4 | 0.004 | J |
| MW-114D | Offsite Wells | Deep | 01/11/2022 | MW-114D_RI2022 | 3.8 | 0.0038 | J |
| MW-114D | Offsite Wells | Deep | 09/13/2022 | MW-114D | 4.4 | 0.0044 | J |
| MW-114D | Offsite Wells | Deep | 06/20/2023 | MW-114D | 3.6 | 0.0036 | |
| MW-114S | Offsite Wells | Shallow | 12/19/2018 | MW-114S-12192018 | 8.67 | 0.00867 | |
| MW-114S | Offsite Wells | Shallow | 09/22/2020 | MW-114S_092220 | 8.5 | 0.0085 | |
| MW-114S | Offsite Wells | Shallow | 01/11/2022 | MW-114S_RI2022 | 9.3 | 0.0093 | |
| MW-114S | Offsite Wells | Shallow | 09/13/2022 | MW-114S | 11.2 | 0.0112 | |
| MW-114S | Offsite Wells | Shallow | 03/07/2023 | MW-114S | 6.8 | 0.0068 | |
| MW-114S | Offsite Wells | Shallow | 06/20/2023 | MW-114S | 6.8 | 0.0068 | |
| MW-114X | Offsite Wells | Lower PRM | 03/28/2023 | MW-114X | 0.88 | 0.00088 | U |
| MW-115X | Offsite Wells | Middle PRM | 05/06/2019 | MW115X-050619 | 1.5 | 0.0015 | U |
| MW-115X | Offsite Wells | Middle PRM | 04/06/2023 | MW-115X | 8.3 | 0.0083 | U |
| MW-116D | Offsite Wells | Deep | 09/23/2020 | MW-116D_092320 | 5 | 0.005 | U |
| MW-116D | Offsite Wells | Deep | 01/12/2022 | MW-116D_RI2022 | **17** | **0.017** | U |
| MW-116D | Offsite Wells | Deep | 09/13/2022 | MW-116D | 3.3 | 0.0033 | J |
| MW-116D | Offsite Wells | Deep | 03/06/2023 | MW-116D | 2.3 | 0.0023 | |
| MW-116D | Offsite Wells | Deep | 06/22/2023 | MW-116D | 2.3 | 0.0023 | |
| MW-116S | Offsite Wells | Shallow | 09/23/2020 | DUP-1_092320 | **17.4** | **0.0174** | J |
| MW-116S | Offsite Wells | Shallow | 09/23/2020 | MW-116S_092320 | **18.1** | **0.0181** | J |
| MW-116S | Offsite Wells | Shallow | 01/11/2022 | MW-116S_RI2022 | 11.8 | 0.0118 | |
| MW-116S | Offsite Wells | Shallow | 09/13/2022 | MW-116S | **17.1** | **0.0171** | |
| MW-116S | Offsite Wells | Shallow | 03/06/2023 | MW-116S | 12.8 | 0.0128 | |
| MW-116S | Offsite Wells | Shallow | 06/22/2023 | MW-116S | **16.7** | **0.0167** | |
| MW-117D | Offsite Wells | Deep | 09/23/2020 | MW-117D_092320 | **500** | **0.5** | U |
| MW-117D | Offsite Wells | Deep | 12/04/2020 | MW-117D_120420 | 6.3 | 0.0063 | U |
| MW-117D | Offsite Wells | Deep | 01/13/2022 | MW-117D_RI2022 | 2.1 | 0.0021 | U |
| MW-117D | Offsite Wells | Deep | 09/15/2022 | MW-117D | 2 | 0.002 | U |
| MW-117D | Offsite Wells | Deep | 03/06/2023 | MW-117D | 0.92 | 0.00092 | U |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-117D | Offsite Wells | Deep | 06/22/2023 | MW-117D | 0.98 | 0.00098 | U |
| MW-117S | Offsite Wells | Shallow | 09/23/2020 | MW-117S_092320 | **500** | **0.5** | U |
| MW-117S | Offsite Wells | Shallow | 12/04/2020 | MW-117S_120420 | 7.2 | 0.0072 | U |
| MW-117S | Offsite Wells | Shallow | 01/13/2022 | MW-117S_RI2022 | 2.1 | 0.0021 | U |
| MW-117S | Offsite Wells | Shallow | 09/15/2022 | MW-117S | 2 | 0.002 | U |
| MW-117S | Offsite Wells | Shallow | 03/06/2023 | MW-117S | 1.1 | 0.0011 | U |
| MW-117S | Offsite Wells | Shallow | 06/22/2023 | MW-117S | 1 | 0.001 | U |
| MW-118D | Offsite Wells | Deep | 09/24/2020 | MW-118D_092420 | **17.6** | **0.0176** | |
| MW-118D | Offsite Wells | Deep | 01/12/2022 | MW-118D_RI2022 | **16.9** | **0.0169** | |
| MW-118D | Offsite Wells | Deep | 09/14/2022 | MW-118D | **18.8** | **0.0188** | |
| MW-118D | Offsite Wells | Deep | 03/11/2023 | MW-118D | 8.3 | 0.0083 | |
| MW-118D | Offsite Wells | Deep | 06/22/2023 | MW-118D | 2.2 | 0.0022 | |
| MW-118S | Offsite Wells | Shallow | 09/24/2020 | MW-118S_092420 | 9.8 | 0.0098 | |
| MW-118S | Offsite Wells | Shallow | 01/12/2022 | MW-118S_RI2022 | 10 | 0.01 | |
| MW-118S | Offsite Wells | Shallow | 09/14/2022 | MW-118S | 9.9 | 0.0099 | |
| MW-118S | Offsite Wells | Shallow | 03/11/2023 | MW-118S | 4.6 | 0.0046 | |
| MW-118S | Offsite Wells | Shallow | 06/22/2023 | MW-118S | 6.7 | 0.0067 | |
| MW-119D | Offsite Wells | Deep | 09/22/2020 | MW-119D_092220 | 3.8 | 0.0038 | |
| MW-119D | Offsite Wells | Deep | 01/10/2022 | DUP-1_RI2022 | 2 | 0.002 | U |
| MW-119D | Offsite Wells | Deep | 01/10/2022 | MW-119D_RI2022 | 2 | 0.002 | U |
| MW-119D | Offsite Wells | Deep | 09/12/2022 | MW-119D | 2.5 | 0.0025 | U |
| MW-119D | Offsite Wells | Deep | 11/07/2022 | MW-119D | 2 | 0.002 | U |
| MW-119D | Offsite Wells | Deep | 03/08/2023 | MW-119D | 8.3 | 0.0083 | U |
| MW-119D | Offsite Wells | Deep | 06/19/2023 | MW-119D | 0.91 | 0.00091 | U |
| MW-119S | Offsite Wells | Shallow | 09/22/2020 | MW-119S_092220 | 2.1 | 0.0021 | U |
| MW-119S | Offsite Wells | Shallow | 01/10/2022 | MW-119S_RI2022 | 2.1 | 0.0021 | U |
| MW-119S | Offsite Wells | Shallow | 09/12/2022 | MW-119S | 2 | 0.002 | U |
| MW-119S | Offsite Wells | Shallow | 11/07/2022 | MW-119S | 2 | 0.002 | U |
| MW-119S | Offsite Wells | Shallow | 03/08/2023 | MW-119S | 0.97 | 0.00097 | U |
| MW-119S | Offsite Wells | Shallow | 06/19/2023 | MW-119S | 0.96 | 0.00096 | U |
| MW-11D | Main Plant Area | Intermediate | 03/12/2014 | GW0012_20140312 | **69** | **0.069** | |
| MW-11D | Main Plant Area | Intermediate | 03/22/2019 | MW-11D_20190322 | **39.6** | **0.0396** | |
| MW-11DD | Main Plant Area | Deep | 03/12/2014 | GW0013_20140312 | **27** | **0.027** | |
| MW-11DD | Main Plant Area | Deep | 03/22/2019 | MW-11DD_20190322 | **28** | **0.028** | |
| MW-120D | Offsite Wells | Deep | 12/17/2018 | MW-120D-12172018 | **26.8** | **0.0268** | |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-120D | Offsite Wells | Deep | 09/28/2020 | MW-120D_092820 | **26.4** | **0.0264** | |
| MW-120D | Offsite Wells | Deep | 01/13/2022 | MW-120D_RI2022 | **22.5** | **0.0225** | |
| MW-120D | Offsite Wells | Deep | 09/15/2022 | MW-120D | 11.6 | 0.0116 | |
| MW-120D | Offsite Wells | Deep | 03/13/2023 | MW-120D | **18.8** | **0.0188** | |
| MW-120D | Offsite Wells | Deep | 06/21/2023 | MW-120D | **24.3** | **0.0243** | |
| MW-120D | Offsite Wells | Deep | 06/21/2023 | DUP_062123 | **25** | **0.025** | |
| MW-120S | Offsite Wells | Shallow | 12/17/2018 | MW-120S-12172018 | **19.9** | **0.0199** | |
| MW-120S | Offsite Wells | Shallow | 09/28/2020 | MW-120S_092820 | **16.5** | **0.0165** | |
| MW-120S | Offsite Wells | Shallow | 01/13/2022 | MW-120S_RI2022 | **15.5** | **0.0155** | |
| MW-120S | Offsite Wells | Shallow | 09/15/2022 | MW-120S | **13.8** | **0.0138** | |
| MW-120S | Offsite Wells | Shallow | 03/13/2023 | MW-120S | 12.6 | 0.0126 | |
| MW-120S | Offsite Wells | Shallow | 06/21/2023 | MW-120S | **15.7** | **0.0157** | |
| MW-121D | Offsite Wells | Deep | 12/20/2018 | MW-121D-12202018 | **28.3** | **0.0283** | |
| MW-121D | Offsite Wells | Deep | 09/25/2020 | MW-121D_092520 | **30.5** | **0.0305** | |
| MW-121D | Offsite Wells | Deep | 01/14/2022 | MW-121D_RI2022 | **27.2** | **0.0272** | |
| MW-121D | Offsite Wells | Deep | 09/16/2022 | MW-121D | **24.4** | **0.0244** | |
| MW-121D | Offsite Wells | Deep | 03/10/2023 | MW-121D | **26.5** | **0.0265** | |
| MW-121D | Offsite Wells | Deep | 06/26/2023 | MW-121D | **31** | **0.031** | |
| MW-121S | Offsite Wells | Shallow | 12/20/2018 | MW-121S-12202018 | **49.3** | **0.0493** | |
| MW-121S | Offsite Wells | Shallow | 09/25/2020 | MW-121S_092520 | **29** | **0.029** | |
| MW-121S | Offsite Wells | Shallow | 01/14/2022 | MW-121S_RI2022 | **23.8** | **0.0238** | |
| MW-121S | Offsite Wells | Shallow | 09/16/2022 | MW-121S | **20.6** | **0.0206** | |
| MW-121S | Offsite Wells | Shallow | 03/10/2023 | MW-121S | **26.5** | **0.0265** | |
| MW-121S | Offsite Wells | Shallow | 06/26/2023 | MW-121S | 0.95 | 0.00095 | U |
| MW-122D | Offsite Wells | Deep | 09/28/2020 | MW-122D_092820 | 3.8 | 0.0038 | J |
| MW-122D | Offsite Wells | Deep | 01/14/2022 | MW-122D_RI2022 | 6 | 0.006 | |
| MW-122D | Offsite Wells | Deep | 09/16/2022 | MW-122D | 4.2 | 0.0042 | |
| MW-122D | Offsite Wells | Deep | 11/09/2022 | MW-122D | 4.6 | 0.0046 | |
| MW-122D | Offsite Wells | Deep | 03/28/2023 | DUP_032823 | 4.1 | 0.0041 | |
| MW-122D | Offsite Wells | Deep | 03/28/2023 | MW-122D | 4.6 | 0.0046 | |
| MW-122D | Offsite Wells | Deep | 06/26/2023 | MW-122D | 4.9 | 0.0049 | |
| MW-122S | Offsite Wells | Shallow | 09/28/2020 | MW-122S_092820 | **21.8** | **0.0218** | |
| MW-122S | Offsite Wells | Shallow | 01/14/2022 | MW-122S_RI2022 | **18.1** | **0.0181** | |
| MW-122S | Offsite Wells | Shallow | 09/16/2022 | MW-122S | **13.8** | **0.0138** | |
| MW-122S | Offsite Wells | Shallow | 11/09/2022 | DUP1-11.09.2022 | **16.7** | **0.0167** | |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-122S | Offsite Wells | Shallow | 11/09/2022 | MW-122S | **16.7** | **0.0167** | |
| MW-122S | Offsite Wells | Shallow | 03/28/2023 | MW-122S | **19.5** | **0.0195** | |
| MW-122S | Offsite Wells | Shallow | 06/26/2023 | MW-122S | **16.9** | **0.0169** | |
| MW-123D | Offsite Wells | Lower PRM | 09/28/2020 | MW-123D_092820 | 1.9 | 0.0019 | U |
| MW-123D | Offsite Wells | Lower PRM | 01/14/2022 | MW-123D_RI2022 | 2 | 0.002 | U |
| MW-123D | Offsite Wells | Lower PRM | 09/19/2022 | MW-123D | 2 | 0.002 | U |
| MW-123D | Offsite Wells | Lower PRM | 04/05/2023 | MW-123D | 8.3 | 0.0083 | U |
| MW-123I | Offsite Wells | Middle PRM | 09/28/2020 | MW-123I_092820 | **18.1** | **0.0181** | |
| MW-123I | Offsite Wells | Middle PRM | 01/14/2022 | MW-123I_RI2022 | 12.6 | 0.0126 | |
| MW-123I | Offsite Wells | Middle PRM | 09/19/2022 | MW-123I | **20** | **0.02** | |
| MW-123I | Offsite Wells | Middle PRM | 04/05/2023 | MW-123I | **24.4** | **0.0244** | |
| MW-123S | Offsite Wells | Shallow | 09/28/2020 | MW-123S_092820 | **84.1** | **0.0841** | |
| MW-123S | Offsite Wells | Shallow | 01/14/2022 | MW-123S_RI2022 | **95.5** | **0.0955** | |
| MW-123S | Offsite Wells | Shallow | 09/19/2022 | MW-123S | **133** | **0.133** | |
| MW-123S | Offsite Wells | Shallow | 03/13/2023 | MW-123S | **121** | **0.121** | |
| MW-123S | Offsite Wells | Shallow | 06/23/2023 | MW-123S | **136** | **0.136** | |
| MW-124D | Offsite Wells | Deep | 12/04/2020 | MW-124D_120420 | **23.9** | **0.0239** | |
| MW-124D | Offsite Wells | Deep | 01/14/2022 | MW-124D_RI2022 | **29.8** | **0.0298** | |
| MW-124D | Offsite Wells | Deep | 09/20/2022 | MW-124D | **36.7** | **0.0367** | |
| MW-124D | Offsite Wells | Deep | 03/08/2023 | DUP_030823 | **29.2** | **0.0292** | |
| MW-124D | Offsite Wells | Deep | 03/08/2023 | MW-124D | **23.9** | **0.0239** | |
| MW-124D | Offsite Wells | Deep | 06/23/2023 | MW-124D | **29.7** | **0.0297** | |
| MW-124S | Offsite Wells | Shallow | 12/04/2020 | DUP_120420 | 8.5 | 0.0085 | |
| MW-124S | Offsite Wells | Shallow | 12/04/2020 | MW-124S_120420 | 8.4 | 0.0084 | |
| MW-124S | Offsite Wells | Shallow | 01/14/2022 | MW-124S_RI2022 | 11.6 | 0.0116 | |
| MW-124S | Offsite Wells | Shallow | 09/20/2022 | MW-124S | **14.2** | **0.0142** | |
| MW-124S | Offsite Wells | Shallow | 03/08/2023 | MW-124S | 9.6 | 0.0096 | |
| MW-124S | Offsite Wells | Shallow | 06/23/2023 | MW-124S | 10.2 | 0.0102 | |
| MW-125D | Offsite Wells | Deep | 12/03/2020 | MW-125D_120320 | **40** | **0.04** | U |
| MW-125D | Offsite Wells | Deep | 12/03/2020 | MW-125D_120320B | 10 | 0.01 | U |
| MW-125D | Offsite Wells | Deep | 01/13/2022 | MW-125D_RI2022 | 2 | 0.002 | U |
| MW-125D | Offsite Wells | Deep | 09/15/2022 | MW-125D | 3.5 | 0.0035 | J |
| MW-125D | Offsite Wells | Deep | 03/09/2023 | MW-125D | 4.2 | 0.0042 | |
| MW-125D | Offsite Wells | Deep | 06/20/2023 | MW-125D | 3.2 | 0.0032 | |
| MW-125S | Offsite Wells | Shallow | 12/03/2020 | MW-125S_120320 | 2.9 | 0.0029 | J |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-125S | Offsite Wells | Shallow | 01/13/2022 | MW-125S_RI2022 | 2.4 | 0.0024 | J |
| MW-125S | Offsite Wells | Shallow | 09/15/2022 | MW-125S | 3.3 | 0.0033 | J |
| MW-125S | Offsite Wells | Shallow | 03/09/2023 | MW-125S | 3.3 | 0.0033 | |
| MW-125S | Offsite Wells | Shallow | 06/20/2023 | MW-125S | 3.4 | 0.0034 | |
| MW-126D | Offsite Wells | Deep | 12/30/2021 | MW-126D | 2.1 | 0.0021 | U |
| MW-126D | Offsite Wells | Deep | 09/12/2022 | DUP_09.12.2022 | 2 | 0.002 | U |
| MW-126D | Offsite Wells | Deep | 09/12/2022 | MW-126D | 2.1 | 0.0021 | U |
| MW-126D | Offsite Wells | Deep | 03/06/2023 | DUP_030623 | 0.93 | 0.00093 | U |
| MW-126D | Offsite Wells | Deep | 03/06/2023 | MW-126D | 0.93 | 0.00093 | U |
| MW-126D | Offsite Wells | Deep | 06/19/2023 | MW-126D | 0.91 | 0.00091 | U |
| MW-126D | Offsite Wells | Deep | 06/19/2023 | DUP_061923 | 0.91 | 0.00091 | U |
| MW-126S | Offsite Wells | Shallow | 12/30/2021 | MW-126S | 2 | 0.002 | U |
| MW-126S | Offsite Wells | Shallow | 09/12/2022 | MW-126S | 2 | 0.002 | U |
| MW-126S | Offsite Wells | Shallow | 03/06/2023 | MW-126S | 1.5 | 0.0015 | J |
| MW-126S | Offsite Wells | Shallow | 06/19/2023 | MW-126S | 1.3 | 0.0013 | J |
| MW-127D | Offsite Wells | Deep | 12/30/2021 | MW-127D | **27.4** | **0.0274** | |
| MW-127D | Offsite Wells | Deep | 09/19/2022 | DUP_09.19.2022 | **30.3** | **0.0303** | |
| MW-127D | Offsite Wells | Deep | 09/19/2022 | MW-127D | **31.2** | **0.0312** | |
| MW-127D | Offsite Wells | Deep | 03/08/2023 | MW-127D | **27.6** | **0.0276** | |
| MW-127D | Offsite Wells | Deep | 06/21/2023 | MW-127D | **26.6** | **0.0266** | |
| MW-127S | Offsite Wells | Shallow | 12/30/2021 | DUP1-123021 | 2.2 | 0.0022 | U |
| MW-127S | Offsite Wells | Shallow | 12/30/2021 | MW-127S | 2 | 0.002 | U |
| MW-127S | Offsite Wells | Shallow | 09/19/2022 | MW-127S | 2 | 0.002 | U |
| MW-127S | Offsite Wells | Shallow | 03/08/2023 | MW-127S | 1 | 0.001 | J |
| MW-127S | Offsite Wells | Shallow | 06/21/2023 | MW-127S | 1.2 | 0.0012 | J |
| MW-128S | Main Plant Area | Shallow | 03/10/2023 | MW-128S | 5.3 | 0.0053 | |
| MW-128S | Main Plant Area | Shallow | 06/26/2023 | MW-128S | 9.4 | 0.0094 | U |
| MW-129S | Main Plant Area | Shallow | 03/10/2023 | MW-129S | 5.8 | 0.0058 | |
| MW-129S | Main Plant Area | Shallow | 06/26/2023 | MW-129S | 10 | 0.01 | U |
| MW-12S | Main Plant Area | Shallow | 03/25/2019 | MW-12S_20190325 | 9.37 | 0.00937 | |
| MW-14S | Main Plant Area | Shallow | 03/25/2019 | MW-14S_20190325 | 8 | 0.008 | |
| MW-15S | Main Plant Area | Shallow | 03/13/2014 | GW0014_20140313 | 12 | 0.012 | U |
| MW-15S | Main Plant Area | Shallow | 03/25/2019 | MW-15S_20190325 | 3.18 | 0.00318 | J |
| MW-16I | Main Plant Area | Intermediate | 09/20/2016 | GW-156 | 4.2 | 0.0042 | J |
| MW-16I | Main Plant Area | Intermediate | 03/25/2019 | MW-16I_20190325 | 11.7 | 0.0117 | |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-16S | Main Plant Area | Shallow | 09/22/2016 | GW-160 | 4.7 | 0.0047 | |
| MW-16S | Main Plant Area | Shallow | 03/25/2019 | MW-16S_20190325 | 8 | 0.008 | U |
| MW-16S | Main Plant Area | Shallow | 11/02/2022 | MW-16S | 2 | 0.002 | U |
| MW-16S | Main Plant Area | Shallow | 03/09/2023 | MW-16S | 1.5 | 0.0015 | J |
| MW-16S | Main Plant Area | Shallow | 06/27/2023 | MW-16S | 3.1 | 0.0031 | |
| MW-17S | Main Plant Area | Shallow | 03/13/2014 | GW0015_20140313 | 12 | 0.012 | U |
| MW-17S | Main Plant Area | Shallow | 03/25/2019 | MW-17S_20190325 | 6.05 | 0.00605 | J |
| MW-18D | Offsite Wells | Deep | 03/21/2014 | GW0034_20140321 | 13 | 0.013 | U |
| MW-18D | Offsite Wells | Deep | 09/16/2016 | GW-136 | 7.9 | 0.0079 | |
| MW-18I | Offsite Wells | Intermediate | 03/21/2014 | GW0035_20140321 | 13 | 0.013 | J |
| MW-18I | Offsite Wells | Intermediate | 09/16/2016 | GW-137 | **18** | **0.018** | |
| MW-18S | Offsite Wells | Shallow | 03/21/2014 | GW0036_20140321 | 13 | 0.013 | U |
| MW-19D | Offsite Wells | Deep | 03/21/2014 | GW0037_20140321 | **21** | **0.021** | J |
| MW-19D | Offsite Wells | Deep | 09/21/2016 | GW-150 | **34** | **0.034** | |
| MW-19D | Offsite Wells | Deep | 09/23/2020 | MW-19D_092320 | **96** | **0.096** | U |
| MW-19D | Offsite Wells | Deep | 10/18/2022 | MW-19D | **21.4** | **0.0214** | |
| MW-19D | Offsite Wells | Deep | 03/14/2023 | MW-19D | **14.6** | **0.0146** | |
| MW-19D | Offsite Wells | Deep | 06/28/2023 | MW-19D | **14.6** | **0.0146** | |
| MW-19I | Offsite Wells | Intermediate | 03/21/2014 | GW0038_20140321 | 13 | 0.013 | UJ |
| MW-19I | Offsite Wells | Intermediate | 09/16/2016 | GW-125 | 6.8 | 0.0068 | |
| MW-19I | Offsite Wells | Intermediate | 10/01/2020 | MW-19I_100120 | 6.5 | 0.0065 | |
| MW-19I | Offsite Wells | Intermediate | 09/20/2022 | MW-19I | **40** | **0.04** | U |
| MW-19I | Offsite Wells | Intermediate | 03/14/2023 | MW-19I | 3 | 0.003 | |
| MW-19I | Offsite Wells | Intermediate | 06/28/2023 | MW-19I | 3.4 | 0.0034 | |
| MW-19S | Offsite Wells | Shallow | 03/21/2014 | GW0039_20140321 | 13 | 0.013 | U |
| MW-19S | Offsite Wells | Shallow | 10/01/2020 | MW-19S_100120 | 5.8 | 0.0058 | |
| MW-19S | Offsite Wells | Shallow | 03/14/2023 | MW-19S | 9.4 | 0.0094 | |
| MW-19X | Offsite Wells | Middle PRM | 09/21/2016 | GW-151 | 1.4 | 0.0014 | J |
| MW-19X | Offsite Wells | Middle PRM | 10/28/2019 | MW19X-10282019 | 3.8 | 0.0038 | U |
| MW-19X | Offsite Wells | Middle PRM | 04/05/2023 | MW-19X | 0.89 | 0.00089 | U |
| MW-1D | Main Plant Area | Deep | 03/12/2014 | GW0008_20140312 | 12 | 0.012 | UJ |
| MW-1D | Main Plant Area | Deep | 03/21/2019 | MW-1D_20190321 | **80** | **0.08** | U |
| MW-1D | Main Plant Area | Deep | 03/21/2019 | MW-1D_20190321FD | **80** | **0.08** | U |
| MW-1D | Main Plant Area | Deep | 10/20/2022 | MW-1D | 12.9 | 0.0129 | |
| MW-1D | Main Plant Area | Deep | 03/13/2023 | MW-1D | 12.8 | 0.0128 | |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-1D | Main Plant Area | Deep | 06/26/2023 | MW-1D | **13.2** | **0.0132** | J |
| MW-22X | Main Plant Area | Middle PRM | 04/04/2023 | MW-22X | **24.85** | **0.02485** | |
| MW-24D | Dredge Spoil Area | Deep | 03/13/2014 | GW0016_20140313 | **30** | **0.03** | |
| MW-24D | Dredge Spoil Area | Deep | 09/21/2016 | GW-154 | **30** | **0.03** | |
| MW-24D | Dredge Spoil Area | Deep | 09/28/2020 | MW-24D_092820 | **18.4** | **0.0184** | |
| MW-24D | Dredge Spoil Area | Deep | 10/19/2022 | MW-24D | **18.1** | **0.0181** | |
| MW-24I | Dredge Spoil Area | Intermediate | 03/13/2014 | GW0017_20140313 | **19** | **0.019** | J |
| MW-24I | Dredge Spoil Area | Intermediate | 09/21/2016 | GW-153 | 12 | 0.012 | |
| MW-24I | Dredge Spoil Area | Intermediate | 09/28/2020 | MW-24I_092820 | 9.4 | 0.0094 | |
| MW-24I | Dredge Spoil Area | Intermediate | 10/19/2022 | MW-24I | 9.8 | 0.0098 | |
| MW-25D | Offsite Wells | Deep | 03/20/2014 | GW0044_20140320 | **43** | **0.043** | |
| MW-25IL | Offsite Wells | Intermediate | 03/20/2014 | GW0043_20140320 | **36** | **0.036** | |
| MW-25IL | Offsite Wells | Intermediate | 10/18/2022 | MW-25IL | **15.4** | **0.0154** | |
| MW-25IU | Offsite Wells | Intermediate | 03/20/2014 | GW0041_20140320 | **16** | **0.016** | J |
| MW-25IU | Offsite Wells | Intermediate | 03/20/2014 | GW0042_20140320 | 13 | 0.013 | UJ |
| MW-25IU | Offsite Wells | Intermediate | 11/01/2022 | MW-25IU | 8.4 | 0.0084 | |
| MW-25S | Offsite Wells | Shallow | 03/20/2014 | GW0040_20140320 | 12 | 0.012 | U |
| MW-25S | Offsite Wells | Shallow | 10/18/2022 | MW-25S | 9.9 | 0.0099 | |
| MW-26D | Offsite Wells | Deep | 03/18/2014 | GW0048_20140318 | **26** | **0.026** | |
| MW-26D | Offsite Wells | Deep | 10/17/2022 | MW-26D | **25.8** | **0.0258** | |
| MW-26IL | Offsite Wells | Intermediate | 03/12/2014 | GW0047_20140312 | **42** | **0.042** | J |
| MW-26IL | Offsite Wells | Intermediate | 10/17/2022 | MW-26IL | **17.1** | **0.0171** | |
| MW-26IU | Offsite Wells | Intermediate | 03/18/2014 | GW0046_20140318 | **30** | **0.03** | |
| MW-26S | Offsite Wells | Shallow | 03/12/2014 | GW0045_20140312 | **29** | **0.029** | |
| MW-26S | Offsite Wells | Shallow | 10/17/2022 | MW-26S | **17.5** | **0.0175** | |
| MW-27IU | Offsite Wells | Intermediate | 03/17/2014 | GW0050_20140317 | 12 | 0.012 | U |
| MW-27IU | Offsite Wells | Intermediate | 10/10/2022 | MW-27IU | 4.6 | 0.0046 | |
| MW-27S | Offsite Wells | Shallow | 03/17/2014 | GW0049_20140317 | **35** | **0.035** | |
| MW-27S | Offsite Wells | Shallow | 10/10/2022 | DUP_20221010 | 4.2 | 0.0042 | |
| MW-27S | Offsite Wells | Shallow | 10/10/2022 | MW-27S | 4 | 0.004 | |
| MW-28IL | Offsite Wells | Intermediate | 04/17/2014 | GW0007_20140417 | 13 | 0.013 | UJ |
| MW-28IL | Offsite Wells | Intermediate | 04/17/2014 | GW0008_20140417 | 12 | 0.012 | UJ |
| MW-28IL | Offsite Wells | Intermediate | 10/11/2022 | MW-28IL | 9.2 | 0.0092 | |
| MW-28S | Offsite Wells | Shallow | 03/17/2014 | GW0051_20140317 | **26** | **0.026** | J |
| MW-28S | Offsite Wells | Shallow | 10/11/2022 | MW-28S | 3 | 0.003 | J |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-29IU | Offsite Wells | Intermediate | 03/17/2014 | GW0054_20140317 | 11 | 0.011 | U |
| MW-29IU | Offsite Wells | Intermediate | 10/11/2022 | MW-29IU | 4.5 | 0.0045 | |
| MW-29S | Offsite Wells | Shallow | 04/17/2014 | GW0009_20140417 | **35** | **0.035** | J |
| MW-29S | Offsite Wells | Shallow | 10/11/2022 | MW-29S | 3 | 0.003 | J |
| MW-2D | Main Plant Area | Deep | 03/26/2019 | MW-2D_20190326 | 7.82 | 0.00782 | J |
| MW-30D | Offsite Wells | Deep | 03/18/2014 | GW0058_20140318 | 12 | 0.012 | U |
| MW-30D | Offsite Wells | Deep | 09/14/2016 | GW-104 | 5.3 | 0.0053 | |
| MW-30D | Offsite Wells | Deep | 10/12/2022 | MW-30D | 9.6 | 0.0096 | |
| MW-30IL | Offsite Wells | Intermediate | 03/18/2014 | GW0057_20140318 | 12 | 0.012 | UJ |
| MW-30IL | Offsite Wells | Intermediate | 09/14/2016 | GW-103 | 5.3 | 0.0053 | |
| MW-30IL | Offsite Wells | Intermediate | 10/12/2022 | MW-30IL | 4.7 | 0.0047 | |
| MW-30IU | Offsite Wells | Intermediate | 03/18/2014 | GW0056_20140318 | 12 | 0.012 | UJ |
| MW-30IU | Offsite Wells | Intermediate | 09/14/2016 | GW-100 | 8.2 | 0.0082 | |
| MW-30IU | Offsite Wells | Intermediate | 09/14/2016 | GW-101 | 7.8 | 0.0078 | |
| MW-30IU | Offsite Wells | Intermediate | 10/11/2022 | MW-30IU | 6 | 0.006 | |
| MW-30S | Offsite Wells | Shallow | 03/18/2014 | GW0055_20140318 | **15** | **0.015** | J |
| MW-30S | Offsite Wells | Shallow | 09/14/2016 | GW-102 | 13 | 0.013 | |
| MW-30S | Offsite Wells | Shallow | 10/11/2022 | MW-30S | 6.5 | 0.0065 | |
| MW-31IU | Offsite Wells | Intermediate | 03/18/2014 | GW0060_20140318 | 11 | 0.011 | U |
| MW-31IU | Offsite Wells | Intermediate | 09/14/2016 | GW-106 | 11 | 0.011 | |
| MW-31IU | Offsite Wells | Intermediate | 10/12/2022 | MW-31IU | 6.9 | 0.0069 | |
| MW-31S | Offsite Wells | Shallow | 03/18/2014 | GW0059_20140318 | 12 | 0.012 | U |
| MW-31S | Offsite Wells | Shallow | 09/14/2016 | GW-105 | 11 | 0.011 | |
| MW-31S | Offsite Wells | Shallow | 10/12/2022 | MW-31S | 7.6 | 0.0076 | |
| MW-32IU | Offsite Wells | Intermediate | 03/20/2014 | GW0062_20140320 | **18** | **0.018** | J |
| MW-32IU | Offsite Wells | Intermediate | 03/20/2014 | GW0063_20140320 | **17** | **0.017** | J |
| MW-32IU | Offsite Wells | Intermediate | 09/20/2016 | GW-138 | 3.4 | 0.0034 | J |
| MW-32S | Offsite Wells | Shallow | 03/20/2014 | GW0061_20140320 | 13 | 0.013 | J |
| MW-32S | Offsite Wells | Shallow | 09/20/2016 | GW-139 | 9.1 | 0.0091 | |
| MW-32S | Offsite Wells | Shallow | 10/19/2022 | MW-32S | 7.6 | 0.0076 | |
| MW-33S | Offsite Wells | Shallow | 04/17/2014 | GW0010_20140417 | 13 | 0.013 | U |
| MW-33S | Offsite Wells | Shallow | 09/15/2016 | GW-113 | **58** | **0.058** | |
| MW-33S | Offsite Wells | Shallow | 09/21/2020 | MW-33S_092120 | 2.1 | 0.0021 | U |
| MW-33S | Offsite Wells | Shallow | 03/10/2023 | MW-33S | 0.94 | 0.00094 | U |
| MW-33S | Offsite Wells | Shallow | 06/28/2023 | MW-33S | 1.1 | 0.0011 | U |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-34D | Offsite Wells | Deep | 04/17/2014 | GW0012_20140417 | 12 | 0.012 | UJ |
| MW-34D | Offsite Wells | Deep | 09/16/2016 | GW-130 | **22** | **0.022** | |
| MW-34D | Offsite Wells | Deep | 09/12/2018 | 34D-09122018-GW | 8.48 | 0.00848 | |
| MW-34D | Offsite Wells | Deep | 10/17/2022 | MW-34D | 12 | 0.012 | |
| MW-34IL | Offsite Wells | Intermediate | 04/17/2014 | GW0011_20140417 | 12 | 0.012 | U |
| MW-34IL | Offsite Wells | Intermediate | 09/16/2016 | GW-129 | 8 | 0.008 | |
| MW-34IL | Offsite Wells | Intermediate | 09/12/2018 | 34IL-09122018-GW | 3.76 | 0.00376 | J |
| MW-34IL | Offsite Wells | Intermediate | 10/17/2022 | MW-34IL | 8.9 | 0.0089 | |
| MW-35D | Offsite Wells | Deep | 04/17/2014 | GW0014_20140417 | 12 | 0.012 | U |
| MW-35D | Offsite Wells | Deep | 09/15/2016 | GW-115 | **17** | **0.017** | |
| MW-35D | Offsite Wells | Deep | 10/12/2022 | MW-35D | 9.5 | 0.0095 | |
| MW-35I | Offsite Wells | Intermediate | 04/17/2014 | GW0013_20140417 | 12 | 0.012 | UJ |
| MW-35I | Offsite Wells | Intermediate | 09/15/2016 | GW-114 | 5.8 | 0.0058 | |
| MW-35I | Offsite Wells | Intermediate | 10/12/2022 | MW-35I | 4.7 | 0.0047 | |
| MW-36D | Offsite Wells | Deep | 04/17/2014 | GW0015_20140417 | 13 | 0.013 | U |
| MW-36D | Offsite Wells | Deep | 09/15/2016 | GW-116 | 4 | 0.004 | J |
| MW-36D | Offsite Wells | Deep | 10/13/2022 | MW-36D | 5 | 0.005 | |
| MW-36D | Offsite Wells | Deep | 03/09/2023 | MW-36D | 3.3 | 0.0033 | |
| MW-36D | Offsite Wells | Deep | 06/29/2023 | MW-36D | 8.3 | 0.0083 | U |
| MW-37D | Offsite Wells | Deep | 09/15/2016 | GW-118 | 8.8 | 0.0088 | |
| MW-37D | Offsite Wells | Deep | 10/13/2022 | MW-37D | **20.8** | **0.0208** | |
| MW-37S | Offsite Wells | Shallow | 09/15/2016 | GW-117 | 2.8 | 0.0028 | J |
| MW-37S | Offsite Wells | Shallow | 10/13/2022 | MW-37S | 2.4 | 0.0024 | J |
| MW-38D | Offsite Wells | Deep | 09/16/2016 | GW-131 | 5.9 | 0.0059 | |
| MW-38D | Offsite Wells | Deep | 09/21/2020 | MW-38D_092120 | 5.1 | 0.0051 | |
| MW-38D | Offsite Wells | Deep | 10/13/2022 | MW-38D | 7 | 0.007 | |
| MW-39D | Offsite Wells | Deep | 09/16/2016 | GW-142 | **20** | **0.02** | |
| MW-39D | Offsite Wells | Deep | 09/24/2020 | MW-39D_092420 | **20** | **0.02** | |
| MW-39D | Offsite Wells | Deep | 10/14/2022 | MW-39D | **19.8** | **0.0198** | |
| MW-39I | Offsite Wells | Intermediate | 09/19/2016 | GW-140 | 7.9 | 0.0079 | |
| MW-39I | Offsite Wells | Intermediate | 09/24/2020 | MW-39I_092420 | **24** | **0.024** | |
| MW-39I | Offsite Wells | Intermediate | 10/14/2022 | MW-39I | **22.5** | **0.0225** | |
| MW-39S | Offsite Wells | Shallow | 09/19/2016 | GW-141 | **41** | **0.041** | |
| MW-39S | Offsite Wells | Shallow | 09/24/2020 | MW-39S_092420 | 4.7 | 0.0047 | |
| MW-39S | Offsite Wells | Shallow | 10/14/2022 | MW-39S | 4.9 | 0.0049 | |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-3D | Main Plant Area | Deep | 03/12/2014 | GW0018_20140312 | **14** | **0.014** | J |
| MW-3D | Main Plant Area | Deep | 03/26/2019 | MW-3D_20190326 | **23.6** | **0.0236** | |
| MW-4 | Main Plant Area | Shallow | 09/19/2016 | GW-145 | **25** | **0.025** | |
| MW-4 | Main Plant Area | Shallow | 03/27/2019 | MW-4_20190327 | 5.21 | 0.00521 | J |
| MW-40I | Offsite Wells | Intermediate | 09/20/2016 | GW-158 | **45** | **0.045** | |
| MW-40I | Offsite Wells | Intermediate | 09/20/2016 | GW-159 | **48** | **0.048** | |
| MW-40I | Offsite Wells | Intermediate | 03/27/2019 | MW-40I_20190327 | **30.5** | **0.0305** | |
| MW-40I | Offsite Wells | Intermediate | 09/25/2020 | MW-40I_092520 | **29.9** | **0.0299** | |
| MW-40I | Offsite Wells | Intermediate | 11/02/2022 | MW-40I | **23.6** | **0.0236** | |
| MW-40I | Offsite Wells | Intermediate | 03/13/2023 | DUP_031323 | **23.5** | **0.0235** | |
| MW-40I | Offsite Wells | Intermediate | 03/13/2023 | MW-40I | **22.7** | **0.0227** | |
| MW-40I | Offsite Wells | Intermediate | 06/27/2023 | MW-40I | **27.8** | **0.0278** | |
| MW-40S | Offsite Wells | Shallow | 09/22/2016 | GW-161 | **26** | **0.026** | |
| MW-40S | Offsite Wells | Shallow | 09/22/2016 | GW-161D | **30** | **0.03** | |
| MW-40S | Offsite Wells | Shallow | 03/22/2019 | MW-40S_20190322 | **20.4** | **0.0204** | |
| MW-40S | Offsite Wells | Shallow | 09/25/2020 | MW-40S_092520 | 12.2 | 0.0122 | |
| MW-40S | Offsite Wells | Shallow | 11/02/2022 | MW-40S | 11.2 | 0.0112 | |
| MW-40S | Offsite Wells | Shallow | 03/13/2023 | MW-40S | 10.8 | 0.0108 | |
| MW-40S | Offsite Wells | Shallow | 06/27/2023 | MW-40S | 11.4 | 0.0114 | |
| MW-41D | Offsite Wells | Deep | 09/16/2016 | GW-132 | **31** | **0.031** | |
| MW-41D | Offsite Wells | Deep | 09/22/2020 | MW-41D_092220 | **32.8** | **0.0328** | |
| MW-41D | Offsite Wells | Deep | 10/13/2022 | MW-41D | **36.5** | **0.0365** | |
| MW-42D | Offsite Wells | Deep | 09/16/2016 | GW-133 | 13 | 0.013 | |
| MW-42D | Offsite Wells | Deep | 09/22/2020 | MW-42D_092220 | 11.6 | 0.0116 | |
| MW-42D | Offsite Wells | Deep | 10/13/2022 | MW-42D | 12.5 | 0.0125 | |
| MW-42D | Offsite Wells | Deep | 03/09/2023 | MW-42D | 10.3 | 0.0103 | |
| MW-42D | Offsite Wells | Deep | 06/29/2023 | MW-42D | 12.1 | 0.0121 | |
| MW-43D | Offsite Wells | Deep | 09/19/2016 | GW-143 | **28** | **0.028** | |
| MW-43D | Offsite Wells | Deep | 09/24/2020 | MW-43D_092420 | **28.8** | **0.0288** | |
| MW-43D | Offsite Wells | Deep | 10/14/2022 | MW-43D | **33.6** | **0.0336** | |
| MW-43I | Offsite Wells | Intermediate | 09/19/2016 | GW-144 | **46** | **0.046** | |
| MW-43I | Offsite Wells | Intermediate | 09/24/2020 | MW-43I_092420 | **34.9** | **0.0349** | |
| MW-43I | Offsite Wells | Intermediate | 10/14/2022 | MW-43I | **38.1** | **0.0381** | |
| MW-44D | Offsite Wells | Deep | 09/16/2016 | GW-162 | 2.7 | 0.0027 | J |
| MW-44D | Offsite Wells | Deep | 09/22/2020 | MW-44D_092220 | 3.5 | 0.0035 | J |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-44D | Offsite Wells | Deep | 10/14/2022 | DUP_2022.10.14 | 2.6 | 0.0026 | J |
| MW-44D | Offsite Wells | Deep | 10/14/2022 | MW-44D | 2.3 | 0.0023 | J |
| MW-5D | Main Plant Area | Intermediate | 03/11/2014 | GW0019_20140311 | **20** | **0.02** | J |
| MW-5D | Main Plant Area | Intermediate | 03/22/2019 | MW-5D_20190322 | **34.9** | **0.0349** | |
| MW-5D | Main Plant Area | Intermediate | 03/22/2019 | MW-5D_20190322FD | **37.5** | **0.0375** | |
| MW-5DD | Main Plant Area | Deep | 03/11/2014 | GW0020_20140311 | **51** | **0.051** | J |
| MW-5DD | Main Plant Area | Deep | 03/11/2014 | GW0021_20140311 | **32** | **0.032** | |
| MW-5DD | Main Plant Area | Deep | 03/22/2019 | MW-5DD_20190322 | **27.6** | **0.0276** | |
| MW-5I | Main Plant Area | Intermediate | 03/11/2014 | GW0022_20140311 | **24** | **0.024** | J |
| MW-5I | Main Plant Area | Intermediate | 03/22/2019 | MW-5I_20190322 | **31.7** | **0.0317** | |
| MW-5I | Main Plant Area | Intermediate | 10/20/2022 | MW-5I | **25.8** | **0.0258** | |
| MW-5I | Main Plant Area | Intermediate | 03/13/2023 | MW-5I | **23.1** | **0.0231** | |
| MW-5I | Main Plant Area | Intermediate | 06/29/2023 | MW-5I | **21.1** | **0.0211** | |
| MW-5X | Main Plant Area | Middle PRM | 03/12/2014 | GW0023_20140312 | 12 | 0.012 | U |
| MW-5X | Main Plant Area | Middle PRM | 09/19/2016 | GW-146 | 1.5 | 0.0015 | J |
| MW-5X | Main Plant Area | Middle PRM | 09/30/2019 | DUP-093019 | 2.23 | 0.00223 | J |
| MW-5X | Main Plant Area | Middle PRM | 09/30/2019 | MW5X-093019 | 2.57 | 0.00257 | J |
| MW-5X | Main Plant Area | Middle PRM | 04/04/2023 | MW-5X | 0.93 | 0.00093 | U |
| MW-6I | Main Plant Area | Intermediate | 03/12/2014 | GW0024_20140312 | 13 | 0.013 | UJ |
| MW-6I | Main Plant Area | Intermediate | 03/21/2019 | MW-6I_20190321 | 7.69 | 0.00769 | J |
| MW-6I | Main Plant Area | Intermediate | 11/01/2022 | DUP_2022.11.01 | 7.2 | 0.0072 | |
| MW-6I | Main Plant Area | Intermediate | 11/01/2022 | MW-6I | 7.7 | 0.0077 | |
| MW-6I | Main Plant Area | Intermediate | 03/13/2023 | MW-6I | 5.1 | 0.0051 | |
| MW-6I | Main Plant Area | Intermediate | 06/26/2023 | MW-6I | 5.9 | 0.0059 | |
| MW-6S | Main Plant Area | Shallow | 03/12/2014 | GW0025_20140312 | 12 | 0.012 | U |
| P-2S | Main Plant Area | Shallow | 03/13/2014 | GW0026_20140313 | **14** | **0.014** | J |
| P-2S | Main Plant Area | Shallow | 03/28/2019 | P-2S_20190328 | **20.5** | **0.0205** | |
| P-2S | Main Plant Area | Shallow | 10/01/2020 | P-2S_100120 | **33.5** | **0.0335** | |
| P-2S | Main Plant Area | Shallow | 11/02/2022 | DUP_2022.11.02 | **15.3** | **0.0153** | |
| P-2S | Main Plant Area | Shallow | 11/02/2022 | P-2S | **18.7** | **0.0187** | |
| P-2S | Main Plant Area | Shallow | 03/09/2023 | P-2S | 13.4 | 0.0134 | |
| P-2S | Main Plant Area | Shallow | 06/28/2023 | P-2S | **15.1** | **0.0151** | |
| P-3D | Dredge Spoil Area | Lower PRM | 04/18/2014 | GW0004_20140418 | 13 | 0.013 | U |
| P-3D | Dredge Spoil Area | Lower PRM | 10/01/2020 | P-3D_100120 | 2.9 | 0.0029 | J |
| P-3D | Dredge Spoil Area | Lower PRM | 09/20/2022 | P-3D | 2 | 0.002 | U |

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| P-3D | Dredge Spoil Area | Lower PRM | 03/10/2023 | DUP_031023 | 1.2 | 0.0012 | J |
| P-3D | Dredge Spoil Area | Lower PRM | 03/10/2023 | P-3D | 1.1 | 0.0011 | J |
| P-3I | Dredge Spoil Area | Middle PRM | 04/18/2014 | GW0005_20140418 | 13 | 0.013 | U |
| P-3I | Dredge Spoil Area | Middle PRM | 10/01/2020 | P-3I_100120 | 8 | 0.008 | |
| P-3I | Dredge Spoil Area | Middle PRM | 09/20/2022 | P-3I | 12.1 | 0.0121 | |
| P-3I | Dredge Spoil Area | Middle PRM | 03/10/2023 | P-3I | 7.8 | 0.0078 | |
| P-3S | Dredge Spoil Area | Shallow | 04/18/2014 | GW0006_20140418 | **52** | **0.052** | |
| P-3S | Dredge Spoil Area | Shallow | 10/01/2020 | P-3S_100120 | **34.2** | **0.0342** | |
| P-3S | Dredge Spoil Area | Shallow | 03/10/2023 | P-3S | **18.8** | **0.0188** | |
| P-3S | Dredge Spoil Area | Shallow | 06/28/2023 | P-3S | **18.4** | **0.0184** | |
| P-5S | Main Plant Area | Shallow | 03/13/2014 | GW0027_20140313 | 12 | 0.012 | UJ |
| P-5S | Main Plant Area | Shallow | 03/26/2019 | P-5S_20190326 | 8 | 0.008 | U |
| P-6S | Main Plant Area | Shallow | 03/14/2014 | GW0028_20140314 | 13 | 0.013 | UJ |
| P-6S | Main Plant Area | Shallow | 03/28/2019 | P-6S_20190328 | 8 | 0.008 | U |
| P-6S | Main Plant Area | Shallow | 11/02/2022 | P-6S | 2.8 | 0.0028 | J |
| P-6S | Main Plant Area | Shallow | 06/26/2023 | P-6S | 5.2 | 0.0052 | |
| P-7S | Main Plant Area | Shallow | 03/27/2019 | P-7S_20190327 | 4.73 | 0.00473 | J |
| PW-1 | Main Plant Area | Intermediate | 09/30/2019 | PW-093019 | 2.11 | 0.00211 | J |
| PW-1 | Main Plant Area | Intermediate | 10/28/2019 | PW-10282019 | 3.7 | 0.0037 | U |
| PZ-5 | Dredge Spoil Area | Shallow | 04/18/2014 | GW0001_20140418 | **16** | **0.016** | J |
| PZ-5 | Dredge Spoil Area | Shallow | 04/18/2014 | GW0002_20140418 | **20** | **0.02** | J |
| PZ-5 | Dredge Spoil Area | Shallow | 10/01/2020 | PZ-5_100120 | **19.2** | **0.0192** | |
| PZ-5 | Dredge Spoil Area | Shallow | 09/20/2022 | PZ-5 | **19.2** | **0.0192** | J |
| PZ-5 | Dredge Spoil Area | Shallow | 03/10/2023 | PZ-5 | 4.4 | 0.0044 | |
| PZ-5 | Dredge Spoil Area | Shallow | 06/28/2023 | PZ-5 | 11.3 | 0.0113 | |
| PZ-6 | Dredge Spoil Area | Shallow | 04/18/2014 | GW0003_20140418 | **54** | **0.054** | |
| PZ-6 | Dredge Spoil Area | Shallow | 11/03/2022 | PZ-6 | **47.1** | **0.0471** | |
| PZ-6 | Dredge Spoil Area | Shallow | 03/10/2023 | PZ-6 | **55.3** | **0.0553** | |
| PZ-6 | Dredge Spoil Area | Shallow | 06/29/2023 | PZ-6 | **55.3** | **0.0553** | |
| PZ-8 | Dredge Spoil Area | Shallow | 09/21/2016 | GW-152 | **22** | **0.022** | |
| PZ-8 | Dredge Spoil Area | Shallow | 10/19/2022 | PZ-8 | 8.2 | 0.0082 | |

Notes:

**Bold/Boxed sample result indicates value exceeds NJDEP GWQS (13 ng/L, 0.013 µg/L).**

Definitions:

Table 3. Perfluorooctanesulfonic Acid Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|

NJDEP GWQS = New Jersey Department of Environmental Protection Groundwater Quality Standard
ng/L = Nanograms per liter (or parts per trillion, ppt)
µg/L = Micrograms per liter (or parts per billion, ppb)
PRM = Potomac Raritan Magothy

Data Qualifiers:
J = Indicates an estimated value
U = Analyte was not detected; the value reported is the method detection limit

Table 4. Monofunctional Surfactant Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| M/H-2D | Main Plant Area | Intermediate | 11/17/2021 | M/H-2D | **671000** | **671** | |
| M/H-2D | Main Plant Area | Intermediate | 11/17/2021 | M/H-2D-SD1 | **741000** | **741** | |
| M/H-2D | Main Plant Area | Intermediate | 11/17/2021 | M/H-2D-SD2 | **591000** | **591** | |
| M/H-2D | Main Plant Area | Intermediate | 11/17/2021 | M/H-2D-SD3 | **601000** | **601** | |
| M/H-2D | Main Plant Area | Intermediate | 11/17/2021 | M/H-2D-SD4 | **581000** | **581** | |
| M/H-2D | Main Plant Area | Intermediate | 11/17/2021 | M/H-2D-SD5 | **610000** | **610** | |
| M/H-2D | Main Plant Area | Intermediate | 10/20/2022 | M/H-2D | **323000** | **323** | J |
| M/H-2D | Main Plant Area | Intermediate | 03/09/2023 | M/H-2D | **89000** | **89** | J |
| M/H-2D | Main Plant Area | Intermediate | 6/27/2023 | M/H-2D | **113000** | **113** | J |
| M/H-4 | Main Plant Area | Shallow | 02/28/2022 | M/H-4 | **3610** | **3.61** | |
| MW-1 | Main Plant Area | Shallow | 03/01/2022 | MW-1 | **2400** | **2.4** | J |
| MW-101D | Offsite Wells | Deep | 05/10/2022 | MW-101D | **66.5** | **0.0665** | |
| MW-101D | Offsite Wells | Deep | 07/08/2022 | MW-101D | **26.8** | **0.0268** | |
| MW-101D | Offsite Wells | Deep | 6/23/2023 | MW-101D | 0 | 0 | U |
| MW-101S | Offsite Wells | Shallow | 05/10/2022 | MW-101S | **28.3** | **0.0283** | |
| MW-101S | Offsite Wells | Shallow | 07/08/2022 | MW-101S | **16** | **0.016** | |
| MW-101S | Offsite Wells | Shallow | 06/23/2023 | MW-101S | **51** | **0.051** | |
| MW-102D | Offsite Wells | Deep | 07/07/2022 | MW-102D | **34.1** | **0.0341** | J |
| MW-102D | Offsite Wells | Deep | 09/13/2022 | MW-102D | **15.2** | **0.0152** | |
| MW-102D | Offsite Wells | Deep | 03/07/2023 | MW-102D | **13.2** | **0.0132** | J |
| MW-102D | Offsite Wells | Deep | 6/22/2023 | MW-102D | **49** | **0.049** | J |
| MW-102S | Offsite Wells | Shallow | 07/07/2022 | MW-102S | **4.3** | **0.0043** | |
| MW-102S | Offsite Wells | Shallow | 09/13/2022 | MW-102S | **3.7** | **0.0037** | |
| MW-102S | Offsite Wells | Shallow | 03/07/2023 | MW-102S | **4.7** | **0.0047** | UJ |
| MW-102S | Offsite Wells | Shallow | 06/22/2023 | MW-102S | **4.6** | **0.0046** | |
| MW-102X | Offsite Wells | Middle PRM | 04/06/2023 | MW-102X | 1 | 0.001 | |
| MW-103D | Offsite Wells | Deep | 07/07/2022 | MW-103D | **11.6** | **0.0116** | J |
| MW-103D | Offsite Wells | Deep | 09/14/2022 | MW-103D | **6.24** | **0.00624** | J |
| MW-103D | Offsite Wells | Deep | 03/14/2023 | MW-103D | **10.8** | **0.0108** | J |
| MW-103D | Offsite Wells | Deep | 6/23/2023 | MW-103D | **19.1** | **0.0191** | |
| MW-103S | Offsite Wells | Shallow | 07/06/2022 | MW-103S | **23.7** | **0.0237** | |
| MW-103S | Offsite Wells | Shallow | 09/14/2022 | MW-103S | **14** | **0.014** | |
| MW-103S | Offsite Wells | Shallow | 03/14/2023 | MW-103S | **43.3** | **0.0433** | J |
| MW-103S | Offsite Wells | Shallow | 06/23/2023 | DUP_062323 | **60.1** | **0.0601** | J |
| MW-103S | Offsite Wells | Shallow | 06/23/2023 | MW-103S | **55.6** | **0.0556** | |

Table 4. Monofunctional Surfactant Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-104D | Offsite Wells | Deep | 09/13/2022 | MW-104D | **31.2** | **0.0312** | J |
| MW-104D | Offsite Wells | Deep | 11/08/2022 | MW-104D | **8.94** | **0.00894** | J |
| MW-104D | Offsite Wells | Deep | 03/08/2023 | MW-104D | **4.76** | **0.00476** | UJ |
| MW-104D | Offsite Wells | Deep | 6/20/2023 | MW-104D | **42.4** | **0.0424** | |
| MW-104S | Offsite Wells | Shallow | 09/13/2022 | MW-104S | **9.6** | **0.0096** | |
| MW-104S | Offsite Wells | Shallow | 11/08/2022 | MW-104S | **9.1** | **0.0091** | |
| MW-104S | Offsite Wells | Shallow | 03/08/2023 | MW-104S | 0.96 | 0.00096 | J |
| MW-104S | Offsite Wells | Shallow | 06/20/2023 | MW-104S | 14.7 | 0.0147 | J |
| MW-105D | Offsite Wells | Deep | 09/12/2022 | MW-105D | 1.2 | 0.0012 | J |
| MW-105D | Offsite Wells | Deep | 03/07/2023 | MW-105D | 0 | 0 | UJ |
| MW-105D | Offsite Wells | Deep | 6/19/2023 | MW-105D | 0 | 0 | U |
| MW-105S | Offsite Wells | Shallow | 09/12/2022 | MW-105S | 0 | 0 | U |
| MW-105S | Offsite Wells | Shallow | 03/07/2023 | MW-105S | 0 | 0 | UJ |
| MW-105S | Offsite Wells | Shallow | 06/19/2023 | MW-105S | 0.94 | 0.00094 | |
| MW-106D | Offsite Wells | Deep | 05/11/2022 | MW106D | **121** | **0.121** | J |
| MW-106D | Offsite Wells | Deep | 07/07/2022 | MW-106D | **23.6** | **0.0236** | |
| MW-106D | Offsite Wells | Deep | 09/16/2022 | MW-106D | **2.9** | **0.0029** | |
| MW-106D | Offsite Wells | Deep | 11/09/2022 | MW-106D | 1.16 | 0.00116 | J |
| MW-106D | Offsite Wells | Deep | 03/14/2023 | MW-106D | **8.86** | **0.00886** | J |
| MW-106D | Offsite Wells | Deep | 6/20/2023 | MW-106D | 0 | 0 | U |
| MW-106S | Offsite Wells | Shallow | 05/11/2022 | MW-106S | 0.75 | 0.00075 | J |
| MW-106S | Offsite Wells | Shallow | 07/07/2022 | MW-106S | **3.75** | **0.00375** | J |
| MW-106S | Offsite Wells | Shallow | 09/16/2022 | MW-106S | 0 | 0 | U |
| MW-106S | Offsite Wells | Shallow | 11/09/2022 | MW-106S | 0 | 0 | U |
| MW-106S | Offsite Wells | Shallow | 03/14/2023 | MW-106S | 0 | 0 | UJ |
| MW-106S | Offsite Wells | Shallow | 06/20/2023 | MW-106S | 2 | 0.002 | |
| MW-107D | Offsite Wells | Deep | 07/08/2022 | MW-107D | **3.86** | **0.00386** | J |
| MW-107D | Offsite Wells | Deep | 09/19/2022 | MW-107D | **2.35** | **0.00235** | J |
| MW-107D | Offsite Wells | Deep | 03/06/2023 | MW-107D | **4.1** | **0.0041** | UJ |
| MW-107D | Offsite Wells | Deep | 6/20/2023 | MW-107D | **2.8** | **0.0028** | |
| MW-107S | Offsite Wells | Shallow | 07/08/2022 | MW-107S | 1.2 | 0.0012 | |
| MW-107S | Offsite Wells | Shallow | 09/19/2022 | MW-107S | 0 | 0 | U |
| MW-107S | Offsite Wells | Shallow | 03/06/2023 | MW-107S | 0 | 0 | UJ |
| MW-107S | Offsite Wells | Shallow | 06/20/2023 | MW-107S | 0.85 | 0.00085 | J |
| MW-108D | Offsite Wells | Middle PRM | 09/12/2022 | MW-108D | **156** | **0.156** | |

Table 4. Monofunctional Surfactant Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-108D | Offsite Wells | Middle PRM | 11/07/2022 | MW-108D | **168** | **0.168** | |
| MW-108D | Offsite Wells | Middle PRM | 6/19/2023 | MW-108D | **78** | **0.078** | J |
| MW-108S | Offsite Wells | Shallow | 09/12/2022 | MW-108S | **47.1** | **0.0471** | |
| MW-108S | Offsite Wells | Shallow | 11/07/2022 | MW-108S | **19** | **0.019** | J |
| MW-108S | Offsite Wells | Shallow | 06/19/2023 | MW-108S | **25.4** | **0.0254** | J |
| MW-109D | Offsite Wells | Deep | 05/10/2022 | MW-109D | 1.6 | 0.0016 | |
| MW-109D | Offsite Wells | Deep | 07/08/2022 | MW-109D | 0 | 0 | U |
| MW-109D | Offsite Wells | Deep | 09/15/2022 | MW-109D | 0 | 0 | U |
| MW-109D | Offsite Wells | Deep | 03/11/2023 | MW-109D | **2.96** | **0.00296** | J |
| MW-109D | Offsite Wells | Deep | 6/27/2023 | MW-109D | 0 | 0 | U |
| MW-109S | Offsite Wells | Shallow | 05/10/2022 | MW-109S | **660** | **0.66** | |
| MW-109S | Offsite Wells | Shallow | 07/08/2022 | MW-109S | **731** | **0.731** | J |
| MW-109S | Offsite Wells | Shallow | 09/15/2022 | MW-109S | **1010** | **1.01** | |
| MW-109S | Offsite Wells | Shallow | 03/11/2023 | MW-109S | **1310** | **1.31** | J |
| MW-109S | Offsite Wells | Shallow | 06/27/2023 | MW-109S | **1820** | **1.82** | J |
| MW-10I | Main Plant Area | Intermediate | 11/01/2022 | MW-10I | **137000** | **137** | J |
| MW-10I | Main Plant Area | Intermediate | 03/13/2023 | MW-10I | **74700** | **74.7** | J |
| MW-10I | Main Plant Area | Intermediate | 6/26/2023 | MW-10I | **107000** | **107** | J |
| MW-10X | Main Plant Area | Middle PRM | 04/04/2023 | MW-10X | 0.44 | 0.00044 | UJ |
| MW-110D | Offsite Wells | Deep | 05/09/2022 | MW-110D | **15** | **0.015** | |
| MW-110D | Offsite Wells | Deep | 07/11/2022 | MW-110D | **14** | **0.014** | |
| MW-110D | Offsite Wells | Deep | 09/13/2022 | MW-110D | **15** | **0.015** | |
| MW-110S | Offsite Wells | Shallow | 05/09/2022 | MW-110S | **89** | **0.089** | |
| MW-110S | Offsite Wells | Shallow | 07/11/2022 | MW-110S | **84** | **0.084** | |
| MW-110S | Offsite Wells | Shallow | 09/13/2022 | MW-110S | **97** | **0.097** | |
| MW-111D | Offsite Wells | Deep | 05/12/2022 | MW-111D | **242** | **0.242** | |
| MW-111D | Offsite Wells | Deep | 07/11/2022 | MW-111D | **242** | **0.242** | |
| MW-111D | Offsite Wells | Deep | 09/13/2022 | MW-111D | **312** | **0.312** | |
| MW-111D | Offsite Wells | Deep | 03/11/2023 | MW-111D | **383** | **0.383** | UJ |
| MW-111D | Offsite Wells | Deep | 6/27/2023 | MW-111D | **383.0** | **0.383** | |
| MW-111S | Offsite Wells | Shallow | 05/12/2022 | MW-111S | **1140** | **1.14** | |
| MW-111S | Offsite Wells | Shallow | 07/11/2022 | MW-111S | **1140** | **1.14** | |
| MW-111S | Offsite Wells | Shallow | 09/13/2022 | MW-111S | **1040** | **1.04** | |
| MW-111S | Offsite Wells | Shallow | 03/11/2023 | MW-111S | **788** | **0.788** | J |
| MW-111S | Offsite Wells | Shallow | 06/27/2023 | DUP_062723 | **1010** | **1.01** | J |

Table 4. Monofunctional Surfactant Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-111S | Offsite Wells | Shallow | 06/27/2023 | MW-111S | **915** | **0.9148** | |
| MW-112D | Offsite Wells | Deep | 05/09/2022 | MW-112D | 0 | 0 | U |
| MW-112D | Offsite Wells | Deep | 07/06/2022 | MW-112D | 0 | 0 | U |
| MW-112D | Offsite Wells | Deep | 09/14/2022 | MW-112D | 0 | 0 | U |
| MW-112D | Offsite Wells | Deep | 11/08/2022 | MW-112D | 0 | 0 | U |
| MW-112D | Offsite Wells | Deep | 03/07/2023 | MW-112D | 0 | 0 | UJ |
| MW-112D | Offsite Wells | Deep | 6/21/2023 | MW-112D | 0 | 0 | U |
| MW-112S | Offsite Wells | Shallow | 05/09/2022 | MW-112S | 0 | 0 | U |
| MW-112S | Offsite Wells | Shallow | 07/06/2022 | MW-112S | 0 | 0 | U |
| MW-112S | Offsite Wells | Shallow | 09/14/2022 | MW-112S | 0.19 | 0.00019 | J |
| MW-112S | Offsite Wells | Shallow | 11/08/2022 | MW-112S | 0.27 | 0.00027 | J |
| MW-112S | Offsite Wells | Shallow | 03/07/2023 | MW-112S | **5.42** | **0.00542** | J |
| MW-112S | Offsite Wells | Shallow | 06/21/2023 | MW-112S | **19.4** | **0.0194** | J |
| MW-113D | Offsite Wells | Deep | 07/07/2022 | MW-113D | 0 | 0 | U |
| MW-113D | Offsite Wells | Deep | 09/14/2022 | MW-113D | 0 | 0 | U |
| MW-113D | Offsite Wells | Deep | 03/07/2023 | MW-113D | 0 | 0 | UJ |
| MW-113D | Offsite Wells | Deep | 6/21/2023 | MW-113D | **5.43** | **0.00543** | J |
| MW-113S | Offsite Wells | Shallow | 07/07/2022 | MW-113S | 0.91 | 0.00091 | J |
| MW-113S | Offsite Wells | Shallow | 09/14/2022 | MW-113S | 0.79 | 0.00079 | J |
| MW-113S | Offsite Wells | Shallow | 03/07/2023 | MW-113S | 0 | 0 | UJ |
| MW-113S | Offsite Wells | Shallow | 06/21/2023 | MW-113S | 2 | 0.002 | |
| MW-114D | Offsite Wells | Deep | 09/13/2022 | MW-114D | **2.44** | **0.00244** | J |
| MW-114D | Offsite Wells | Deep | 03/07/2023 | MW-114D | 0 | 0 | UJ |
| MW-114D | Offsite Wells | Deep | 6/20/2023 | MW-114D | 0.66 | 0.00066 | J |
| MW-114S | Offsite Wells | Shallow | 09/13/2022 | MW-114S | 0.23 | 0.00023 | J |
| MW-114S | Offsite Wells | Shallow | 03/07/2023 | MW-114S | 24 | 0.024 | J |
| MW-114S | Offsite Wells | Shallow | 06/20/2023 | MW-114S | 0 | 0 | U |
| MW-114X | Offsite Wells | Lower PRM | 03/28/2023 | MW-114X | **7.48** | **0.00748** | UJ |
| MW-115X | Offsite Wells | Middle PRM | 04/06/2023 | MW-115X | 0.27 | 0.00027 | J |
| MW-116D | Offsite Wells | Deep | 09/13/2022 | MW-116D | **6.34** | **0.00634** | J |
| MW-116D | Offsite Wells | Deep | 03/06/2023 | MW-116D | 0 | 0 | UJ |
| MW-116D | Offsite Wells | Deep | 6/22/2023 | MW-116D | **5.38** | **0.00538** | J |
| MW-116S | Offsite Wells | Shallow | 09/13/2022 | MW-116S | 0 | 0 | U |
| MW-116S | Offsite Wells | Shallow | 03/06/2023 | MW-116S | 0 | 0 | UJ |
| MW-116S | Offsite Wells | Shallow | 06/22/2023 | MW-116S | 0 | 0 | U |

Table 4. Monofunctional Surfactant Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-117D | Offsite Wells | Deep | 09/15/2022 | MW-117D | 0.53 | 0.00053 | J |
| MW-117D | Offsite Wells | Deep | 03/06/2023 | MW-117D | 1 | 0.001 | UJ |
| MW-117D | Offsite Wells | Deep | 6/22/2023 | MW-117D | **2.1** | **0.0021** | |
| MW-117S | Offsite Wells | Shallow | 09/15/2022 | MW-117S | 0.19 | 0.00019 | J |
| MW-117S | Offsite Wells | Shallow | 03/06/2023 | MW-117S | 0 | 0 | UJ |
| MW-117S | Offsite Wells | Shallow | 06/22/2023 | MW-117S | 0 | 0 | U |
| MW-118D | Offsite Wells | Deep | 07/08/2022 | MW-118D | 0.29 | 0.00029 | J |
| MW-118D | Offsite Wells | Deep | 09/14/2022 | MW-118D | 0.27 | 0.00027 | J |
| MW-118D | Offsite Wells | Deep | 03/11/2023 | MW-118D | **3.3** | **0.0033** | J |
| MW-118D | Offsite Wells | Deep | 6/22/2023 | MW-118D | **3.25** | **0.00325** | J |
| MW-118S | Offsite Wells | Shallow | 07/08/2022 | MW-118S | 0.59 | 0.00059 | J |
| MW-118S | Offsite Wells | Shallow | 09/14/2022 | MW-118S | 0 | 0 | U |
| MW-118S | Offsite Wells | Shallow | 03/11/2023 | MW-118S | 0 | 0 | UJ |
| MW-118S | Offsite Wells | Shallow | 06/22/2023 | MW-118S | 0 | 0 | U |
| MW-119D | Offsite Wells | Deep | 09/12/2022 | MW-119D | **9.6** | **0.0096** | |
| MW-119D | Offsite Wells | Deep | 11/07/2022 | MW-119D | **7.01** | **0.00701** | |
| MW-119D | Offsite Wells | Deep | 03/08/2023 | MW-119D | **6.29** | **0.00629** | UJ |
| MW-119D | Offsite Wells | Deep | 6/19/2023 | MW-119D | **3.51** | **0.00351** | J |
| MW-119S | Offsite Wells | Shallow | 09/12/2022 | MW-119S | 0.3 | 0.0003 | J |
| MW-119S | Offsite Wells | Shallow | 11/07/2022 | MW-119S | 0.87 | 0.00087 | |
| MW-119S | Offsite Wells | Shallow | 03/08/2023 | MW-119S | 0.58 | 0.00058 | UJ |
| MW-119S | Offsite Wells | Shallow | 06/19/2023 | MW-119S | 0 | 0 | U |
| MW-120D | Offsite Wells | Deep | 09/15/2022 | MW-120D | **38.6** | **0.0386** | J |
| MW-120D | Offsite Wells | Deep | 03/13/2023 | MW-120D | **65** | **0.065** | UJ |
| MW-120D | Offsite Wells | Deep | 6/21/2023 | DUP_062123 | **62** | **0.062** | |
| MW-120D | Offsite Wells | Deep | 6/21/2023 | MW-120D | **63.3** | **0.0633** | J |
| MW-120S | Offsite Wells | Shallow | 09/15/2022 | MW-120S | **34** | **0.034** | |
| MW-120S | Offsite Wells | Shallow | 03/13/2023 | MW-120S | **36** | **0.036** | UJ |
| MW-120S | Offsite Wells | Shallow | 06/21/2023 | MW-120S | **33** | **0.033** | |
| MW-121D | Offsite Wells | Deep | 09/16/2022 | MW-121D | **3.3** | **0.0033** | |
| MW-121D | Offsite Wells | Deep | 03/10/2023 | MW-121D | 1.2 | 0.0012 | UJ |
| MW-121D | Offsite Wells | Deep | 6/26/2023 | MW-121D | 4.9 | 0.0049 | |
| MW-121S | Offsite Wells | Shallow | 09/16/2022 | MW-121S | **68** | **0.068** | |
| MW-121S | Offsite Wells | Shallow | 03/10/2023 | MW-121S | **92.5** | **0.0925** | UJ |
| MW-121S | Offsite Wells | Shallow | 06/26/2023 | MW-121S | **5.7** | **0.0057** | J |

Table 4. Monofunctional Surfactant Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-122D | Offsite Wells | Deep | 09/16/2022 | MW-122D | **16** | **0.016** | |
| MW-122D | Offsite Wells | Deep | 11/09/2022 | MW-122D | **15** | **0.015** | |
| MW-122D | Offsite Wells | Deep | 03/28/2023 | MW-122D | **20** | **0.02** | UJ |
| MW-122D | Offsite Wells | Deep | 6/26/2023 | MW-122D | **18** | **0.018** | |
| MW-122S | Offsite Wells | Shallow | 09/16/2022 | MW-122S | **810** | **0.81** | |
| MW-122S | Offsite Wells | Shallow | 11/09/2022 | MW-122S | **660** | **0.66** | |
| MW-122S | Offsite Wells | Shallow | 03/28/2023 | MW-122S | **560** | **0.56** | UJ |
| MW-122S | Offsite Wells | Shallow | 06/26/2023 | MW-122S | **580** | **0.58** | |
| MW-123D | Offsite Wells | Lower PRM | 04/05/2023 | MW-123D | **24.6** | **0.0246** | UJ |
| MW-123I | Offsite Wells | Middle PRM | 04/05/2023 | MW-123I | **32.6** | **0.0326** | UJ |
| MW-123S | Offsite Wells | Shallow | 09/19/2022 | MW-123S | **38** | **0.038** | |
| MW-123S | Offsite Wells | Shallow | 03/13/2023 | MW-123S | **68** | **0.068** | UJ |
| MW-123S | Offsite Wells | Shallow | 06/23/2023 | MW-123S | **140** | **0.14** | J |
| MW-124D | Offsite Wells | Deep | 05/11/2022 | MW-124D | **3** | **0.003** | |
| MW-124D | Offsite Wells | Deep | 07/11/2022 | MW-124D | 1.6 | 0.0016 | |
| MW-124D | Offsite Wells | Deep | 09/20/2022 | MW-124D | 2 | 0.002 | |
| MW-124D | Offsite Wells | Deep | 03/08/2023 | MW-124D | **13** | **0.013** | R |
| MW-124D | Offsite Wells | Deep | 6/23/2023 | MW-124D | **3.6** | **0.0036** | |
| MW-124S | Offsite Wells | Shallow | 05/11/2022 | MW-124S | **42.7** | **0.0427** | J |
| MW-124S | Offsite Wells | Shallow | 07/11/2022 | MW-124S | **25** | **0.025** | |
| MW-124S | Offsite Wells | Shallow | 09/20/2022 | MW-124S | **78.7** | **0.0787** | J |
| MW-124S | Offsite Wells | Shallow | 03/08/2023 | MW-124S | **82.5** | **0.0825** | UJ |
| MW-124S | Offsite Wells | Shallow | 06/23/2023 | MW-124S | **92.8** | **0.0928** | J |
| MW-125D | Offsite Wells | Deep | 09/15/2022 | MW-125D | 0 | 0 | U |
| MW-125D | Offsite Wells | Deep | 03/09/2023 | MW-125D | 0 | 0 | UJ |
| MW-125D | Offsite Wells | Deep | 6/20/2023 | MW-125D | 0 | 0 | U |
| MW-125S | Offsite Wells | Shallow | 09/15/2022 | MW-125S | 0 | 0 | U |
| MW-125S | Offsite Wells | Shallow | 03/09/2023 | MW-125S | 0 | 0 | UJ |
| MW-125S | Offsite Wells | Shallow | 06/20/2023 | MW-125S | 0 | 0 | U |
| MW-126D | Offsite Wells | Deep | 09/12/2022 | MW-126D | 0 | 0 | U |
| MW-126D | Offsite Wells | Deep | 03/06/2023 | MW-126D | 0 | 0 | UJ |
| MW-126D | Offsite Wells | Deep | 6/19/2023 | DUP_061923 | 0 | 0 | U |
| MW-126D | Offsite Wells | Deep | 6/19/2023 | MW-126D | 0 | 0 | U |
| MW-126S | Offsite Wells | Shallow | 09/12/2022 | MW-126S | 0 | 0 | U |
| MW-126S | Offsite Wells | Shallow | 03/06/2023 | MW-126S | 0 | 0 | UJ |

Table 4. Monofunctional Surfactant Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-126S | Offsite Wells | Shallow | 06/19/2023 | MW-126S | 0 | 0 | U |
| MW-127D | Offsite Wells | Deep | 09/19/2022 | MW-127D | **92.1** | **0.0921** | |
| MW-127D | Offsite Wells | Deep | 03/08/2023 | MW-127D | **79.4** | **0.0794** | UJ |
| MW-127D | Offsite Wells | Deep | 6/21/2023 | MW-127D | **56.1** | **0.0561** | |
| MW-127S | Offsite Wells | Shallow | 09/19/2022 | MW-127S | **4** | **0.004** | |
| MW-127S | Offsite Wells | Shallow | 03/08/2023 | MW-127S | **7.1** | **0.0071** | UJ |
| MW-127S | Offsite Wells | Shallow | 06/21/2023 | MW-127S | **4.1** | **0.0041** | |
| MW-128S | Main Plant Area | Shallow | 03/10/2023 | MW-128S | **96400** | **96.4** | J |
| MW-128S | Main Plant Area | Shallow | 06/26/2023 | MW-128S | **121000** | **121** | J |
| MW-129S | Main Plant Area | Shallow | 03/10/2023 | MW-129S | **14100** | **14.1** | UJ |
| MW-129S | Main Plant Area | Shallow | 06/26/2023 | MW-129S | **22900** | **22.9** | J |
| MW-12S | Main Plant Area | Shallow | 02/28/2022 | MW-12S | **19100** | **19.1** | |
| MW-16S | Main Plant Area | Shallow | 11/17/2021 | MW-16S | **27100** | **27.1** | |
| MW-16S | Main Plant Area | Shallow | 03/01/2022 | MW-16S | **6630** | **6.63** | J |
| MW-16S | Main Plant Area | Shallow | 11/02/2022 | MW-16S | **7600** | **7.6** | |
| MW-16S | Main Plant Area | Shallow | 03/09/2023 | MW-16S | **9600** | **9.6** | J |
| MW-16S | Main Plant Area | Shallow | 06/27/2023 | MW-16S | **14500** | **14.5** | J |
| MW-19D | Offsite Wells | Deep | 07/12/2022 | MW-19D | **12300** | **12.3** | |
| MW-19D | Offsite Wells | Deep | 10/18/2022 | MW-19D | **12400** | **12.4** | J |
| MW-19D | Offsite Wells | Deep | 03/14/2023 | MW-19D | **12400** | **12.4** | UJ |
| MW-19D | Offsite Wells | Deep | 6/28/2023 | MW-19D | **15400** | **15.4** | J |
| MW-19I | Offsite Wells | Intermediate | 07/12/2022 | MW-19I | **6300** | **6.3** | J |
| MW-19I | Offsite Wells | Intermediate | 09/20/2022 | MW-19I | **6300** | **6.3** | J |
| MW-19I | Offsite Wells | Intermediate | 03/14/2023 | MW-19I | **7500** | **7.5** | UJ |
| MW-19I | Offsite Wells | Intermediate | 6/28/2023 | MW-19I | **296** | **0.296** | J |
| MW-19S | Offsite Wells | Shallow | 07/12/2022 | MW-19S | **1400** | **1.4** | |
| MW-19S | Offsite Wells | Shallow | 03/14/2023 | MW-19S | **4000** | **4** | J |
| MW-19X | Offsite Wells | Middle PRM | 04/05/2023 | MW-19X | **94.2** | **0.0942** | J |
| MW-1D | Main Plant Area | Deep | 10/20/2022 | MW-1D | **35600** | **35.6** | J |
| MW-1D | Main Plant Area | Deep | 03/13/2023 | MW-1D | **26900** | **26.9** | UJ |
| MW-1D | Main Plant Area | Deep | 6/26/2023 | MW-1D | **33600** | **33.6** | J |
| MW-22X | Main Plant Area | Middle PRM | 04/04/2023 | MW-22X | **505** | **0.505** | UJ |
| MW-24D | Dredge Spoil Area | Deep | 10/19/2022 | MW-24D | **158** | **0.158** | |
| MW-24I | Dredge Spoil Area | Intermediate | 10/19/2022 | MW-24I | **114** | **0.114** | J |
| MW-25IL | Offsite Wells | Intermediate | 10/18/2022 | MW-25IL | **6050** | **6.05** | |

Table 4. Monofunctional Surfactant Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-25IU | Offsite Wells | Intermediate | 11/01/2022 | MW-25IU | **9010** | **9.01** | |
| MW-25S | Offsite Wells | Shallow | 10/18/2022 | MW-25S | **3970** | **3.97** | |
| MW-27IU | Offsite Wells | Intermediate | 10/10/2022 | MW-27IU | **10400** | **10.4** | J |
| MW-27S | Offsite Wells | Shallow | 10/10/2022 | MW-27S | **2880** | **2.88** | J |
| MW-28IL | Offsite Wells | Intermediate | 10/11/2022 | MW-28IL | **11100** | **11.1** | J |
| MW-28S | Offsite Wells | Shallow | 10/11/2022 | MW-28S | **112** | **0.112** | J |
| MW-29IU | Offsite Wells | Intermediate | 10/11/2022 | MW-29IU | **2410** | **2.41** | J |
| MW-29S | Offsite Wells | Shallow | 10/11/2022 | MW-29S | **39** | **0.039** | |
| MW-31IU | Offsite Wells | Intermediate | 10/12/2022 | MW-31IU | **811** | **0.811** | |
| MW-31S | Offsite Wells | Shallow | 10/12/2022 | MW-31S | **705** | **0.705** | |
| MW-32S | Offsite Wells | Shallow | 10/19/2022 | MW-32S | **2200** | **2.2** | |
| MW-33S | Offsite Wells | Shallow | 07/12/2022 | MW-33S | **42** | **0.042** | |
| MW-33S | Offsite Wells | Shallow | 03/10/2023 | MW-33S | **200** | **0.2** | UJ |
| MW-33S | Offsite Wells | Shallow | 06/28/2023 | MW-33S | **210.29** | **0.21029** | J |
| MW-34D | Offsite Wells | Deep | 10/17/2022 | MW-34D | **950** | **0.95** | |
| MW-34IL | Offsite Wells | Intermediate | 10/17/2022 | MW-34IL | **690** | **0.69** | |
| MW-35D | Offsite Wells | Deep | 10/12/2022 | MW-35D | **55** | **0.055** | J |
| MW-35I | Offsite Wells | Intermediate | 10/12/2022 | MW-35I | **160** | **0.16** | J |
| MW-36D | Offsite Wells | Deep | 07/11/2022 | MW-36D | **87** | **0.087** | |
| MW-36D | Offsite Wells | Deep | 10/13/2022 | MW-36D | 1.2 | 0.0012 | |
| MW-36D | Offsite Wells | Deep | 03/09/2023 | MW-36D | **5.4** | **0.0054** | UJ |
| MW-36D | Offsite Wells | Deep | 6/29/2023 | MW-36D | **2.5** | **0.0025** | J |
| MW-37D | Offsite Wells | Deep | 10/13/2022 | MW-37D | **1820** | **1.82** | |
| MW-37S | Offsite Wells | Shallow | 10/13/2022 | MW-37S | **411** | **0.411** | J |
| MW-38D | Offsite Wells | Deep | 07/12/2022 | MW-38D | **63** | **0.063** | |
| MW-38D | Offsite Wells | Deep | 10/13/2022 | MW-38D | **95** | **0.095** | |
| MW-4 | Main Plant Area | Shallow | 03/01/2022 | MW-4 | **10100** | **10.1** | J |
| MW-40I | Offsite Wells | Intermediate | 11/02/2022 | MW-40I | **2460** | **2.46** | |
| MW-40I | Offsite Wells | Intermediate | 03/13/2023 | MW-40I | **2170** | **2.17** | R |
| MW-40I | Offsite Wells | Intermediate | 6/27/2023 | MW-40I | **2480** | **2.48** | J |
| MW-40S | Offsite Wells | Shallow | 11/17/2021 | MW-40S | **1220** | **1.22** | |
| MW-40S | Offsite Wells | Shallow | 03/02/2022 | MW-40S | **1920** | **1.92** | J |
| MW-40S | Offsite Wells | Shallow | 11/02/2022 | MW-40S | **970** | **0.97** | |
| MW-40S | Offsite Wells | Shallow | 03/13/2023 | MW-40S | **690** | **0.69** | J |
| MW-40S | Offsite Wells | Shallow | 06/27/2023 | MW-40S | **620** | **0.62** | J |

Table 4. Monofunctional Surfactant Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| MW-41D | Offsite Wells | Deep | 07/12/2022 | MW-41D | **28** | **0.028** | |
| MW-41D | Offsite Wells | Deep | 10/13/2022 | MW-41D | **28** | **0.028** | |
| MW-42D | Offsite Wells | Deep | 07/11/2022 | MW-42D | 0 | 0 | U |
| MW-42D | Offsite Wells | Deep | 10/13/2022 | MW-42D | 0.61 | 0.00061 | J |
| MW-42D | Offsite Wells | Deep | 03/09/2023 | MW-42D | 0 | 0 | UJ |
| MW-42D | Offsite Wells | Deep | 6/29/2023 | MW-42D | 0 | 0 | U |
| MW-43D | Offsite Wells | Deep | 07/12/2022 | MW-43D | **40** | **0.04** | |
| MW-43D | Offsite Wells | Deep | 10/14/2022 | MW-43D | **48** | **0.048** | |
| MW-43I | Offsite Wells | Intermediate | 07/12/2022 | MW-43I | **271** | **0.271** | |
| MW-43I | Offsite Wells | Intermediate | 10/14/2022 | MW-43I | **292** | **0.292** | |
| MW-44D | Offsite Wells | Deep | 10/14/2022 | MW-44D | **18.7** | **0.0187** | J |
| MW-5I | Main Plant Area | Intermediate | 10/20/2022 | MW-5I | **2140** | **2.14** | |
| MW-5I | Main Plant Area | Intermediate | 03/13/2023 | MW-5I | **2970** | **2.97** | J |
| MW-5I | Main Plant Area | Intermediate | 6/29/2023 | MW-5I | **2370** | **2.37** | J |
| MW-5X | Main Plant Area | Middle PRM | 04/04/2023 | MW-5X | **8.7** | **0.0087** | UJ |
| MW-6I | Main Plant Area | Intermediate | 11/01/2022 | MW-6I | **2830** | **2.83** | J |
| MW-6I | Main Plant Area | Intermediate | 03/13/2023 | MW-6I | **2980** | **2.98** | UJ |
| MW-6I | Main Plant Area | Intermediate | 6/26/2023 | MW-6I | **3040** | **3.04** | J |
| P-2S | Main Plant Area | Shallow | 11/02/2022 | P-2S | **672** | **0.672** | |
| P-2S | Main Plant Area | Shallow | 03/09/2023 | P-2S | **560** | **0.56** | J |
| P-2S | Main Plant Area | Shallow | 06/28/2023 | P-2S | **500** | **0.5** | J |
| P-3D | Dredge Spoil Area | Lower PRM | 09/20/2022 | P-3D | **7.31** | **0.00731** | J |
| P-3D | Dredge Spoil Area | Lower PRM | 03/10/2023 | P-3D | **29.5** | **0.0295** | UJ |
| P-3I | Dredge Spoil Area | Middle PRM | 09/20/2022 | P-3I | **255** | **0.255** | |
| P-3I | Dredge Spoil Area | Middle PRM | 03/10/2023 | P-3I | **401** | **0.401** | J |
| P-3S | Dredge Spoil Area | Shallow | 03/10/2023 | P-3S | **5760** | **5.76** | UJ |
| P-3S | Dredge Spoil Area | Shallow | 06/28/2023 | P-3S | **7160** | **7.16** | J |
| P-6S | Main Plant Area | Shallow | 11/02/2022 | P-6S | **85700** | **85.7** | J |
| P-6S | Main Plant Area | Shallow | 06/26/2023 | P-6S | **45600** | **45.6** | J |
| PZ-5 | Dredge Spoil Area | Shallow | 09/20/2022 | PZ-5 | **495** | **0.495** | |
| PZ-5 | Dredge Spoil Area | Shallow | 03/10/2023 | PZ-5 | **450** | **0.45** | UJ |
| PZ-5 | Dredge Spoil Area | Shallow | 06/28/2023 | PZ-5 | **361** | **0.361** | J |
| PZ-6 | Dredge Spoil Area | Shallow | 11/03/2022 | PZ-6 | **201** | **0.201** | J |
| PZ-6 | Dredge Spoil Area | Shallow | 03/10/2023 | PZ-6 | **439** | **0.439** | UJ |
| PZ-6 | Dredge Spoil Area | Shallow | 06/29/2023 | PZ-6 | **675** | **0.675** | J |

Table 4. Monofunctional Surfactant Groundwater Results Summary

| Well Location ID | Location Description | Aquifer Designation | Sample Date | Sample ID | Concentration (ng/L) | Concentration (µg/L) | Qualifier |
|---|---|---|---|---|---|---|---|
| PZ-8 | Dredge Spoil Area | Shallow | 10/19/2022 | PZ-8 | **428** | **0.428** | |

Notes:

**Bold/Boxed sample result indicates value exceeds NJDEP GWQS (2 ng/L, 0.02 (µg/L)**

Result represents the total of monofunctional surfactant (MFS) results. A result of zero indicates non-detect values for all MFS oligimers analyzed.

Definitions:

NJDEP GWQS = New Jersey Department of Environmental Protection Groundwater Quality Standard
ng/L = Nanograms per liter (or parts per trillion, ppt)
µg/L = Micrograms per liter (or parts per billion, ppb)
PRM = Potomac Raritan Magothy

Data Qualifiers:

J = Indicates an estimated value
U = Analyte was not detected; the value reported is the method detection limit

MW-40I and MW-124D – the N5 oligomer result was rejected so the total should be qualified.

# Appendix A

Field Sampling Forms

integral consulting inc.

# GROUNDWATER SAMPLE COLLECTION FORM

110 Marter Ave, Suite 304
Moorestown, NJ 08057
(856) 399-7720

Well ID PZ-5
Sample ID PZ-5
Date 6/28/23

Project Name: West Deptford, NJ
Project Number: CF1165.2501.02A/.3202.01
Sampler LC & AR

**Well Information**

| | | | | | |
|---|---|---|---|---|---|
| Monument Condition | ☒ Good | ☐ Needs Repair | | | |
| Well Cap Condition | ☒ Good | ☐ Locked | ☐ Replaced | ☐ Needs Replacement | |
| Elevation Mark | ☒ Yes | ☐ Added | ☐ other | | |
| Well Diameter | ☒ 2-inch | ☐ 4-inch | ☐ 6-inch | ☐ Other | |
| Odor ☒ | Comments | | | | |

**Purge Data**

Total Well Depth 18.7 ft ☐ Clean Bottom ☒ Muddy Bottom ☐ Not Measured
Depth to Water 13.2 ft
Casing Volume 5.5 ft (H20) X 0.16 gpf = 0.88 X 3 = 2.64 gallons
3/4 " = 0.02 gpf 1"= 0.04 gpf 2" = 0.16 gpf 4"=0.65 gpf 6"=1.47 gpf

**Purge Method**

Pump Type: Bailer - 3 volume Purge
Sample Intake Depth: no pump or tubing
Purge Start Time: Purge Stop Time:
Tubing:
Total volume purged:
Purge Rate:
Sample Rate:

**Field Parameters**

| Time | Gallons | pH | Temperature (°C) | ORP (mvolts) | Turbidity (NTU) | Spec. Cond (mS/cm) | D.O. (mg/L) | Comments |
|---|---|---|---|---|---|---|---|---|
| 1350 | 0 | 5.55 | 15.5 | -105.5 | 97.36 | 236.7 | 2.55 | brownish color & odor |
| 1355 | 1.5 | 5.49 | 15.1 | -90.0 | 124.40 | 211.8 | 3.35 | |
| 1400 | 2.7 | 5.55 | 15.0 | -82.6 | 110.46 | 211.7 | 3.75 | |

**Sampling Device** Bailer
Filter ☒ Type: Size:

**Sample Containers** Collection Time 1405

| Tag No. | Type | Preservative | Analytical Method | QA Remarks |
|---|---|---|---|---|
| ☒ 1 | (2) 500 ml (1) 60 ml | none | Method 11c.33 | |
| ☒ 2 | (2) 250 ml | none | MFS | |

Samplers' Signature Victoria Donnelly Date 6/28/23

# GROUNDWATER SAMPLE COLLECTION FORM

integral consulting inc.

110 Marter Ave, Suite 304
Moorestown, NJ 08057
(856) 399-7720

Well ID PZ-6
Sample ID PZ-6
Date 6/28/23

Project Name: West Deptford, NJ
Project Number: CF1165.2501.02A/.3202.01
Sampler ICO / IA

**Well Information**

| | | | | | |
|---|---|---|---|---|---|
| Monument Condition | ☒ Good | ☐ Needs Repair | | | |
| Well Cap Condition | ☒ Good | ☐ Locked | ☐ Replaced | ☐ Needs Replacement | |
| Elevation Mark | ☒ Yes | ☐ Added | ☐ other | | |
| Well Diameter | ☒ 2-inch | ☐ 4-inch | ☐ 6-inch | ☐ Other | |
| Odor ☐ | Comments no odor | | | | |

**Purge Data**

Total Well Depth 16.5 ft ☒ Clean Bottom ☐ Muddy Bottom ☐ Not Measured
Depth to Water 12.82 ft
Casing Volume 3 ~~8.68~~ .59 ft (H20) X 0.16 gpf = ~~1.38~~ X 3 = ~~4.17~~ 1.77 gallons
3/4 " = 0.02 gpf 1"= 0.04 gpf 2" = 0.16 gpf 4"=0.65 gpf 6"=1.47 gpf

**Purge Method**

Pump Type: Bailer, no pump or tubing Tubing:
Sample Intake Depth 10 ft (6/29)
Purge Start Time 1430 + 850 (6/29) Purge Stop Time
Total volume purged 1.77
Purge Rate
Sample Rate

**Field Parameters** (6/28)

| | Time | Gallons | pH | Temperature (°C) | ORP (mvolts) | Turbidity (NTU) | Spec. Cond (mS/cm) | D.O. (mg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1430 | 0 | 6.18 | 16.7 | -38.4 | 3.77 | 0.484 | 5.30 | clear |
| 2 | 1615 | 1 | 6.55 | 17.3 | -7.5 | 30.31 | 0.487 | 7.30 | clear |
| 3 | 850 | 1 | 6.01 | 15.3 | -14.6 | 11.4 | ~~0.624~~ 560 | 4.38 ~~3.33~~ | clear water |
| 4 | ~~855~~ | 1.77 | 6.10 | 14.5 | -27.2 | 12.5 | | | clear |

6/29 DTW 12.6

**Sampling Device** Bailer
Filter Type: Size:

**Sample Containers** Collection Time 905

| Tag No. | Type | Preservative | Analytical Method | QA Remarks |
|---|---|---|---|---|
| 1 | 2(500 ml) + 1(60ml) | none | Method 1633 | |
| 2 | 2(250ml) | none | MFS | |

Samplers' Signature Date 6/29/23

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MH-20 | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 14.30 |
| **Date:** 6/27/23 | **Well Depth (ft):** 52.3 | **DTW (After Pump Placement):** 14.31 |
| **Sampler:** AR | **Well Diameter:** 4" | **Column Height:** 37.99 |
| **Weather:** 72°F CLOUDY | **Screen Interval:** 40-50 | **Start Purge:** 9:48 |
| | **Pump Intake Depth (ft):** 45 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** DB POLY | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:55 | 5.64 | .4063 | 110.01 | .57 | 17.2 | 134.4 | 210 | 14.32 | |
| 10:00 | 5.63 | .4043 | 27.72 #1 | .36 | 17.1 | 132.9 | 210 | 14.31 | |
| 10:05 | 5.63 | .4044 | 33.50 | .48 | 17.1 | 131.1 | 210 | 14.31 | |
| 10:10 | 5.64 | .4034 | 39.00 | .59 | 17.0 | 129.9 | 210 | 14.31 | |
| 10:15 | 5.64 | .4024 | 44.99 | .58 | 17.1 | 129.3 | " | " | |
| 10:20 | 5.64 | .4014 | 50.01 #2 | .77 | 17.0 | 128.7 | " | " | |
| 10:25 | 5.64 | .4022 | 46.96 | .87 | 17.1 | 128.6 | " | " | |
| 10:30 | 5.65 | .4022 | 50.02 | 1.02 | 17.1 | 128.6 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): PRO DSS YSI (19K101408)

Comments: #1 INVERTED DSS

#2 INVERTED DSS

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW - 2D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 15.33 |
| **Date:** 06/26/23 | **Well Depth (ft):** 103.1 | **DTW (After Pump Placement):** 15.34 |
| **Sampler:** AR | **Well Diameter:** 4" | **Column Height:** 87.76 |
| **Weather:** 87° F Cloudy | **Screen Interval:** 93 - 103 | **Start Purge:** ~~12:17~~ ~~12:17~~ 2:17 |
| | **Pump Intake Depth (ft):** 98 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 2:20 | 4.91 | .3626 | 8.77 | 1.09 | 18.4 | 112.7 | 150 | 15.34 | |
| 2:25 | 4.85 | .3548 | 8.96 | .81 | 18.2 | 129.7 | 150 | 15.34 | |
| 2:30 | 4.81 | .3595 | 10.02 | .75 | 18.1 | 141.6 | 150 | 15.34 | |
| 2:35 | 4.80 | .3590 | 11.05 | .79 | 18.0 | 146.0 | " | " | |
| 2:40 | 4.79 | .3580 | 11.36 | .78 | 18.0 | 152.0 | " | " | |
| 2:45 | 4.77 | .3576 | 14.20 | .80 | 17.8 | 160.2 | " | " | |
| 2:50 | 4.76 | .3572 | 15.70 | .97 | 17.8 | 164.0 | " | " | |
| 2:55 | 4.76 | .3572 | 18.14 | 1.02 | 17.8 | 169.0 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): DSS (19K101408) PRO

Comments:

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-5I | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 16.14 |
| **Date:** 6/29/23 | **Well Depth (ft):** 71.6 | **DTW (After Pump Placement):** 16.15 |
| **Sampler:** KG / AR | **Well Diameter:** 2in | **Column Height:** 55.46 |
| **Weather:** Hazy, 84°F | **Screen Interval:** 60-70 | **Start Purge:** 1100 |
| | **Pump Intake Depth (ft):** 65 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Double Banded 70 ft | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1100 | 4.06 | 254.9 | 79.58 | 5.39 | 18.3 | 27.2 | 200 | 16.15 | |
| 1105 | 3.73 | 256.5 | 75.34 | 1.76 | 17.5 | 47.7 | 200 | 16.15 | |
| 1110 | 3.71 | 264.0 | 81.56 | 1.19 | 17.2 | 52.3 | 200 | 16.15 | |
| 1115 | 3.69 | 264.4 | 80.49 | .80 | 17.2 | 73.3 | " | " | |
| 1120 | 3.68 | 271.3 | 82.81 | .58 | 17.2 | 94.0 | " | " | |
| 1125 | 3.68 | 271.4 | 92.734 | .35 | 17.2 | 116.3 | " | " | |
| 1130 | 3.70 | 271.3 | 51.23 | .29 | 17.2 | 126.3 | " | " | |
| 1135 | 3.70 | 271.6 | 51.07 | .26 | 17.1 | 132.4 | " | " | |
| 1140 | 3.70 | 271.8 | 48.98 | .25 | 17.1 | 139.0 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor):

Comments: YSI Pro DSS Serial # 19K101408

* INVERTED YSI *

Sampled @ 1145

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-6I | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 16.46 |
| **Date:** 06/20/23 | **Well Depth (ft):** 71.5' | **DTW (After Pump Placement):** 16.48 |
| **Sampler:** AR | **Well Diameter:** 2" | **Column Height:** 55.04 |
| **Weather:** 79° Cloudy | **Screen Interval:** 61.5 - 71.5 | **Start Purge:** 10:45 |
| | **Pump Intake Depth (ft):** 66.5' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 10:45 | 4.32 | .2340 | 36.0 | 4.42 | 15.9 | 162.3 | 600 | 16.46 | |
| 10:50 | 3.85 | .2394 | 35.2 | .34 | 15.3 | 88.0 | 400 | 16.48 | |
| 10:55 | 3.95 | .2406 | 36.70 | .25 | 16.7 | 35.0 | 230 | 16.48 | |
| 11:00 | 4.07 | .2479 | 35.60 | .19 | 16.5 | -155.0 | 230 | " | |
| 11:05 | 4.15 | .2644 | 37.70 | .16 | 16.8 | -117.7 | 230 | " | |
| 11:10 | 4.07 | .2869 | 43.62 | .13 | 16.5 | -67.0 | " | " | |
| 11:15 | 3.87 | .3500 | 50.01 | .12 | 16.8 | -38.5 | " | " | |
| 11:20 | 3.78 | .3850 | 54.60 | .10 | 17.0 | -8.0 | " | " | |
| 11:25 | 3.72 | .4100 | 77.60 | .14 | 19.7 | 12.3 | 70 | " | |
| 11:30 | 3.75 | .4200 | 78.90 | .18 | 21.5 | 22.8 | 70 | " | |
| 11:35 | 3.71 | .4371 | 82.00 | .17 | 18.5 | 20.7 | 200 | " | |
| 11:40 | 3.66 | .4380 | 84.00 | .10 | 17.3 | .4 | 200 | " | |
| 11:45 | 3.64 | .4450 | 90.01 | .08 | 17.7 | -29.4 | 190 | " | |
| 11:50 | 3.64 | .4473 | 40.02 | .08 | 17.7 | 31.4 | 190 | " | |
| 11:55 | 3.65 | .4472 | 96.01 | .07 | 17.8 | 46.1 | 190 | " | |
| 12:00 | 3.76 | .4380 | 14.67* | .07 | 17.8 | 51.1 | " | " | |
| 12:05 | 3.64 | .4441 | 14.40 | .06 | 17.8 | 60.0 | " | " | |
| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): PRO DSS (19K2014068)

Comments: *INVERTED DSS

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-6I | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 16.44 |
| **Date:** 6/26/23 | **Well Depth (ft):** 71.5 | **DTW (After Pump Placement):** 16.48 |
| **Sampler:** AR | **Well Diameter:** 2" | **Column Height:** 55.04 |
| **Weather:** 79° Cloudy | **Screen Interval:** 61.5 - 71.5 | **Start Purge:** 10:45 |
| | **Pump Intake Depth (ft):** 66.5 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** DB POLY | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 12:00 | 3.66 | .4477 | 17.98 | .060 | 17.7 | 68.3 | 190 | 16.78 | |
| 12:15 | 3.65 | .4480 | 21.01 | .05 | 17.7 | 74.0 | 190 | 16.48 | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): PID ID53 (19K101408)

Comments:

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-101 | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 15.70 |
| **Date:** 6/26/23 | **Well Depth (ft):** 42.85 | **DTW (After Pump Placement):** & 15.70 |
| **Sampler:** MS | **Well Diameter:** 2" | **Column Height:** 27.2 |
| **Weather:** 79°F Humidity 79%, M. Cloudy | **Screen Interval:** 33-43' | **Start Purge:** 1138 |
| | **Pump Intake Depth (ft):** 38' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1150 | 5.15 | 0.691 | 39.39 | 2.32 | 21.1 | 308.3 | 160 | 15.70 | Clear |
| 1155 | 5.05 | 0.580 | 55.41 | 0.93 | 20.1 | 306.3 | 160 | | Clear |
| 1200 | 5.10 | 0.577 | 60.18 | 0.85 | 20.5 | 302.5 | 160 | | Clear |
| 1205 | 5.12 | 0.576 | 88.44 | 0.81 | 20.1 | 299.9 | 160 | | Clear |
| 1210 | 5.13 | 0.575 | 181.26 * | 0.80 | 20.6 | 299.5 | 160 | | |
| 1215 | MS | empties | flow cell | | | | | | |
| 1218 | 5.21 | 0.582 | 20.70 | 2.12 | 20.3 | 309.1 | 160 | | |
| 1223 | 5.16 | 0.579 | 29.89 | 0.87 | 20.3 | 306.2 | 160 | | |
| 1228 | 5.17 | 0.578 | 28.08 | 0.79 | 20.4 | 303.6 | 160 | | |
| 1233 | 5.17 | 0.579 | 27.19 | 0.78 | 20.4 | 302.6 | 160 | | |
| 1235 | SAMPLED BY MS | | | | | | | | |
| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI ProDSS S/N: 20D10347 / Handheld S/N: 19B100688

Comments: Hole in compressor/controller hose. MS taped over hose, holding pressure ok.
* High Turbidity likely from air bubbles in flow cell; visual turbidity appears less than 30 NTU.

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-165 | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 11.54 |
| **Date:** 6/27/23 | **Well Depth (ft):** 24.42 | **DTW (After Pump Placement):** 11.62 |
| **Sampler:** KC | **Well Diameter:** 4in | **Column Height:** |
| **Weather:** Cloudy, Drizzle @ 73°F | **Screen Interval:** 9-24 | **Start Purge:** 1000 |
| | **Pump Intake Depth (ft):** 16.5 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 20' Double Banded Tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1000 | 6.74 | 1813 | 108.3 | 8.31 | 17.7 | 203.4 | 250 | 11.62 | adjusted PR* orange silty bottom, covering DTW PT |
| 1005 | 6.75 | 1818 | 94.9 | 8.24 | 17.6 | 202.3 | 150 | 11.62 | |
| 1010 | 6.75 | 1822 | 96.0 | 8.24 | 17.6 | 201.4 | 150 | | |
| 1015 | 6.75 | 1833 | 89.7 | 8.25 | 17.6 | 200.7 | | | |
| 1020 | 6.75 | 1878 | 85.7 | 8.26 | 17.7 | 200.3 | | | |
| 1025 | 6.76 | 1891 | 82.3 | 8.25 | 17.7 | 200.2 | | | |
| 1030 | 6.75 | 1928 | 75.7 | 8.24 | 17.8 | 200.7 | | | |
| 1035 | 6.75 | 1953 | 75.2 | 8.23 | 17.8 | 201.0 | | | |
| 1040 | 6.76 | 1963 | 65.5 | 8.21 | 17.8 | 200.8 | | | |
| 1045 | 6.75 | 1982 | 61.3 | 8.20 | 17.8 | 200.2 | | | |
| 1050 | 6.75 | 1995 | 56.2 | 8.17 | 17.9 | 200.0 | | | |
| 1055 | → sampled | | | | | | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor):

Comments: YSI Pro DSS Serial (handheld) - 18C105176

*PR = Purge rate

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-19S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 17.86 |
| **Date:** 6/28/2023 | **Well Depth (ft):** 24.90 | **DTW (After Pump Placement):** |
| **Sampler:** | **Well Diameter:** 2" | **Column Height:** |
| **Weather:** | **Screen Interval:** 10-25' | **Start Purge:** |
| | **Pump Intake Depth (ft):** 17.5' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 17.5' DB POLY | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO serial:

Comments: NJ stated NO HDPE drop tubing needed

~~Sample collected~~ @ MB

- D.Goff could not drop the pump into the well due to roots/debris floating about water @ 17 ft. D. Goff had issues getting the water meter level probe. M. Barron called Katrina about the issue. Katrina called MB back after speaking with her manager. Katrina stated we can skip the well.

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-19I | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 17.89 |
| **Date:** 6/28/2023 | **Well Depth (ft):** 94.97 | **DTW (After Pump Placement):** 17.90 |
| **Sampler:** M. Baima | **Well Diameter:** 2" | **Column Height:** 76.81 |
| **Weather:** 70, Partly Cloudy | **Screen Interval:** 85-95' | **Start Purge:** ~~8:57~~ 8:51 |
| | **Pump Intake Depth (ft):** 90' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 90' DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 8:55 | 5.67 | 0.265 | 95.76 | 0.78 | 15.7 | 100.1 | 200 | 17.89 | |
| 9:00 | 5.70 | 0.273 | 80.12 | 0.74 | 16.9 | 87.1 | 200 | 17.89 | |
| 9:05 | 5.79 | 0.270 | 81.10 | 0.60 | 16.4 | 47.5 | 200 | 17.88 | |
| 9:10 | 5.87 | 0.270 | 78.53 | 0.55 | 17.1 | 22.2 | — | — | |
| 9:15 | 5.90 | 0.276 | 72.86 | 0.60 | 17.2 | 11.5 | — | — | |
| 9:20 | 5.91 | 0.278 | 72.45 | 0.60 | 17.4 | 9.6 | — | — | |
| 9:25 | 5.95 | 0.281 | 72.05 | 0.60 | 17.9 | 5.1 | — | — | |
| 9:30 | 5.95 | 0.285 | 72.11 | 0.60 | 18.0 | 3.1 | — | — | |
| 9:35 | 5.97 | 0.288 | 71.63 | 0.63 | 18.8 | 1.7 | — | — | |
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| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 18C103637

Comments: MJ stated NO HDPE drop tubing needed
Sample collected @ 9:40

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-19D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 17.09 |
| **Date:** 10/28/2023 | **Well Depth (ft):** 129.18 | **DTW (After Pump Placement):** 17.06 |
| **Sampler:** AJG | **Well Diameter:** 2" | **Column Height:** |
| **Weather:** 70, Partly Cloudy | **Screen Interval:** 120 - 130' | **Start Purge:** 905 |
| | **Pump Intake Depth (ft):** 125' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 125' DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 910 | 4.58 | 361.7 | 117.94 | 1.14 | 15.6 | 12.1 | 200 | 17.08 | |
| 915 | 4.45 | 360.9 | 54.73 | 0.90 | 15.4 | 13.8 | 200 | 17.07 | |
| 920 | 4.42 | 361.5 | 86.21 | 0.83 | 15.4 | 8.0 | 200 | 17.08 | |
| 925 | 4.38 | 363.8 | 78.46 | 0.77 | 15.5 | 8.0 | 200 | 17.08 | |
| 930 | 4.35 | 363.4 | 50.83 | 0.73 | 15.6 | 3.8 | 200 | 17.08 | |
| 935 | 4.33 | 362.9 | 26.92 | 0.68 | 15.6 | 6.5 | 200 | 17.08 | |
| 940 | 4.33 | 362.8 | 29.30 | 0.68 | 15.6 | 7.1 | 200 | 17.08 | |
| 945 | 4.32 | 362.9 | 31.11 | 0.70 | 15.7 | 7.9 | 200 | 17.08 | |
| 950 | 4.32 | 362.8 | 33.40 | 0.69 | 15.7 | 8.4 | 200 | 17.08 | |
| 955 | 4.32 | 362.6 | 30.60 | 0.70 | 15.7 | 8.6 | 200 | 17.08 | |
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| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): YSI PRO serial: 20F000291

Comments: MJ stated NO HDPE drop tubing needed
sample collected @ 1000

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-33S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 22.11 |
| **Date:** 6/28/2023 | **Well Depth (ft):** 32.81 | **DTW (After Pump Placement):** 22.10 |
| **Sampler:** M. Barron | **Well Diameter:** 2" | **Column Height:** 10.70 |
| **Weather:** 74, Partly Cloudy | **Screen Interval:** 18-38' | **Start Purge:** 10:43 |
| | **Pump Intake Depth (ft):** 28' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 28' DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 10:45 | 3.26 | 0.675 | 548.10 | 2.43 | 16.3 | 311.6 | 200 | 22.11 | |
| 10:50 | 3.25 | 0.661 | 349.47 | 1.02 | 16.0 | 299.1 | 200 | 22.10 | |
| 10:55 | 3.24 | 0.658 | 233.89 | 0.71 | 15.6 | 328.8 | 200 | 22.10 | |
| 11:00 | 3.25 | 0.639 | 192.58 | 0.65 | 16.0 | 334.7 | — | — | |
| 11:05 | 3.27 | 0.627 | 129.29 | 0.62 | 16.0 | 352.6 | — | — | |
| 11:10 | 3.30 | 0.659 | 161.32 | 0.62 | 15.9 | 358.1 | 200 | 22.10 | |
| 11:15 | 3.32 | 0.692 | 146.11 | 0.63 | 15.7 | 363.7 | 200 | 22.10 | |
| 11:20 | 3.35 | 0.643 | 139.14 | 0.61 | 15.8 | 365.8 | — | — | |
| 11:25 | 3.36 | 0.623 | 112.55 | 0.61 | 15.8 | 367.2 | — | — | |
| 11:30 | 3.39 | 0.594 | 121.11 | 0.60 | 15.8 | 369.4 | — | — | |
| 11:35 | 3.40 | 0.571 | 132.06 | 0.66 | 15.7 | 371.6 | — | — | |
| 11:40 | 3.37 | 0.510 | 120.60 | 0.66 | 16.0 | 375.5 | — | — | |
| 11:45 | 3.37 | 0.565 | 117.62 | 0.66 | 16.0 | 378.7 | — | — | |
| 11:50 | 3.35 | 0.549 | 117.65 | 0.67 | 16.5 | 379.7 | — | — | |
| 11:55 | 3.37 | 0.547 | 117.30 | 0.70 | 16.5 | 379.9 | — | — | |
| 12:00 | 3.37 | 0.546 | 115.01 | 0.67 | 16.5 | 384.2 | — | — | |
| | | | | | | | | | |
| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): YSI PRO serial: 18C103637

Comments: MJ stated NO HDPE drop tubing needed
Sample collected @ 12:05

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-36D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 49.38 |
| **Date:** 6/29/2023 | **Well Depth (ft):** 215.41 | **DTW (After Pump Placement):** 49.37 |
| **Sampler:** M. Barron | **Well Diameter:** 2" | **Column Height:** 166.03 |
| **Weather:** 70, Cloudy | **Screen Interval:** 196-211' | **Start Purge:** 8:26 |
| | **Pump Intake Depth (ft):** 203.5' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 200' DB POLY; 3.5' HDPE drop tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 8:30 | 6.31 | 0.400 | 74.31 | 2.06 | 15.7 | -85.7 | 200 | 49.37 | |
| 8:35 | 6.43 | 0.541 | 428.19 | 0.61 | 15.8 | -109.9 | 200 | 49.38 | |
| 8:40 | 6.42 | 0.560 | 324.85 | 0.54 | 15.5 | -113.2 | 200 | 49.38 | |
| 8:45 | 6.41 | 0.580 | 307.12 | 0.53 | 15.6 | -113.7 | — | — | |
| 8:50 | 6.39 | 0.604 | 164.86 | 0.49 | 15.5 | -112.2 | — | — | |
| 8:55 | 6.38 | 0.629 | 120.99 | 0.47 | 15.4 | -110.7 | — | — | |
| 9:00 | 6.34 | 0.673 | 112.72 | 0.45 | 15.3 | -104.8 | — | — | |
| 9:05 | 6.34 | 0.689 | 109.35 | 0.43 | 15.4 | -98.9 | — | — | |
| 9:10 | 6.34 | 0.684 | 107.13 | 0.41 | 15.5 | -95.0 | — | — | |
| 9:15 | 6.35 | 0.686 | 105.81 | 0.40 | 15.5 | -92.1 | — | — | |
| 9:20 | 6.35 | 0.696 | 106.92 | 0.39 | 15.4 | -89.4 | — | — | |
| 9:25 | 6.35 | 0.697 | 104.77 | 0.39 | 15.5 | -87.8 | — | — | |
| 9:30 | 6.35 | 0.696 | 103.82 | 0.39 | 15.5 | -88.5 | — | — | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO serial: 20F000291

Comments: sample collected @ 9:35

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** ~~405~~ MW-405 | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 12.59 |
| **Date:** 6/27/23 | **Well Depth (ft):** 24.9 | **DTW (After Pump Placement):** 13.00 |
| **Sampler:** AR | **Well Diameter:** 2" | **Column Height:** 11.9 |
| **Weather:** 77°F Cloudy | **Screen Interval:** 10-25' | **Start Purge:** 12:17 |
| | **Pump Intake Depth (ft):** 17 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** DB poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 12:20 | 5.80 | .2773 | 300.0 | .65 | 14.4 | 93.2 | 150 | 12.59 | |
| 12:25 | 5.79 | .2773 | 213.0 | .45 | 15.5 | 98.7 | 150 | 12.59 | |
| 12:30 | 5.79 | .2775 | 170.3 | .55 | 15.3 | 100.1 | 150 | 12.59 | |
| 12:35 | 5.79 | .2775 | 136.9 | .42 | 15.4 | 102.3 | " | " | |
| 12:40 | 5.79 | .2777 | 123.3 | .36 | 15.7 | 103.0 | " | " | |
| 12:45 | 5.79 | .2772 | 151.4 | .34 | 15.6 | 103.9 | " | " | |
| 12:50 | 5.79 | .2784 | 116.0 * | .31 | 15.9 | 104.5 | " | " | |
| 12:55 | 5.79 | .2786 | 113.0 | .31 | 15.5 | 104.9 | " | " | |
| 1:00 | 5.78 | .2777 | 95.4 | .36 | 15.8 | 106.3 | " | " | |
| 1:05 | 5.79 | .2781 | 75.4 | .30 | 16.1 | 106.7 | " | " | |
| 1:10 | 5.79 | .2807 | 77.6 | .29 | 16.6 | 110.2 | " | " | |
| 1:15 | 5.79 | .2787 | 72.9 | .29 | 16.6 | 108.9 | " | " | |
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| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): YSI DSS (19K101408)

Comments: *INVERTED YSI*

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-40I | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** ~~12.39~~ 12.40 |
| **Date:** 6/27/23 | **Well Depth (ft):** 59.40 | **DTW (After Pump Placement):** 12.39 |
| **Sampler:** KO / AR | **Well Diameter:** 2in | **Column Height:** 47 |
| **Weather:** Drizzle, 84°F | **Screen Interval:** 45 - 60 | **Start Purge:** 1210 |
| | **Pump Intake Depth (ft):** 52.5 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 60 ft Dedicated Tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1210 | 5.11 | 270.8 | 120.8 | 2.69 | 15.6 | 161.8 | 200 | 12.39 | cloudy water purge Rate |
| 1215 | 5.01 | 272.9 | 182.8 | 3.24 | 17.0 | 173.7 | 150 | 12.62 | adjusted |
| 1220 | 5.00 | 270.4 | 231.2 | 3.39 | 16.5 | 179.1 | 150 | 12.62 | |
| 1225 | 4.99 | 270.9 | 211.0 | 3.54 | 16.4 | 184.2 | | | |
| 1230 | 4.99 | 271.4 | 191.8 | 3.31 | 16.1 | 186.9 | | | |
| 1235 | 4.99 | 271.0 | 169.6 | 3.01 | 16.1 | 189.0 | | | |
| 1240 | 4.99 | 271.9 | 172.9 | 2.94 | 16.3 | 190.7 | | | |
| 1245 | 5.00 | 272.0 | 168.8 | 2.82 | 16.4 | 191.5 | | | |
| 1250 | 5.00 | 272.5 | 176.2 | 2.76 | 16.3 | 190.3 | | | |
| 1255 | 5.00 | 272.0 | 176.0 | 2.69 | 16.1 | 193.9 | | | adjusted flowrate to remove bubbles |
| 1300 | 5.00 | 273.0 | 89.6 | 2.65 | 16.2 | 195.4 | | | |
| 1305 | 5.00 | 273.2 | 89.2 | 2.51 | 16.5 | 195.8 | | | |
| 1310 | 5.00 | 273.2 | 91.2 | 2.08 | 16.5 | 196.3 | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor):

Comments: YSI DSS (Handheld Serial # 18C 10517C)

Sampled @ 1320

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-42D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 32.28 |
| **Date:** 6/29/2023 | **Well Depth (ft):** 162.59 | **DTW (After Pump Placement):** 32.28 |
| **Sampler:** AJL | **Well Diameter:** 2" | **Column Height:** 130.31 |
| **Weather:** 75, Partly Cloudy/Hazy | **Screen Interval:** 147-162' | **Start Purge:** 10:20 |
| | **Pump Intake Depth (ft):** 154' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 154 DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 10:25 | 7.26 | 0.349 | 2.87 | 2.81 | 19.5 | -128.7 | 200 | 32.27 | |
| 10:30 | 7.28 | 0.354 | 9.21 | 1.28 | 19.1 | -137.3 | 200 | 32.27 | |
| 10:35 | 7.28 | 0.354 | 9.70 | 1.07 | 19.0 | -137.2 | 200 | 32.28 | |
| 10:40 | 7.28 | 0.354 | 9.00 | 0.81 | 19.1 | -137.7 | — | — | |
| 10:45 | 7.28 | 0.354 | 9.30 | 0.65 | 19.1 | -137.5 | — | — | |
| 10:50 | 7.29 | 0.353 | 9.42 | 0.59 | 19.0 | -137.3 | — | — | |
| 10:55 | 7.29 | 0.353 | 10.31 | 0.55 | 19.1 | -137.2 | — | — | |
| 11:00 | 7.29 | 0.353 | 10.17 | 0.52 | 19.2 | -137.2 | — | — | |
| 11:05 | 7.28 | 0.353 | 10.08 | 0.50 | 19.2 | -137.1 | — | — | |
| 11:10 | 7.28 | 0.353 | 10.21 | 0.50 | 19.2 | -137.2 | — | — | |
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| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): YSI PRO serial: 20F000291

Comments: MJ stated NO HDPE drop tubing needed
sample collected @ 11:15

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-101S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 30.77 |
| **Date:** 6/23/23 | **Well Depth (ft):** 98 ft | **DTW (After Pump Placement):** 30.76 |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **Column Height:** 67.24 |
| **Weather:** 50°f RAIN | **Screen Interval:** 87-97 ft | **Start Purge:** 9:08 |
| | **Pump Intake Depth (ft):** | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:15 | 5.45 | 699 | 12.04 | .88 | 15.8 | 50.1 | 160 | 30.76 | |
| 9:20 | 5.39 | 698 | 10.92 | .61 | 15.6 | 42.5 | " | 30.78 | |
| 9:25 | 5.39 | 697 | 12.99 | .46 | 15.7 | 29.6 | " | 30.78 | |
| 9:30 | 5.40 | 697 | 15.76 | .38 | 15.6 | 20.2 | " | 30.78 | |
| 9:35 | 5.40 | 697 | 20.71 | .35 | 15.6 | 13.9 | " | " | |
| 9:40 | 5.37 | 697 | 22.70 | .34 | 15.7 | 7.2 | " | " | |
| 9:45 | 5.34 | 697 | 28.91 | .32 | 15.7 | 1.8 | " | " | |
| 9:50 | 5.32 | 697 | 33.09* | .31 | 15.6 | .4 | " | " | |
| 9:55 | 5.30 | 699 | 20.95 | .41 | 15.6 | -.4 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): PID DSS 455 (19K101408)

Comments: * - SHOOK OUT BUBBLES *

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-101D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 30.91 |
| **Date:** 6/23/23 | **Well Depth (ft):** 137.5 | **DTW (After Pump Placement):** 30.94 |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **Column Height:** |
| **Weather:** 60°F Rain | **Screen Interval:** 127-137 ft | **Start Purge:** 9:18 |
| | **Pump Intake Depth (ft):** 131 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Drop 80 ft Double Banded 50 ft | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:20 | 10.92 | 1380.9 | 85.5 | 8.27 | 16.2 | 75.3 | 500 | 30.94 | |
| 9:25 | 10.89 | .743.3 | 78.1 | 1.45 | 15.3 | 64.4 | 200 | 30.94 | |
| 9:30 | 10.84 | .334 | 80.6 | 0.31 | 15.1 | 62.24 | 200 | 30.94 | |
| 9:35 | 10.84 | .329 | 83.7 | 0.22 | 15.1 | 57.1 | " | " | |
| 9:40 | 10.84 | .323 | 90.0 | 0.17 | 15.1 | 49.4 | " | " | |
| 9:45 | 10.83 | .318 | 86.5 | 0.15 | 15.1 | 45.2 | " | " | |
| 9:50 | 10.81 | .309 | 88.5 | 0.13 | 15.1 | 40.5 | " | " | |
| 9:55 | 10.79 | .301 | 90.3 | 0.12 | 15.0 | 37.4 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

**Rental Equipment Details (Serial/Vendor):** PRODSC YSI (21K100641)

Comments: Sampled @ 10:00

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-102S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 42.13 |
| **Date:** 6/22/2023 | **Well Depth (ft):** 116.21 | **DTW (After Pump Placement):** 42.11 |
| **Sampler:** C. WESTENBERGER | **Well Diameter:** 2" | **Column Height:** 74.08 |
| **Weather:** 60°F OVERCAST | **Screen Interval:** 107 - 117' | **Start Purge:** 11:40 |
| | **Pump Intake Depth (ft):** 112' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 112' DB POLY | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| @ 11:50 11:45 | 11.01 | 0.357.7 | 76.79 | 2.85 | 14.5 | 69.8 | 250 | 42.11 | |
| ~~12:00~~ | 7.44 | 0.322 | 72.04 | 1.72 | 14.4 | -88.0 | 250 | 42.18 | |
| 11:55 | 6.96 | 0.320 | 15.72 | 0.67 | 14.3 | -60.0 | 250 | 42.18 | |
| 12:00 | 6.88 | 0.319 | 14.98 | 0.57 | 14.3 | -55.6 | 250 | 42.18 | |
| 12:05 | 6.85 | 0.319 | 14.53 | 0.55 | 14.3 | -54.3 | 250 | 42.18 | |
| 12:10 | 6.82 | 0.318 | 14.34 | 0.50 | 14.3 | -53.0 | 250 | 42.18 | |
| 12:15 | 6.79 | 0.318 | 15.21 | 0.49 | 14.3 | -52.92 | 250 | 42.19 | |
| 12:20 | 6.76 | 0.318 | 16.01 | 0.46 | 14.3 | -52.01 | 250 | 42.20 | |
| 12:25 | | | | SAMPLE | @ | | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI Serial PRO: 21K 104086

Comments: MJ stated NO HDPE drop tubing needed
Sample collected @ 12:25

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

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|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-102D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 42.69 |
| **Date:** 6/22/2023 | **Well Depth (ft):** 173.58 | **DTW (After Pump Placement):** 42.70 |
| **Sampler:** M. Barron | **Well Diameter:** 2" | **Column Height:** 130.89 |
| **Weather:** 62, Cloudy | **Screen Interval:** 164-174' | **Start Purge:** 11:38 |
| | **Pump Intake Depth (ft):** 169' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 169' DB POLY | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 11:45 | 8.16 | 0.247 | 9.29 | 1.97 | 14.5 | 129.0 | 175 | 42.72 | |
| 11:50 | 7.41 | 0.249 | 8.49 | 1.10 | 14.4 | 130.6 | 175 | 42.72 | |
| 11:55 | 7.75 | 0.249 | 9.58 | 0.95 | 14.3 | 125.9 | 175 | 42.72 | |
| 12:00 | 7.76 | 0.249 | 12.12 | 0.89 | 14.3 | 79.9 | — | — | |
| 12:05 | 7.75 | 0.249 | 12.84 | ~~0.240~~ 0.89 | 14.3 | 92.1 | — | — | |
| 12:10 | 7.75 | 0.249 | 13.36 | 0.87 | 14.3 | 97.8 | — | — | |
| 12:15 | 7.75 | 0.249 | 12.99 | 0.86 | 14.3 | 97.2 | — | — | |
| 12:20 | 7.76 | 0.249 | 13.50 | 0.85 | 14.3 | 93.8 | — | — | |
| 12:25 | 7.75 | 0.249 | 12.40 | 0.82 | 14.3 | 89.2 | — | — | |
| 12:30 | 7.75 | 0.249 | 12.74 | 0.83 | 14.3 | 88.4 | — | — | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI Serial PRO: ~~19K104087~~ OR 19K101415

Comments: MJ stated NO HDPE drop tubing needed
Sample collected @ 12:35

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

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|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-103S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 86.90 |
| **Date:** 6/23/2023 | **Well Depth (ft):** 188.45 | **DTW (After Pump Placement):** 86.95 |
| **Sampler:** M. Barron | **Well Diameter:** 2" | **Column Height:** 101.55 |
| **Weather:** 63, Rainy | **Screen Interval:** 177-187' | **Start Purge:** 8:40 |
| | **Pump Intake Depth (ft):** 182' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 182' DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 8:45 | 9.85 | 0.187 | 5.61 | 7.03 | 15.7 | 125.3 | 175 | 86.96 | |
| ~~8:50~~ 8:50 | 9.85 | 0.186 | 5.66 | 6.56 | 15.5 | 121.5 | 175 | 86.96 | |
| 8:55 | 9.87 | 0.181 | 25.85 | 3.02 | 15.2 | 97.0 | 175 | 86.96 | |
| 9:00 | 9.85 | 0.181 | 1.27 | 2.87 | 15.1 | 87.2 | — | — | |
| 9:05 | 9.88 | 0.180 | 1.50 | 2.61 | 15.1 | 71.8 | — | — | |
| 9:10 | 9.89 | 0.180 | 1.21 | 1.93 | 15.1 | 60.2 | — | — | |
| 9:15 | 9.91 | 0.180 | 1.36 | 1.26 | 15.0 | 52.4 | — | — | |
| 9:20 | 9.93 | 0.181 | 1.74 | 1.13 | 15.0 | 44.2 | — | — | |
| 9:25 | 9.94 | 0.181 | 4.27 | | 15.0 | 39.0 | — | — | |
| ~~9:30~~ m | | | | | | | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 18C103637

Comments: MJ stated NO HDPE drop tubing needed
Sample collected @ 9:30

* duplicate sample collected for MW-103S_MS, MW-103S_MSD, and DUP_062323*

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

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|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-103D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 87.14 |
| **Date:** 6/23/2023 | **Well Depth (ft):** 242.85 | **DTW (After Pump Placement):** 87.30 |
| **Sampler:** C. WESTENBERGER | **Well Diameter:** 2" | **Column Height:** 155.71 |
| **Weather:** 60°F RAIN | **Screen Interval:** 231-242' | **Start Purge:** 8:40 |
| | **Pump Intake Depth (ft):** 236' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 200' DB Poly; 36' HDPE drop tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 8:45 | 11.60 | 0.843 | 156.3 | 6.98 | 15.1 | -102.9 | 175 | 87.30 | |
| 8:50 | 11.65 | 0.861 | 104.02 | 5.60 | 15.1 | -138.9 | 175 | 87.30 | |
| 8:55 | 11.56 | 0.861 | 69.72 | 1.80 | 14.9 | -227.8 | 175 | 87.28 | |
| 9:00 | 11.56 | 0.865 | 61.90 | 1.56 | 14.8 | -255.9 | 175 | 87.28 | |
| 9:05 | 11.37 | 0.865 | 34.58 | 1.24 | 14.8 | -287.4 | 175 | 87.29 | |
| 9:10 | 11.59 | 0.865 | 9.40 | 1.06 | 14.8 | -311.4 | 175 | 87.30 | |
| 9:15 | 11.58 | 0.866 | 9.00 | 0.86 | 14.8 | -333.5 | 175 | 87.30 | |
| 9:20 | 11.58 | 0.867 | 9.05 | 0.83 | 14.7 | -348.9 | 175 | 87.30 | |
| 9:25 | 11.57 | 0.867 | 8.92 | 0.80 | 14.7 | -355.2 | 175 | 87.30 | |
| 9:30 | 11.57 | 0.867 | 8.89 | 0.79 | 14.7 | -386.9 | 175 | 87.30 | |
| 9:35 | | | | SAMPLE | | | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 20F00291

Comments: Sample collected @ 9:35

36' of HDPE
200' of DB Poly

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-104S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 69.91 |
| **Date:** 6/20/2023 | **Well Depth (ft):** 188.30 | **DTW (After Pump Placement):** 69.93 |
| **Sampler:** M. Barron | **Well Diameter:** 2" | **Column Height:** 118.39 |
| **Weather:** 67, Cloudy | **Screen Interval:** 177-187' | **Start Purge:** 9:07 |
| | **Pump Intake Depth (ft):** 182' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 182 DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:29 | 10.48 | 0.145 | 141.38 | 2.36 | 14.0 | 135.5 | 250 | 69.92 | troubleshooting YSI |
| 9:34 | 10.41 | 0.141 | 105.15 | 1.26 | 14.0 | 65.0 | 250 | 69.92 | |
| 9:39 | 10.43 | 0.141 | 83.34 | 1.15 | 14.0 | 54.4 | 250 | 69.92 | |
| 9:44 | 10.42 | 0.140 | 52.79 | 1.12 | 13.9 | 48.1 | — | — | |
| 9:49 | 10.43 | 0.140 | 35.20 | 1.10 | 13.9 | 45.3 | — | — | |
| 9:54 | 10.42 | 0.140 | 20.93 | 1.04 | 13.9 | 40.3 | — | — | |
| 9:59 | 10.41 | 0.140 | 17.02 | 1.01 | 13.9 | 37.1 | — | — | |
| 10:04 | 10.41 | m 0.140 | 15.05 | 1.00 | 13.9 | 33.4 | — | — | |
| 10:09 | 10.41 | m 0.140 | 15.09 | 0.98 | 13.9 | 30.9 | — | — | |
| 10:14 | 10.42 | m 0.139 | 15.04 | 0.97 | 13.9 | 28.6 | — | — | |
| 10:19 | 10.42 | m 0.139 | 15.74 | 0.96 | 13.9 | 26.1 | — | — | |
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| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 19K101415

Comments: MJ stated NO HDPE drop tubing needed
Sample collected @10:25
MJ arrived onsite since pump was stuck at 110' deep @ 11:00
MJ retrieved pump @ 12:15
* extra bottleware Trojan *

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-104D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 69.82 |
| **Date:** 6/20/2023 | **Well Depth (ft):** 229.16 | **DTW (After Pump Placement):** 70.10 |
| **Sampler:** C. Westenberger | **Well Diameter:** 2" | **Column Height:** 159.34 |
| **Weather:** 67, Cloudy | **Screen Interval:** 215 - 225' | **Start Purge:** 9:00 |
| | **Pump Intake Depth (ft):** 220' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 200' DB poly; 20' HDPE drop tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:05 | 6.37 | 0.111 | 36.56 | 1.63 | 14.4 | 95.4 | 250 | 70.10 | |
| 9:10 | 6.39 | 0.111 | 34.67 | 0.84 | 14.1 | 54.4 | 250 | 70.10 | |
| 9:15 | 6.42 | 0.1115 | 34.08 | 0.64 | 14.1 | 41.3 | 250 | 70.10 | |
| 9:20 | 6.45 | 0.111 | 33.98 | 0.62 | 14.1 | 37.1 | 250 | 70.15 | |
| 9:25 | 6.46 | 0.111 | 34.49 | 0.57 | 14.1 | 33.2 | 250 | 70.15 | |
| 9:30 | 6.51 | 0.112 | 34.95 | 0.51 | 14.1 | 27.4 | 250 | 70.15 | |
| 9:35 | 6.49 | 0.112 | 35.06 | 0.49 | 14.1 | 25.1 | 250 | 70.15 | |
| 9:40 | 6.49 | 0.112 | 37.31 | 0.46 | 14.0 | 23.6 | 250 | 70.15 | |
| 9:45 | | | | SAMPLE | | | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor):

Comments: Sample collected @ 9:45

~~30 feet~~
20 feet HPPE
200' DB poly

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

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|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-105S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 69.55 |
| **Date:** 6/19/23 | **Well Depth (ft):** 214.80 | **DTW (After Pump Placement):** 69.7 |
| **Sampler:** AJ/KO | **Well Diameter:** 2" | **Column Height:** 145.25 |
| **Weather:** 84°F Sun | **Screen Interval:** 202' - 212' | **Start Purge:** 1300 |
| | **Pump Intake Depth (ft):** | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1305 | 12.15 | 1092 | 18.25 | 4.22 | 19.9 | 32.2 | 200 | 69.7 | |
| 1310 | 11.35 | 1109 | 16.81 | 2.88 | 16.8 | -7.7 | 200 | 69.7 | |
| 1315 | 11.34 | 1109 | 16.43 | 2.81 | 16.4 | -21.9 | | | |
| 1320 | 11.36 | 1106 | 17.42 | 2.84 | 16.0 | -28.8 | | | |
| 1325 | 11.38 | 1069 | 17.70 | 2.72 | 15.9 | -40.1 | | | |
| 1330 | 11.37 | 1014 | 15.79 | 2.58 | 15.8 | -50.5 | | | |
| 1335 | 11.38 | 987 | 16.22 | 2.50 | 15.6 | -56.8 | | | |
| 1340 | 11.36 | 923 | 19.49 | 2.36 | 15.5 | -65.1 | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor):

Comments: YSI Pro DSS Serial # 18C105175 (hand held)

Sampled @ 1345

MW-105S

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

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|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-105D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 69.25 |
| **Date:** 6/19/23 | **Well Depth (ft):** 302 | **DTW (After Pump Placement):** 69.3 |
| **Sampler:** AB/KO | **Well Diameter:** 2" | **Column Height:** 232.70 |
| **Weather:** 84°F Sun | **Screen Interval:** 287-297' | **Start Purge:** 12:47 |
| | **Pump Intake Depth (ft):** 290 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Drop - [redacted]' 110 Double bonded 180 | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1250 | 6.56 | 30.9 | 263.90 | 5.48 | 31.7 | 65.C | 125 | 69.3 | |
| 1305 | 9.81 | .4090 | 47.61 | 3.99 | 18.0 | -79.4 | 125 | 69.3 | |
| 1310 | 9.35 | .3951 | 107.31 | 3.91 | 16.7 | -77.4 | 150 | 69.3 | |
| 1315 | 8.82 | .3901 | 106.21 | 3.31 | 16.4 | -75.4 | 150 | 69.3 | |
| 1320 | 8.67 | .3956 | 107.61 | 3.09 | 16.3 | -79.4 | 150 | 69.2 | |
| 1325 | 8.51 | .3880 | 90.97 | 1.86 | 16.3 | -98.2 | " | " | |
| 1330 | 8.36 | .3877 | 5.11 | 1.00 | 16.2 | -120.4 | " | " | |
| 1335 | 8.27 | .3908 | 6.05 | 0.89 | 15.9 | -140.6 | " | " | |
| 1340 | 8.21 | .3875 | 6.00 | 0.88 | 15.8 | -151.0 | " | " | |
| 1345 | 8.22 | .3871 | 6.11 | 0.88 | 15.9 | -153.7 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): ProDSS YSI 20E100150

Comments: Sampled @ 1350

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

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|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-106S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 72.69 |
| **Date:** 6/20/23 | **Well Depth (ft):** 154.40 | **DTW (After Pump Placement):** 72.99 |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **Column Height:** 81.41 |
| **Weather:** 67° f Cloudy | **Screen Interval:** 140-150ft | **Start Purge:** 9:10 |
| | **Pump Intake Depth (ft):** 145 ft | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Dable bonded | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:15 | 10.18 | .3579 | 7.52 | 1.18 | 16.5 | -139.9 | 200 | 72.99 | |
| 9:50 | 10.01 | .3400 | 10.92 | 0.88 | 14.8 | -172.8 | 200 | 72.99 | |
| 9:55 | 10.13 | .3401 | 9.74 | 0.60 | 14.8 | -191.7 | 200 | 72.99 | |
| 10:00 | 8.34 | .3072 | 10.31 | 0.29 | 14.8 | -292.3 | " | " | |
| 10:05 | 7.66 | .3118 | 6.18 | 0.35 | 14.8 | -222.3 | " | " | |
| 10:10 | 7.58 | .3121 | 5.70 | 0.37 | 14.8 | -215.9 | " | " | |
| 10:15 | 7.53 | .3119 | 5.00 | 0.38 | 14.8 | -206.7 | " | " | |
| 10:20 | 7.47 | .3120 | 4.28 | 0.39 | 14.8 | -200.5 | " | " | |
| 10:25 | 7.44 | .3118 | 3.78 | 0.40 | 14.8 | -194.9 | " | " | |
| 10:30 | 7.33 | .3109 | 3.09 | 0.42 | 14.8 | -196.8 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): PRO DSS TXI (20E100150)

Comments: Stopped @ 9:35 - Generator issues / Training AR on well setup @ MW-106D

9:50 - Resume purge

Sampled @ 10:30

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-106D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 72.28 |
| **Date:** 6/20/23 | **Well Depth (ft):** 206.20 | **DTW (After Pump Placement):** 72.44 |
| **Sampler:** AB / AR | **Well Diameter:** 2" | **Column Height:** 133.76 |
| **Weather:** 69°F Cloudy | **Screen Interval:** 190-200ft | **Start Purge:** 9:50 |
| | **Pump Intake Depth (ft):** 196 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Double bonded - 180 Disp - 1C | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:50 | 11.24 | .674 | 8.30 | 3.23 | 16.2 | 130.1 | 175 | 72.44 | |
| 9:55 | 9.15 | .3496 | 330 | .44 | 15.3 | 173 | 175 | 72.44 | |
| 10:00 | 8.44 | .3568 | 436.75 | 0.44 | 15.2 | -254.4 | 175 | 72.44 | |
| 10:05 | 8.08 | .3576 | 340.0 | .43 | 15.0 | -231.9 | " | " | |
| 10:10 | 8.11 | .3570 | 355.96 | 0.42 | 15.0 | -226.0 | " | " | |
| 10:15 | 8.13 | .3557 | 280.11 | 0.45 | 14.4 | -227.7 | " | " | |
| 10:20 | 8.13 | .3557 | 280.11 | 0.45 | 14.9 | -227.7 | " | " | |
| 10:25 | 8.13 | .3557 | 280.11 | 0.45 | 14.9 | -227.7 | " | " | |
| 10:30 | 8.13 | .3557 | 280.11 | 0.45 | 14.9 | -227.7 | " | " | |
| 10:35 | 7.89 | .3552 | 155.33 | 0.45 | 14.8 | -219.9 | " | " | |
| 10:40 | 7.86 | .3554 | 148.71 | 0.45 | 14.8 | -218.6 | " | " | |
| 10:45 | 7.82 | .3556 | 133.04 | 0.45 | 14.9 | -214.1 | " | " | |
| 10:50 | 7.73 | .3557 | 150.57 | 0.42 | 14.9 | -206.7 | " | " | |
| 10:55 | 7.72 | .3555 | 120.11 | 0.43 | 14.9 | -206.3 | " | " | |
| 11:00 | 7.64 | .3553 | 107.0 | .42 | 14.9 | -199.2 | " | " | |
| 11:05 | 7.63 | .3556 | 88.76 | .42 | 15.0 | -197.7 | " | " | |
| 11:10 | 7.63 | .3554 | 80.57 | .41 | 15.0 | -197.6 | " | " | |
| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): ~~MP1~~ PRO DDS 4x1 (19K100590)

Comments:

integral consulting inc.

2 of 2

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-106D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** |
| **Date:** | **Well Depth (ft):** | **DTW (After Pump Placement):** |
| **Sampler:** | **Well Diameter:** | **Column Height:** |
| **Weather:** | **Screen Interval:** | **Start Purge:** |
| | **Pump Intake Depth (ft):** | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 11:15 | 7.44 | .3552 | 73.60 | .41 | 15.0 | -194.3 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor):

Comments: Sampled @ 11:20

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-107S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 30.95 |
| **Date:** 6/20/23 | **Well Depth (ft):** 81.90 | **DTW (After Pump Placement):** 30.83 |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **Column Height:** 51.07 |
| **Weather:** 74°F Cloudy | **Screen Interval:** 72-82 | **Start Purge:** 13:04 |
| | **Pump Intake Depth (ft):** 75' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Double Banded | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 13:10 | 11.74 | .959 | 39.47 | 5.71 | 15.1 | -40.7 | 140 | 30.89 | |
| 13:15 | 7.54 | .331 | 54.63 | 1.00 | 15.7 | -167.8 | 140 | 30.89 | |
| 13:20 | 7.19 | .407 | 51.10 | 0.92 | 15.0 | -124.4 | 140 | 30.89 | |
| 13:25 | 6.98 | .407 | 49.99 | .77 | 16.0 | -99.6 | " | " | |
| 13:30 | 6.80 | .405 | 52.16 | .63 | 16.0 | -83.3 | " | " | |
| 13:35 | 6.68 | .404 | 53.81 | .55 | 16.0 | -77.6 | " | " | |
| 13:40 | 6.64 | .404 | 59.50 | .50 | 16.1 | -75.7 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): PRO DSS (20E10-150)

Comments: Sampled @ 13:50

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-107D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 31.00 |
| **Date:** 6/20/23 | **Well Depth (ft):** 123.7 | **DTW (After Pump Placement):** 31.22 |
| **Sampler:** AB/MR | **Well Diameter:** 2" | **Column Height:** 92.48 |
| **Weather:** 74°F Cloudy | **Screen Interval:** 112 - 122 ft | **Start Purge:** 12:57 |
| | **Pump Intake Depth (ft):** | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Dable bonded | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 13:00 | 9.85 | .2825 | 8.56 | 2.27 | 17.6 | -126.5 | 175 | 31.13 | |
| 13:05 | 9.95 | .2295 | 2.76 | ~~2.58~~ 0.58 | 15.7 | -225.3 | 175 | 31.13 | |
| 13:10 | 9.98 | .2792 | 3.10 | 0.51 | 16.1 | -244.1 | 175 | 31.13 | |
| 13:15 | 9.98 | .2792 | 2.93 | 0.48 | 16.2 | -250.5 | " | " | |
| 13:20 | 9.96 | .2329 | 2.93 | 0.44 | 16.2 | -250.2 | " | " | |
| 13:25 | 9.92 | .2796 | 3.12 | 0.40 | 16.1 | -248.1 | " | " | |
| 13:30 | 9.83 | .2806 | 2.65 | 0.38 | 16.1 | -270.3 | " | " | |
| 13:35 | 9.32 | .2946 | 1.35 | 0.34 | 16.2 | -250.2 | " | " | |
| 13:40 | 9.24 | .3476 | .86 | 0.34 | 16.3 | -274.0 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): 19K100590 YSI DSS

Comments: Sampled @ 13:45

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-108S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 85.61 |
| **Date:** 6/19/2023 | **Well Depth (ft):** ~~235'~~ 237.80 | **DTW (After Pump Placement):** 85.61 |
| **Sampler:** C. GOESTENBERGER | **Well Diameter:** 2" | **Column Height:** 152.20 |
| **Weather:** 88, Sunny | **Screen Interval:** 225-235' | **Start Purge:** 14:35 |
| | **Pump Intake Depth (ft):** 230' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 200' DB poly, 30' HDPE (double banding) | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 14:40 | 8.51 | 0.524 | 16.00 | 8.35 | 17.1 | 21 | 250 | 85.65 | * |
| 14:45 | 9.27 | 0.523 | 3.87 | 7.72 | 16.3 | -25.4 | 250 | 85.65 | → TROUBLE SHOOT YSI - TUBING CONNECT INCORRECTLY |
| 15:00 | 10:04 | 0.525 | 2.91 | 7.49 | 16.1 | -32.3 | 250 | 85.70 | |
| 1555 | 11:23 | 0.556 | 294.51 | 6.85 | 15.5 | -34.13 | 250 | 85.70 | |
| 1600 | 11:39 | 0.620 | 216.32 | 1.88 | 15.4 | -97.5 | 250 | 85.70 | |
| 1605 | 11:41 | 0.616 | 61.87 | 0.93 | 15.3 | -155.0 | 250 | " | |
| 1610 | 11:45 | 0.599 | 65.62 | 0.63 | 15.3 | -177.9 | 250 | " | |
| 1615 | 11:43 | 0.591 | 62.04 | 0.60 | 15.4 | -195.0 | 250 | " | |
| 1620 | 11:41 | 0.586 | 60.98 | 0.59 | 15.2 | -200.6 | 250 | " | |
| 1625 | 11:40 | 0.588 | 59.32 | 0.57 | 15.1 | -199.5 | 250 | " | |
| 1630 | | | | SAMPLE | | | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial 19L101415

Comments: SCH 30" HDPE DROP TUBING

SAMPLED @ 16:30

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-108D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 88.87 |
| **Date:** 6/19/2023 | **Well Depth (ft):** 349.91 | **DTW (After Pump Placement):** 88.87 |
| **Sampler:** M. Barron | **Well Diameter:** 2" | **Column Height:** 261.04 |
| **Weather:** 88, Sunny | **Screen Interval:** 335-345' | **Start Purge:** 14:16 |
| | **Pump Intake Depth (ft):** 340' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 200' DB Poly; 140 HDPE drop tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 14:18 | 7.46 | 0.487 | 13.13 | 1.61 | 22.7 | -179.6 | 189 | 88.89 | |
| 14:23 | 7.57 | 0.464 | 8.18 | 1.59 | 17.2 | -223.8 | 190 | 88.88 | |
| 14:28 | 7.62 | 0.390 | 62.55 | 1.09 | 16.7 | -235.3 | 191 | 88.89 | |
| 14:33 | 7.77 | 0.406 | 56.17 | 0.88 | 16.3 | -236.7 | — | — | |
| 14:38 | 7.85 | 0.419 | 56.40 | 0.79 | 16.0 | -225.8 | — | — | |
| 14:43 | 7.88 | 0.426 | 58.67 | 0.76 | 15.9 | -211.2 | — | — | |
| 14:48 | 7.80 | 0.429 | 61.71 | 0.74 | 15.9 | -202.5 | — | — | |
| 14:53 | 7.93 | 0.431 | 60.86 | 0.74 | 15.8 | -193.4 | — | — | |
| 14:58 | 7.93 | 0.436 | 64.29 | 0.72 | 15.9 | -186.5 | — | — | |
| 15:03 | 7.93 | 0.438 | 66.37 | 0.71 | 16.0 | -183.2 | — | — | |
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| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 21K104086

Comments: Sample collected @ 15:05

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-109S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 50.10 |
| **Date:** 6/27/2023 | **Well Depth (ft):** 150.90 | **DTW (After Pump Placement):** 50.09 |
| **Sampler:** M. Barron | **Well Diameter:** 2" | **Column Height:** 100.80 |
| **Weather:** 71, Cloudy | **Screen Interval:** 147-157' | **Start Purge:** 8:50 |
| | **Pump Intake Depth (ft):** 152' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 152' DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 8:55 | 6.32 | 0.413 | 39.74 | 0.80 | 16.2 | -25.2 | 200 | 50.09 | |
| 9:00 | 6.35 | 0.412 | 39.36 | 0.64 | 16.1 | -21.1 | 200 | 50.10 | |
| 9:05 | 6.37 | 0.411 | 26.00 | 0.58 | 16.0 | -21.5 | 200 | 50.09 | |
| 9:10 | 6.45 | 0.411 | 34.12 | 0.56 | 16.0 | -22.5 | — | — | |
| 9:15 | 6.38 | 0.412 | 33.35 | 0.52 | 16.0 | -21.9 | — | — | |
| 9:20 | 6.38 | 0.412 | 34.97 | 0.51 | 16.0 | -22.4 | — | — | |
| 9:25 | 6.38 | 0.411 | 31.83 | 0.49 | 16.0 | -23.0 | — | — | |
| 9:30 | 6.38 | 0.412 | 32.77 | 0.48 | 16.0 | -23.2 | — | — | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

**Rental Equipment Details (Serial/Vendor):** YSI PRO serial: 18C103637

Comments: MJ stated NO HDPE drop tubing needed
sample collected @ 9:35

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-109D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 59.89 |
| **Date:** 6/27/2023 | **Well Depth (ft):** 266.92 | **DTW (After Pump Placement):** 59.99 |
| **Sampler:** AJG | **Well Diameter:** 2" | **Column Height:** 207.03 |
| **Weather:** 74 Rainy | **Screen Interval:** 257-267' | **Start Purge:** 8:50 |
| | **Pump Intake Depth (ft):** 262' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 200' DB POLY; 62' HDPE drop tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 8 55 | 7.68 | 401.5 | 23.32 | 1.88 | 18.2 | 56.7 | 200 | 59.99 | |
| 9 00 | 7 38 | 394.4 | 34.13 | 1.05 | 17 9 | 98.8 | 200 | 59.96 | |
| 9 05 | 7.05 | 386.9 | 107.11 | 0.77 | 17.7 | 96.6 | 200 | 60.02 | |
| 9 10 | 6.99 | 381.2 | 95.57 | 0.81 | 17.6 | 88.5 | 200 | 60.07 | |
| 9 15 | 6.93 | 379.4 | 98.44 | 0.84 | 17 6 | 81.3 | 200 | 60.09 | |
| 9 20 | 6.94 | 376.8 | 79.11 | 0.80 | 17.7 | 78.2 | 200 | 60.12 | |
| 9 25 | 6.94 | 378.0 | 63.14 | 0.81 | 17.6 | 79.1 | 200 | 60.12 | |
| 930 | 6.94 | 376.8 | 58.10 | 0.79 | 17.6 | 77.7 | 200 | 60.12 | |
| 9 35 | 6.94 | 375.0 | 53.70 | 0.77 | 17.6 | 76.8 | 200 | 60.13 | |
| 9 40 | 6 94 | 374.2 | 50.42 | 0.76 | 17.5 | 75.8 | 2 00 | 60.12 | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: ~~18C10367~~ 20F000291

Comments: Sample collected @ 9:45

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-111S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 23.82 |
| **Date:** 6/27/2023 | **Well Depth (ft):** 72.27 | **DTW (After Pump Placement):** 23.83 |
| **Sampler:** AJG | **Well Diameter:** 2" | **Column Height:** 48.45 |
| **Weather:** 74 overcast | **Screen Interval:** 62-72' | **Start Purge:** 10 40 |
| | **Pump Intake Depth (ft):** 67' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 67' DB POLY | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1045 | 6.07 | 326.0 | 51.09 | 2.68 | 19.4 | 100.0 | 200 | 23.83 | |
| 1050 | 5.93 | 326.0 | 83.34 | 2.01 | 19.4 | 94.9 | 200 | 23.83 | |
| 1055 | 5.84 | 326.3 | 107.81 | 1.25 | 19.6 | 85.3 | 200 | 23.83 | |
| 1100 | 5.80 | 326.3 | 109.80 | 1.22 | 19.9 | 84.3 | 200 | 23.83 | |
| 1105 | 5.79 | 325.4 | 116.79 | 0.90 | 20.2 | 72.2 | 200 | 23.84 | |
| 1110 | 5.74 | 323.2 | 143.24 | 0.86 | 20.4 | 68.5 | 200 | 23.84 | |
| 1115 | 5.73 | 324.8 | 176.30 | 0.77 | 22.3 | 62.3 | 200 | 23.84 | |
| 1120 | 5.73 | 325.2 | 121.11 | 0.75 | 22.7 | 58.5 | 200 | 23.84 | |
| 1125 | 5.73 | 325.8 | 103.32 | 0.73 | 23.3 | 54.7 | 200 | 23.84 | |
| 1130 | 5.73 | 322.9 | 101.94 | 0.75 | 20.3 | 53.8 | 200 | 23.85 | |
| 1135 | 5.73 | 323.1 | 105.61 | 0.74 | 20.2 | 54.3 | 200 | 23.85 | |
| 1140 | 5.74 | 323.7 | 99.72 | 0.75 | 19.8 | 54.1 | 200 | 23.85 | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 18C103637

Comments: MJ stated NO HDPE drop tubing needed

*duplicate samples collected*
Sample collected @ 11:40

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-111D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 23.78 |
| **Date:** 6/27/2023 | **Well Depth (ft):** 124.95 | **DTW (After Pump Placement):** 23.77 |
| **Sampler:** M. Baran | **Well Diameter:** 2" | **Column Height:** 101.17 |
| **Weather:** 74, Cloudy / Rainy | **Screen Interval:** 115-125' | **Start Purge:** 10:38 |
| | **Pump Intake Depth (ft):** 120' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 120' DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 10:40 | 6.58 | 0.333 | 81.49 | 0.64 | 17.1 | -43.2 | 200 | 23.77 | |
| 10:45 | 6.49 | 0.324 | 66.52 | 0.49 | 16.2 | -58.0 | 200 | 23.77 | |
| 10:50 | 6.46 | 0.322 | 54.32 | 0.74 | 15.8 | -63.3 | 200 | 23.78 | |
| 10:55 | 6.43 | 0.323 | 56.01 | 0.52 | 16.2 | -63.4 | — | — | |
| 11:00 | 6.42 | 0.336 | 56.96 | 0.60 | 17.6 | -66.3 | — | — | |
| 11:05 | 6.42 | 0.337 | 57.88 | 0.58 | 17.6 | -66.2 | — | — | |
| 11:10 | 6.41 | 0.337 | 59.06 | 0.58 | 17.7 | -66.4 | — | — | |
| 11:15 | 6.40 | 0.336 | 59.96 | 0.58 | 17.6 | -67.7 | — | — | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 20F000291

Comments: MJ stated NO HDPE drop tubing needed
Sample collected at 11:20

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-112S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 83.00 |
| **Date:** 6/21/2023 | **Well Depth (ft):** 172.13 | **DTW (After Pump Placement):** 82.99 |
| **Sampler:** M. Barron | **Well Diameter:** 2" | **Column Height:** 89.13 |
| **Weather:** 63, Cloudy | **Screen Interval:** 160-170' | **Start Purge:** 8:38 |
| | **Pump Intake Depth (ft):** 165' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 165' DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 8:40 | ~~9.14~~ 9.14 | 0.212 | ~~47.26~~ | 9.49 | 16.2 | 191.9 | 250 | 82.99 | |
| 8:45 | 9.08 | 0.209 | 38.27 | 7.46 | 15.4 | 174.6 | 250 | 82.99 | |
| 8:50 | 9.09 | 0.210 | 32.77 | 6.28 | 15.1 | 163.1 | 250 | 82.99 | |
| 8:55 | 9.14 | 0.212 | 30.97 | 5.79 | 15.1 | 153.9 | — | — | |
| 9:00 | 9.18 | 0.213 | 29.15 | 5.36 | 15.0 | 145.7 | — | 83.00 | |
| 9:05 | 9.19 | 0.214 | 27.84 | 5.15 | 14.9 | 140.5 | — | — | |
| 9:10 | 9.18 | 0.214 | 28.93 | 4.99 | 14.9 | 136.7 | — | - | |
| 9:15 | 9.18 | 0.214 | 26.58 | 4.94 | 14.9 | 132.6 | — | — | |
| 9:20 | 9.17 | 0.215 | 26.19 | 4.94 | 15.0 | 130.6 | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI Serial PRO: 19K101415

Comments: MJ said NO HDPE drop tubing needed

sample collected @ 9:25

* extra bottleware Trojan *

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-112D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 83.26 |
| **Date:** 6/21/2023 | **Well Depth (ft):** 240.00 | **DTW (After Pump Placement):** 83.30 |
| **Sampler:** C. Westenberger | **Well Diameter:** 2" | **Column Height:** 156.70 |
| **Weather:** 63, Cloudy | **Screen Interval:** 227 - 237' | **Start Purge:** 8:35 |
| | **Pump Intake Depth (ft):** 232' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder → 35' (aw) | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 200' DB Poly; ~~32'~~ 35' HDPE tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 8:40 | 8.06 | 0.878 | 145.67 | 7.36 | 15.7 | 212.3 | 175 | ~~83~~.3 | |
| 8:45 | 8.04 | 0.285 | 129.67 | 6.23 | 15.5 | -47.3 | 175 | " | |
| 8:50 | 7.97 | 0.304 | 15.62 | 1.08 | 15.5 | -132.1 | 175 | " | |
| 8:55 | 7.90 | 0.318 | 13.00 | 0.79 | 15.5 | -152.9 | 175 | " | |
| 9:00 | 7.81 | 0.336 | 12.98 | 0.68 | 15.5 | -159.9 | 175 | " | |
| 9:05 | 7.72 | 0.355 | 12.01 | 0.61 | 15.4 | -160.3 | 175 | " | |
| 9:10 | 7.64 | 0.364 | 13.00 | 0.60 | 15.4 | -155.9 | 175 | " | |
| 9:15 | 7.58 | 0.373 | 12.58 | 0.59 | 15.4 | -156.3 | 175 | " | |
| 9:20 | 7.56 | 0.378 | 13.05 | 0.68 | 15.3 | -157.9 | 175 | " | |
| 9:25 | 7.56 | 0.379 | 13.00 | 0.58 | 15.3 | -156.9 | 175 | " | |
| ~~9:30~~ | | | | SAMPLE | | | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 21K104086

Comments: Sample collected @ 9:30

35' of HDPE
200' of DB Poly

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-113S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 71.80 |
| **Date:** 6/21/2023 | **Well Depth (ft):** 170.68 | **DTW (After Pump Placement):** 71.80 |
| **Sampler:** M. Barron | **Well Diameter:** 2" | **Column Height:** 98.88 |
| **Weather:** 65, Rainy / Cloudy | **Screen Interval:** 161 - 171' | **Start Purge:** 11:33 |
| | **Pump Intake Depth (ft):** 166' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 166' DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 11:35 | 10.74 | 0.304 | 99.45 | 10.33 | 16.6 | -0.1 | 175 | 71.80 | |
| 11:40 | 10.61 | 0.274 | 60.25 | 10.07 | 15.2 | -210.8 | 175 | 71.81 | |
| 11:45 | 10.61 | 0.272 | 22.34 | 9.76 | 15.1 | 14.2 | 175 | 71.80 | |
| 11:50 | 10.60 | 0.273 | 34.12 | 10.21 | 15.1 | 18.9 | — | — | |
| 11:55 | 10.59 | 0.271 | 35.52 | 10.61 | 15.0 | 18.0 | — | — | |
| 12:00 | 10.59 | 0.271 | 41.60 | 10.27 | 15.0 | 22.0 | — | — | |
| 12:05 | 10.56 | 0.269 | 45.33 | 9.81 | 15.1 | 25.8 | — | 71.82 | |
| 12:10 | 10.53 | 0.267 | 44.50 | 9.59 | 15.0 | 28.7 | — | — | |
| 12:15 | 10.52 | 0.268 | 49.31 | 10.26 | 15.0 | 31.5 | — | — | |
| 12:20 | 10.51 | 0.268 | 46.47 | 10.92 | 15.0 | 26.4 | — | 71.82 | |
| 12:25 | 10.50 | 0.268 | 43.62 | 9.97 | 15.1 | 29.3 | — | — | |
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| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): YSI PRO serial: 21K104086

Comments: MJ stated NO HDPE drop tubing needed

Sample collected @ 12:30

*extra bottleware Trojan*

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-113D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 72.35 |
| **Date:** 6/21/2023 | **Well Depth (ft):** 236.71 | **DTW (After Pump Placement):** 71.54 |
| **Sampler:** C. WESTENBERGER | **Well Diameter:** 2" | **Column Height:** 164.36 |
| **Weather:** 60° RAIN/Shower | **Screen Interval:** 227-237' | **Start Purge:** 11:35 |
| | **Pump Intake Depth (ft):** 232' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 200' DB Poly; 32' HDPE drop tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 11:40 | 8.48 | 0.391 | 71.62 | 1.97 | 14.7 | 81.02 | 275 | 71.54 | |
| 11:45 | 8.13 | 0.392 | 74.35 | 0.77 | 14.6 | -63.6 | 275 | 71.54 | |
| 11:50 | 8.11 | 0.392 | 76.39 | 0.73 | 14.6 | -81.8 | 275 | 71.54 | |
| 11:55 | 8.11 | 0.392 | 78.56 | 0.72 | 14.6 | -88.5 | 275 | 71.54 | |
| 12:00 | 8.11 | 0.392 | 65.13 | 0.70 | 14.6 | -97.4 | 275 | 71.54 | |
| 12:05 | 8.10 | 0.392 | 66.98 | 0.69 | 14.6 | -100.2 | 275 | 71.54 | |
| 12:10 | 8.10 | 0.392 | 68.00 | 0.70 | 14.6 | -101.99 | 275 | 71.54 | |
| 12:15 | 8.09 | 0.392 | 68.74 | 0.69 | 14.6 | -102.08 | 275 | 71.54 | |
| 12:20 | 8.09 | 0.392 | 69.02 | 0.72 | 14.6 | -102.58 | 275 | 71.54 | |
| 12:25 | 8.09 | 0.392 | 69.32 | 0.71 | 14.6 | -102.88 | 275 | 71.54 | |
| 12:30 | | | | SAMPLE | | | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 19K101415

Comments: Sample collected @ 12:30

32' HDPE

200 DP POLY

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-114S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 88.42 |
| **Date:** 6/20/2023 | **Well Depth (ft):** 201.43 | **DTW (After Pump Placement):** 88.43 |
| **Sampler:** M. Barron | **Well Diameter:** 2" | **Column Height:** 113.01 |
| **Weather:** 74. Cloudy | **Screen Interval:** 187 - 197' | **Start Purge:** 12:43 |
| | **Pump Intake Depth (ft):** 192' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 192' DB poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 12:45 | 7.75 | 0.351 | 8.64 | 1.54 | 19.8 | -119.7 | 250 | 88.43 | |
| 12:50 | 7.72 | 0.381 | 9.79 | 0.97 | 15.5 | -133.0 | 250 | 88.43 | |
| 12:55 | 7.72 | 0.317 | 11.10 | 0.80 | 15.3 | -136.8 | 250 | 88.43 | |
| 13:00 | 7.72 | 0.317 | 12.09 | 0.69 | 15.3 | -139.7 | — | — | |
| 13:05 | 7.73 | 0.317 | 12.45 | 0.67 | 15.3 | -141.0 | — | — | |
| 13:10 | 7.73 | 0.317 | 13.13 | 0.64 | 15.3 | -141.5 | — | — | |
| 13:15 | 7.73 | 0.317 | 13.68 | 0.64 | 15.3 | -141.8 | — | — | |
| 13:20 | 7.73 | 0.316 | 14.72 | 0.62 | 15.3 | -141.7 | — | — | |
| 13:25 | 7.72 | 0.316 | 12.25 | 0.61 | 15.3 | -141.5 | — | — | |
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| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): 451 PRO serial: 21K104086

Comments: MJ stated NO HDPE ~~Double~~ Drop Tubing Needed

Sample collected @ 13:30

* Trojan bottle sample collected *

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-114D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 86.55 |
| **Date:** 6/20/2023 | **Well Depth (ft):** 271.9 | **DTW (After Pump Placement):** 87.10 |
| **Sampler:** C. Westenberger | **Well Diameter:** 2" | **Column Height:** 185.35 |
| **Weather:** 74° Partly Cloudy | **Screen Interval:** 262 - 272' | **Start Purge:** 12:40 |
| | **Pump Intake Depth (ft):** 267' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 200' DB poly; 67' HDPE drop tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 12:45 | 9.87 | 0.447 | 19.16 | 4.27 | 15.6 | 111.8 | 250 | 87.10 | |
| 12:50 | 9.88 | 0.446 | 35.98 | 3.96 | 15.5 | 110.6 | 250 | 87.10 | |
| 12:55 | 9.88 | 0.444 | ~~42.~~ 32.83 | 3.81 | 15.3 | 97.3 | 250 | 87.10 | Bubbles on sensor |
| 13:00 | 9.89 | 0.445 | 36.74 | 3.77 | 15.2 | 92.1 | 250 | 87.10 | |
| 13:05 | 9.89 | 0.445 | 33.55 | 3.82 | 15.2 | 90.3 | 250 | 87.10 | |
| 13:10 | 9.93 | 0.445 | 31.06 | 3.86 | 15.2 | 89.6 | 250 | 87.10 | |
| 13:15 | 9.89 | 0.445 | 30.78 | 3.81 | 15.2 | 88.2 | 250 | 87.10 | |
| 13:20 | 9.89 | 0.445 | 31.56 | 3.85 | 15.2 | 88.5 | 250 | 87.10 | |
| 13:25 | 9.89 | 0.445 | 30.02 | 3.84 | 15.2 | 87.9 | 250 | 87.10 | |
| 13:30 | | | | SAMPLE @ | | | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): Serial YSI PRO: 19K101415

Comments: Sample collected @ 13:30

67 ~~00~~ ft of HDPE

200 ft of DB poly

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-116S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 76.19 |
| **Date:** 6/22/2023 | **Well Depth (ft):** 156.78 | **DTW (After Pump Placement):** 76.18 |
| **Sampler:** M Barron | **Well Diameter:** 2" | **Column Height:** 80.59 |
| **Weather:** Cl. Cloudy | **Screen Interval:** 147-157' | **Start Purge:** 9:00 |
| | **Pump Intake Depth (ft):** 152' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 152' DB POLY | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:05 | 11.45 | 0.532 | 84.52 | 7.04 | 15.6 | 119.4 | 175 | 76.20 | |
| 9:10 | 11.50 | 0.531 | 75.12 | 3.42 | 15.2 | 84.0 | 175 | 76.15 | |
| 9:15 | 11.53 | 0.526 | 68.12 | 2.56 | 14.7 | 65.1 | 175 | 76.18 | |
| 9:20 | 11.46 | 0.526 | 27.74 | 2.03 | 14.7 | 58.4 | — | — | |
| 9:25 | 11.45 | 0.526 | 25.49 | 1.94 | 14.7 | 52.2 | — | 76.18 | |
| 9:30 | 11.45 | 0.526 | 23.42 | 1.89 | 14.6 | 45.6 | — | — | |
| 9:35 | 11.46 | 0.525 | 22.33 | 1.87 | 14.6 | 40.3 | — | — | |
| 9:40 | 11.46 | 0.525 | 21.11 | 1.85 | 14.6 | 38.7 | — | — | |
| 9:45 | 11.47 | 0.526 | 21.06 | 1.80 | 14.6 | 44.2 | — | 76.18 | |
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| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 21K104086

Comments: MJ stated NO HDPE drop tubing needed

Sample collected @ 9:50

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-116D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 76.21 |
| **Date:** 6/22/2023 | **Well Depth (ft):** 246.89 | **DTW (After Pump Placement):** 76.22 |
| **Sampler:** C. Weskhberger | **Well Diameter:** 2" | **Column Height:** 170.68 |
| **Weather:** 60, Cloudy | **Screen Interval:** 237 - 247 | **Start Purge:** 9:00 |
| | **Pump Intake Depth (ft):** 242' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 200' DBPoly; 42' HDPE drop tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:05 | 11.54 | 0.899 | 21.98 | 2.75 | 15.9 | 10.3 | 175 | 76.39 | |
| 9:10 | 11.58 | 0.901 | 17.95 | 1.39 | 15.2 | -52.3 | 175 | 76.39 | |
| 9:15 | 11.60 | 0.893 | 11.80 | 1.33 | 15.2 | -76.2 | 175 | 76.39 | |
| 9:20 | 11.61 | 0.887 | 10.36 | 1.10 | 15.1 | -97.4 | 175 | 76.39 | |
| 9:25 | 11.63 | 0.889 | 13.62 | 1.04 | 15.1 | -104.9 | 175 | 76.41 | |
| 9:30 | 11.64 | 0.889 | 14.01 | 1.00 | 15.0 | -107.1 | 175 | 76.41 | |
| 9:35 | 11.64 | 0.888 | 14.68 | 0.99 | 15.0 | -108.3 | 175 | 76.41 | |
| 9:40 | 11.64 | 0.889 | 13.97 | 0.98 | 15.0 | -110.5 | 175 | 76.43 | |
| 9:45 | 11.64 | 0.890 | 14.03 | 0.97 | 15.0 | -110.9 | 175 | 74.43 | |
| 9:50 | | | | SAMPLE | ② | | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 19K101415

Comments: Sample collected @ 9:50

42' of HDPE

200' of DBPoly

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

| | | | |
|---|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW - 1175 | | Lab ID #: 03060 |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 35.23 | |
| **Date:** 6/22/2023 | **Well Depth (ft):** 101.5 | **DTW (After Pump Placement):** 35.24 | |
| **Sampler:** AB/AE | **Well Diameter:** 2" | **Column Height:** 66.26 | |
| **Weather:** 63°F Cloudy | **Screen Interval:** 72-102 | **Start Purge:** 11:35 | |
| | **Pump Intake Depth (ft):** 75 | **Purge Method:** Low-Flow | |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump | |
| **Below Cap:** NA | **Tubing Type:** DROP & DB (70ft) (25ft) | | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 11:40 | 9.74 | .336 | 24.53 | 0.98 | 14.8 | -226.7 | 650 | 35.24 | |
| 11:45 | 8.08 | .316 | 4.20 | .46 | 14.7 | -257.0 | 650 | 37.19 | |
| 11:50 | 6.90 | .294 | 4.30 | .41 | 14.6 | -182.2 | 380 | 37.37 | |
| 11:55 | 6.70 | .289 | 4.08 | .41 | 14.9 | -168.0 | 145 | 38.13 | |
| 12:00 | 6.68 | .287 | 7.12 | .45 | 16.2 | -168.5 | 145 | 38.13 | |
| 12:05 | 6.66 | .287 | 7.91 | .49 | 15.9 | -168.5 | 145 | 38.13 | |
| 12:10 | 6.64 | .286 | 9.88 | .47 | 15.8 | -169.7 | " | " | |
| 12:15 | 6.66 | .287 | 14.0 | .44 | 15.7 | -171.5 | " | " | |
| 12:20 | 6.72 | .291 | 15.97 | .42 | 15.7 | -180.2 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): PROSS VSI (19K100590)

Comments:

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-117D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 38.39 |
| **Date:** 6/22/23 | **Well Depth (ft):** 147.5 ft | **DTW (After Pump Placement):** 38.60 |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **Column Height:** 108.9 |
| **Weather:** 67° f Cloudy | **Screen Interval:** 137 - 147 ft | **Start Purge:** 11:22 |
| | **Pump Intake Depth (ft):** 140 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Drop: 90 Double Banded: 50 | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 11:35 | 12.20 | 2.080 | 40.49 | 2.00 | 15.9 | -66.5 | 275 | 38.60 | |
| 11:40 | 12.19 | 2.070 | 47.19 | 1.10 | 16.2 | -98.6 | 200 | 3 | |
| 11:45 | 12.20 | 3.060 | 60.59 | .73 | 16.2 | -123.6 | 200 | 39.58 | |
| 11:50 | 12.18 | 1.813 | 68.19 | 0.71 | 16.1 | -140.6 | 200 | 38.58 | |
| 11:55 | 12.13 | 1.547 | 82.91 | 0.64 | 16.2 | -166.7 | " | " | |
| 12:00 | 12.11 | 1.504 | 92.95 | 0.64 | 16.1 | -170.9 | " | " | |
| 12:05 | 12.06 | 1.320 | ~~Equipment~~ 30.23 | 0.61 | 16.1 | -184.0 | " | " | |
| 12:10 | 12.02 | 1.220 | 34.90 | 0.65 | 16.0 | -191.2 | " | " | |
| 12:15 | 11.99 | 1.167 | 36.09 | 0.63 | 16.1 | -192.9 | " | " | |
| 12:20 | 11.96 | 1.091 | 36.07 | 0.60 | 16.1 | -196.0 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): PRODSS YSI - 20 E 100150

Comments: Sample @ 12:25

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW 118S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 46.54 |
| **Date:** 06/22/23 | **Well Depth (ft):** 118.70 | **DTW (After Pump Placement):** 46.58 |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **Column Height:** 72.12 |
| **Weather:** 61°F Cloudy | **Screen Interval:** 107 - 117 ft | **Start Purge:** 8:45 |
| | **Pump Intake Depth (ft):** 110 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Drop 50 Double banded 60 | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 8:45 | 6.35 | .2635 | 7.03 | 1.16 | 15.4 | -101.1 | 350 | 46.56 | |
| 8:50 | 6.42 | .2700 | 37.43 | .68 | 15.3 | -115.0 | 350 | 46.57 | |
| 8:55 | 6.34 | .2628 | 13.16 | .65 | 15.3 | -110.2 | 350 | 46.56 | |
| 9:00 | 6.31 | .2616 | 9.92 | .63 | 15.2 | -109.7 | 350 | 46.56 | |
| 9:05 | 6.29 | .2608 | 9.29 | .60 | 15.2 | -109.8 | 350 | 46.56 | |
| 9:10 | 6.27 | .2603 | 10.77 | .57 | 15.2 | -110.2 | 350 | " | |
| 9:15 | 6.27 | .2601 | 11.89 | .57 | 15.2 | -110.4 | 350 | " | |
| 9:20 | 6.26 | .2598 | 13.30 | .55 | 15.2 | -109.9 | 350 | " | |
| 9:25 | 6.24 | .2598 | 15.22 | .56 | 15.2 | -109.4 | 350 | " | |
| 9:30 | 6.24 | .2594 | 11.79 | .53 | 15.2 | -110.0 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): (19K100590) PROBOSS YS1

Comments: Sampled @ 9:33

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

| | | | |
|---|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-118D | | Lab ID #: 03060 |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | | |
| **Date:** 6/22/23 | **Well Depth (ft):** 174ft ✱ | **DTW (Before Pump Placement):** 46.71 | |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **DTW (After Pump Placement):** 46.74 | |
| **Weather:** 64o F Cloudy | **Screen Interval:** 187-197 ✱ | **Column Height:** 127.26 | |
| | **Pump Intake Depth (ft):** 170 ft | **Start Purge:** 8:26 | |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Purge Method:** Low-Flow | |
| **Below Cap:** NA | **Tubing Type:** ~~Double bonded~~ | **Sample Method:** Pump | |

Dup 100 Double 76

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 8:40 | 10.45 | .095 | 209.13 | 9.24 | 17.2 | 21.6 | 125 | 46.74 | |
| 8:45 | 10.63 | .122 | 160.58 | 8.31 | 16.7 | 6.4 | 125 | 46.74 | |
| 8:50 | 10.59 | .113 | 119.51 | 7.02 | 16.6 | 1.7 | 125 | 46.74 | |
| 8:55 | 10.46 | .140 | 94.20 | 4.29 | 16.5 | -0.7 | " | " | |
| 9:00 | 10.39 | .140 | 68.88 | 2.49 | 16.5 | -2.1 | " | " | |
| 9:05 | 10.37 | .140 | 58.71 | 2.74 | 16.5 | -2.7 | " | " | |
| 9:10 | 10.34 | .117 | 67.32 | 2.23 | 16.5 | -4.0 | " | " | |
| 9:15 | 10.32 | .139 | 67.80 | 2.00 | 16.5 | -5.0 | " | " | |
| 9:20 | 10.30 | .139 | 66.10 | 1.73 | 16.5 | -6.4 | " | " | |
| 9:25 | 10.30 | .139 | 65.90 | 1.19 | 16.5 | -7.4 | " | " | |
| 9:30 | 10.26 | .137 | 65.40 | 0.91 | 16.5 | -8 | " | " | |
| 9:35 | 10.24 | .138 | 62.02 | 0.79 | 16.5 | -8.8 | " | " | |
| 9:40 | 10.25 | .138 | 62.01 | 0.67 | 16.5 | -8.9 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor):

Comments: ✱ Well depth and screened interval from the record table to exceed the measured depth Sampled @ 9:45

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-119S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 105.81 |
| **Date:** 6/19/2023 | **Well Depth (ft):** 238.95 | **DTW (After Pump Placement):** 105.87 |
| **Sampler:** C. Westenberger | **Well Diameter:** 2" | **Column Height:** 133.14 |
| **Weather:** 70°, Sunny | **Screen Interval:** 227-237 | **Start Purge:** 10:25 |
| | **Pump Intake Depth (ft):** 232 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 200' DBPoly ; 32' HDPE drop tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 10:28 | 11.45 | 0.672 | 24.30 | 5.18 | 16.7 | 71.6 | 175 | 180.89 | |
| 10:33 | 11.34 | 0.590 | 30.07 | 1.79 | 15.7 | 28.1 | 177 | 108.90 | |
| 10:38 | 11.19 | 0.494 | 28.59 | 1.34 | 15.6 | -9.1 | 176 | 108.91 | |
| 10:43 | 11.10 | 0.465 | 29.31 | 1.15 | 15.5 | -18.7 | — | — | |
| 10:48 | 11.04 | 0.444 | 30.80 | 1.03 | 15.4 | -25.1 | — | — | |
| 10:53 | 10.99 | 0.426 | 28.85 | 0.93 | 15.4 | -32.5 | — | — | |
| 10:58 | 10.93 | 0.414 | 30.43 | 0.86 | 15.4 | -40.4 | — | — | |
| 11:03 | 10.89 | 0.405 | 30.99 | 0.80 | 15.6 | -46.9 | — | — | |
| 11:08 | 10.79 | 0.391 | 32.14 | 0.76 | 15.7 | -51.7 | — | — | |
| 11:13 | 10.61 | 0.374 | 37.81 | 0.73 | 15.4 | -55.1 | — | — | |
| 11:18 | 10.46 | 0.365 | 39.93 | 0.71 | 15.8 | -59.4 | — | — | |
| 11:23 | 10.35 | 0.363 | 40.33 | 0.66 | 15.7 | -64.4 | — | — | |
| 11:28 | 10.26 | 0.362 | 41.84 | 0.64 | 15.6 | -71.1 | — | — | |
| 11:33 | 10.20 | 0.361 | 43.91 | 0.62 | 15.5 | -77.6 | — | — | |
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| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): ~~Serial PRO~~ MB VSI Serial PRO: 21K104086

Comments: Sample collected @ 11:35

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-119D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 105.7 |
| **Date:** 6/19/2023 | **Well Depth (ft):** 300.26 | **DTW (After Pump Placement):** 105.82 |
| **Sampler:** Megan B. | **Well Diameter:** 2 | **Column Height:** 194.36 |
| **Weather:** 88. Sunny | **Screen Interval:** 307 - 317 | **Start Purge:** 10:25 |
| | **Pump Intake Depth (ft):** 295 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** double banded poly, HDPE drop tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 10:30 | 11.50 | ~~11.59~~ | 158.07 | 6.41 | 15.8 | -146.0 | 300 | 106.57 | |
| 10:35 | 11.51 | ~~11.51~~ | 222.0 | 3.64 | 15.6 | -188.0 | 300 | 106.6 | |
| 10:40 | 11.48 | 1.128 | 274.86 | 2.70 | 15.5 | -245.8 | 300 | 106.6 | |
| 10:45 | 11.47 | 1.111 | 315.52 | 2.30 | 15.5 | -246.5 | 300 | 106.6 | |
| 10:50 | 11.46 | 1.074 | 408.87 | 1.46 | 15.4 | -264.3 | 300 | 106.6 | |
| 10:55 | 11:44 | 1.046 | 600.59 | 1.26 | 15.6 | -271.2 | 300 | 106.6 | Duplicate Sample (DUP) |
| 11:00 | 11:42 | 0.988 | 585.27 | 1.15 | 15.4 | -270.3 | 300 | 106.6 | [redacted] |
| 11:05 | 11:39 | 0.939 | 34.05 | 1.07 | 15.5 | -275.0 | 300 | 106.6 | |
| 11:10 | 11:30 | 0.876 | 39.95 | 1.00 | 15.5 | -275.0 | 300 | 106.6 | |
| 11:15 | 11:29 | 0.808 | 41.02 | 0.97 | 15.4 | -274.8 | 300 | 106.6 | |
| 11:20 | 11:21 | 0.798 | 45.04 | 0.93 | 15.3 | -272.3 | 300 | 106.6 | |
| 11:25 | | | | SAMPLE | | | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO serial: 19K101415

Comments: MJ confirmed DTB due to silt possibly

Sample collected @ 11:25

200' of DB tubing plus ~95' of HDPE

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-120S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 19.15 |
| **Date:** 6/21/23 | **Well Depth (ft):** 77 | **DTW (After Pump Placement):** 19.21 |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **Column Height:** 57.79 |
| **Weather:** 65 °F RAIN | **Screen Interval:** 67-77 | **Start Purge:** 11:51 |
| | **Pump Intake Depth (ft):** 72 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** DOUBLE BONDED | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 12:00 | 6.33 | .190.5 | 289.9 | 4.96 | 16.1 | -107.8 | 250 | 19.18 | |
| 12:05 | 6.27 | .1925 | 224.3 | 4.17 | 14.2 | -105.5 | 250 | 19.18 | |
| 12:10 | 6.07 | .2008 | 74.2 | 1.03 | 16.2 | -88.6 | 250 | 19.18 | |
| 12:15 | 5.90 | .2055 | 70.7 | .70 | 16.1 | -75.7 | 250 | " | |
| 12:20 | 5.82 | .2072 | 67.0 | .50 | 16.1 | -67.7 | 250 | " | |
| 12:25 | 5.79 | .2080 | 68.1 | .42 | 16.0 | -64.5 | 250 | " | |
| 12:30 | 5.78 | .2080 | 85.3 | .38 | 16.0 | -61.0 | 250 | " | |
| 12:35 | 5.76 | .2103 | 85.0 | .35 | 16.0 | -50.7 | 250 | " | |
| 12:40 | 5.77 | .2104 | 77.1 | .32 | 15.9 | -44.9 | 250 | " | |
| 12:45 | 6.24 | .1944 | 54.8 | .34 | 16.3 | -112.9 | 250 | " | |
| 12:50 | 6.22 | .1945 | 57.0 | .35 | 16.7 | -109.4 | 250 | " | |
| 12:55 | 5.82 | .2092 | 66.5 | .31 | 16.2 | -63.2 | " | " | |
| 1:00 | 5.79 | .2116 | 66.8 | .32 | 18.3 | -62.9 | " | " | |
| 1:05 | 5.83 | .2134 | 67.3 | .32 | 20.8 | -58.1 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): PRO DSS YSI (20E100150)

Comments:

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-120D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 18.97 |
| **Date:** 6/21/23 | **Well Depth (ft):** 134 | **DTW (After Pump Placement):** 19.00 |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **Column Height:** 115 |
| **Weather:** 65°F RAIN | **Screen Interval:** 122-133 | **Start Purge:** 11:51 |
| | **Pump Intake Depth (ft):** 126 ft | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Double bonded | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 11:55 | 5.72 | .217 | 21.06 | 0.86 | 16.3 | -81.4 | 210 | 19.00 | |
| 12:00 | 5.69 | .218 | 11.34 | 0.83 | 16.3 | -85.4 | 210 | 19.00 | |
| 12:05 | 5.69 | .217 | 14.11 | 0.70 | 16.2 | -92.4 | 210 | 19.00 | |
| 12:10 | 5.70 | .217 | 17.34 | 0.63 | 16.2 | -96.8 | " | " | |
| 12:15 | 5.70 | .217 | 18.65 | 0.59 | 16.2 | -99.1 | " | " | |
| 12:20 | 5.70 | .217 | 32.90 | 0.55 | 16.2 | -100.8 | " | " | |
| 12:25 | 5.71 | .218 | 32.91 | 0.43 | 16.2 | -99.3 | " | " | |
| 12:30 | 5.71 | .218 | 86.11 | 0.41 | 16.3 | -97.7 | " | " | |
| 12:35 | 5.72 | .219 | 99.47 | 0.43 | 16.2 | -97.2 | " | " | |
| 12:40 | 5.73 | .219 | 102.11 | 0.44 | 16.7 | -97.5 | " | " | |
| 12:45 | 5.73 | .218 | 86.55 | 0.45 | 17.2 | -96.3 | " | " | |
| 12:50 | 5.74 | .218 | 90.51 | 0.49 | 17.9 | -94.5 | " | " | |
| 12:55 | 5.73 | .219 | 45.68 | 0.55 | 18.2 | -102.3 | " | " | |
| 13:00 | 5.74 | .219 | 22.30 | 0.61 | 18.5 | -105.3 | " | " | |
| 13:05 | 5.73 | .219 | 27.31 | 0.62 | 18.6 | -106.3 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor):

Comments: PRO DSS YSI 19K100590

Sampled @ 13:08

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-121S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 29.34 |
| **Date:** 6/26/2023 | **Well Depth (ft):** 101.98 | **DTW (After Pump Placement):** 29.39 |
| **Sampler:** M. Barron | **Well Diameter:** 2" | **Column Height:** 72.64 |
| **Weather:** 74, Cloudy | **Screen Interval:** 92 - 102' | **Start Purge:** 11:23 |
| | **Pump Intake Depth (ft):** 97' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 97' DB poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 11:25 | 6.56 | 0.0830 | 6.40 | 3.30 | 19.6 | -18.3 | 200 | 29.39 | |
| 11:30 | 6.38 | ~~0.0820~~ 0.0807 | 4.39 | 1.13 | 16.7 | -60.7 | 200 | 29.40 | |
| 11:35 | 6.37 | ~~0.0810~~ 0.0800 | 4.18 | 0.89 | 16.5 | -69.9 | 200 | 29.40 | |
| 11:40 | 6.36 | 0.0801 | 3.92 | 0.77 | 16.5 | -74.0 | — | — | |
| 11:45 | 6.36 | 0.0760 | 3.65 | 0.72 | 16.4 | -77.8 | — | — | |
| 11:50 | 6.37 | 0.0763 | 3.69 | 0.71 | 18.0 | -80.8 | — | — | |
| 11:55 | 6.37 | 0.0760 | 3.70 | 0.72 | 16.5 | -80.6 | — | — | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 18C103637

Comments: MJ stated No HDPE Drop tubing needed
Sample collected @ 12:00

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-121D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 28.92 |
| **Date:** 6/26/2023 | **Well Depth (ft):** 180.75 | **DTW (After Pump Placement):** 29.06 |
| **Sampler:** | **Well Diameter:** 2" | **Column Height:** 151.83 |
| **Weather:** 74, Cloudy | **Screen Interval:** 171 - 181' | **Start Purge:** 1020 |
| | **Pump Intake Depth (ft):** 176' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 176' DB poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1025 | 6.71 | 320.5 | 451.26 | 0.90 | 17.0 | 11.5 | 200 | 29.05 | |
| 1030 | 6.52 | 320.5 | 423.11 | 0.89 | 16.9 | 7.6 | 200 | 29.06 | |
| 1035 | 6.53 | 320.1 | 444.08 | 0.61 | 16.6 | 0.5 | 200 | 29.05 | |
| 1040 | 6.53 | 320.9 | 542.11 | 0.55 | 16.6 | 5.7 | 200 | 29.05 | |
| 1045 | 6.54 | 321.4 | 591.13 | 0.50 | 16.5 | 0.7 | 200 | 29.06 | |
| 1050 | 6.54 | 321.8 | 624.41 | 0.47 | 16.4 | 0.9 | 200 | 29.06 | |
| 1055 | 6.53 | 321.6 | 606.14 | 0.42 | 16.4 | 0.7 | 200 | 29.06 | |
| 1200 | 6.53 | 321.5 | 536.68 | 0.40 | 16.3 | 0.6 | 200 | 29.06 | |
| 1205 | 6.52 | 320.8 | 461.50 | 0.38 | 16.3 | 1.2 | 200 | 29.07 | |
| 1210 | 6.51 | 320.1 | 328.11 | 0.36 | 16.3 | 1.1 | 200 | 29.07 | |
| 1215 | 6.51 | 319.8 | 269.60 | 0.35 | 16.2 | 1.4 | 200 | 29.07 | |
| 1220 | 6.50 | 319.6 | 221.60 | 0.34 | 16.1 | 1.3 | 200 | 29.07 | |
| 1225 | 6.50 | 319.6 | 187.23 | 0.33 | 16.1 | 1.3 | 200 | 29.07 | |
| 1230 | 6.50 | 318.8 | 161.11 | 0.33 | 16.2 | 1.0 | 200 | 29.07 | |
| 1235 | 6.50 | 318.9 | 159.00 | 0.33 | 16.1 | 1.1 | 200 | 29.08 | |
| 1240 | 6.50 | 318.6 | 148.40 | 0.32 | 16.1 | 1.3 | 200 | 29.07 | |
| 1245 | 6.50 | 318.6 | 141.65 | 0.32 | 16.1 | 1.2 | 200 | 29.08 | |
| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): YSI PRO serial: 20F006291

Comments: MJ stated no HDPE drop tubing needed

sample collected @ 12:50

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

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|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-122S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 20.15 |
| **Date:** 6/26/2023 | **Well Depth (ft):** 51.59 | **DTW (After Pump Placement):** 20.06 |
| **Sampler:** AJG | **Well Diameter:** 2" | **Column Height:** |
| **Weather:** 74, Cloudy | **Screen Interval:** 42-52 | **Start Purge:** 9:30 |
| | **Pump Intake Depth (ft):** 47' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 47' DB poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:35 | 5.65 | 315.8 | 144.20 | 3.68 | 16.7 | 322.2 | 200 | 20.16 | |
| 9 40 | 5.70 | 326.0 | 0.88 | 3.43 | 16.6 | 315.9 | 200 | 20.18 | |
| 9 45 | 5.25 | 331.5 | 0.82 | 1.40 | 16.6 | 299.1 | 200 | 20.18 | |
| 9 50 | 4.79 | 352.3 | 0.86 | 1.13 | 16.7 | 336.5 | 200 | 20.18 | |
| 9 55 | 4.42 | 377.4 | 1.10 | 2.64 | 16.6 | 396.3 | 200 | 20.19 | |
| 10 00 | 4.26 | 389.1 | 0.31 | 3.20 | 16.6 | 428.1 | 200 | 20.19 | |
| 10 05 | 4.23 | 391.3 | 0.91 | 3.30 | 16.6 | 436.0 | 200 | 20.19 | |
| 10 10 | 4.21 | 392.5 | 0.54 | 3.30 | 16.6 | 439.0 | 200 | 20.20 | |
| 10 15 | 4.20 | 392.5 | 1.06 | 3.30 | 16.6 | 442.0 | 200 | 20.20 | |
| DG 1020 | | | | | | | 200 | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI pro Serial : 20F000291

Comments: MJ stated No HDPE drop tubing needed
sample collected @ 10:20

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-122D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 20.10 |
| **Date:** 6/26/2023 | **Well Depth (ft):** 106.27 | **DTW (After Pump Placement):** 20.11 |
| **Sampler:** M. Barran | **Well Diameter:** 2" | **Column Height:** 86.17 |
| **Weather:** 74, Cloudy | **Screen Interval:** 97-107' | **Start Purge:** 9:31 |
| | **Pump Intake Depth (ft):** 102' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 102' DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:35 | 7.33 | 0.382 | 22.75 | 4.25 | 16.0 | -46.5 | 250 | 20.10 | |
| 9:40 | 7.31 | 0.381 | 22.78 | 2.05 | 15.9 | -76.8 | 250 | 20.06 | |
| 9:45 | 7.09 | 0.368 | 20.95 | 1.27 | 15.9 | -97.6 | 200 | 20.06 | |
| 9:50 | 6.86 | 0.355 | 19.56 | 1.29 | 16.6 | -85.7 | 200 | 20.10 | |
| 9:55 | 6.76 | 0.347 | 18.90 | 1.14 | 16.6 | -83.8 | 200 | — | |
| 10:00 | 6.64 | 0.345 | 18.84 | 1.04 | 16.5 | -80.9 | — | — | |
| 10:05 | 6.58 | 0.344 | 18.63 | 0.96 | 16.6 | -81.3 | — | — | |
| 10:10 | 6.52 | 0.337 | 17.88 | 0.95 | 16.6 | -80.9 | — | — | |
| 10:15 | 6.44 | 0.335 | 18.31 | 0.90 | 16.6 | -79.0 | — | — | |
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| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): YSI PRO Serial: 18C103637

Comments: MJ stated no HDPE drop tubing needed
sample collected @ 10:20

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-123S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 12.12 |
| **Date:** 6/23/2023 | **Well Depth (ft):** 51.91 | **DTW (After Pump Placement):** 12.16 |
| **Sampler:** ~~E. Westenberger~~ M. Baron | **Well Diameter:** 2" | **Column Height:** 39.79 |
| **Weather:** 68, Cloudy | **Screen Interval:** 42-52' | **Start Purge:** 11:20 |
| | **Pump Intake Depth (ft):** 47' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 47' DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 11:25 | 5.03 | 0.544 | 3.91 | 2.71 | 13.9 | 310.0 | 250 | 12.16 | |
| 11:30 | 4.88 | 0.544 | 6.48 | 2.59 | 13.8 | 321.9 | 250 | 12.16 | |
| 11:35 | 4.83 | 0.544 | 8.00 | 2.27 | 13.8 | 331.3 | 250 | 12.16 | |
| 11:40 | 4.80 | 0.544 | 7.81 | 1.06 | 13.7 | 326.1 | — | — | |
| 11:45 | 4.79 | 0.546 | 9.25 | 0.91 | 13.7 | 327.6 | — | — | |
| 11:50 | 4.78 | 0.546 | 10.74 | 0.81 | 13.7 | 325.0 | — | — | |
| 11:55 | 4.78 | 0.545 | 9.98 | 0.85 | 13.7 | 337.7 | — | — | |
| 12:00 | 4.78 | 0.547 | 12.19 | 0.60 | 13.7 | 330.8 | — | — | |
| 12:05 | 4.78 | 0.548 | 11.39 | 0.55 | 13.7 | 328.8 | — | — | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI PRO serial: 20F006291

Comments: MJ stated NO HDPE drop tubing needed
Sample collected @ 12:10

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-124S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 14.68 |
| **Date:** 6/23/23 | **Well Depth (ft):** 74.71 | **DTW (After Pump Placement):** 14.71 |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **Column Height:** 60 |
| **Weather:** 65° F cloudy | **Screen Interval:** 62-72 | **Start Purge:** 11:40 |
| | **Pump Intake Depth (ft):** 66 ft | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Double bank | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 11:40 | 6.59 | .219 | 26.47 | 2.78 | 15.3 | -60.6 | 250 | 14.71 | |
| 11:45 | 6.58 | .219 | 24.54 | 1.78 | 15.3 | -78.2 | 250 | 14.71 | |
| 11:50 | 6.56 | .221 | 23.80 | 1.34 | 15.3 | -87.1 | 250 | 14.71 | |
| 11:55 | 6.56 | .221 | 22.68 | .97 | 15.2 | -93.9 | " | " | |
| 12:00 | 6.56 | .221 | 22.25 | .77 | 15.3 | -96.0 | " | " | |
| 12:~~00~~05 | 6.56 | .223 | 30.00 | .30 | 15.2 | -94.0 | " | " | |
| 12:~~15~~10 | 6.57 | .224 | 77.21 | .28 | 15.2 | -94.5 | " | " | |
| 12:~~20~~15 | 6.57 | .222 | 60.00 | .36 | 14.5 | -87.0 | " | " | |
| 12:20 | 6.64 | .2124 | 60.21 | .74 | 14.7 | -62.6 | " | " | |
| 12:25 | 6.62 | .2123 | 62.01 | .71 | 16.8 | -60.8 | " | " | |
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| | *+/- 0.1 S.U.* | *+/- 3%* | *+/-10% OR < 5 NTU* | *+/-10%* | *+/-3%* | *+/-10mV* | *<500 mL/min* | *+/- 0.3 ft* | |

Rental Equipment Details (Serial/Vendor): PRO DSS (19K101408)

Comments:

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-124D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 14.86 |
| **Date:** 6/23/23 | **Well Depth (ft):** 123 ft | **DTW (After Pump Placement):** 14.87 |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **Column Height:** 108.13 |
| **Weather:** 65°F Cloudy | **Screen Interval:** 112-122 | **Start Purge:** 11:38 |
| | **Pump Intake Depth (ft):** 117 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Double Bonded | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 11:40 | 8.03 | .299 | 5.3 | 1.71 | 15.3 | -129.2 | 300 | 14.87 | |
| 11:45 | 8.02 | .297 | 3.5 | 0.54 | 15.4 | -209.4 | 275 | 14.87 | |
| 11:50 | 8.07 | .297 | 3.3 | 0.37 | 15.4 | -228.9 | 11 | 1 | |
| 11:55 | 8.07 | .297 | 3.1 | 0.30 | 15.4 | -246.8 | 0 | 1 | |
| 12:00 | 8.04 | .296 | 3.1 | 0.28 | 15.5 | -246.7 | 1 | 11 | |
| 12:05 | 8.07 | .296 | 2.2 | 0.27 | 15.5 | -248.7 | 4 | 1 | |
| 12:10 | 8.07 | .296 | 1.9 | 0.25 | 15.4 | -249.3 | 1 | 1 | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): ProDSS YSI (21K100641)

Comments: Sampled @ 12:15

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-125S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 57.95' |
| **Date:** 6/20/23 | **Well Depth (ft):** 156.5 | **DTW (After Pump Placement):** 58.0' |
| **Sampler:** KO & MS | **Well Diameter:** 2 in | **Column Height:** 98.5 |
| **Weather:** 67°F & cloudy | **Screen Interval:** 145-155' | **Start Purge:** 0925 |
| | **Pump Intake Depth (ft):** ~150 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** ~200 DB Poly | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 0930 | 7.43 | 0.446 | 5.18 | 3.23 | 15.8 | -91.2 | 275 | 58.05 | |
| 0940 | 7.69 | 0.368 | 4.62 | 1.19 | 15.2 | -151.1 | 275 | 58.06 | |
| 0945 | 7.69 | 0.368 | 4.53 | 0.82 | 15.2 | -154.9 | 275 | 58.06 | |
| 0950 | 7.70 | 0.367 | 4.19 | 0.71 | 15.2 | -156.7 | 275 | 58.06 | |
| 0955 | 7.69 | 0.370 | 3.90 | 0.606 | 15.2 | -156.8 | 275 | 58.06 | |
| 1000 | 7.667 | 0.366 | 3.30 | 0.602 | 15.1 | -154.1 | 275 | 58.06 | |
| 1005 | 7.667 | 0.364 | 2.75 | 0.602 | 15.4 | -153.6 | 275 | 58.06 | |
| 1010 | SAMPLE | | | | | | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): YSI ProDSS SN: 20E100146

Comments:

Rotten egg odor from purged water

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

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|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-125D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 58.12 |
| **Date:** 6/20/23 | **Well Depth (ft):** 230.05 | **DTW (After Pump Placement):** 58.25 |
| **Sampler:** KO & MJ | **Well Diameter:** 2 in | **Column Height:** 171.93 |
| **Weather:** 67°F & cloudy | **Screen Interval:** ~~[illegible]~~ 217-227 | **Start Purge:** 9:35 |
| | **Pump Intake Depth (ft):** ~~220~~ 222' | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** ~22 ft Drop 200 ft Double Bonded Tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 935 | 11.19 | ~~355~~ | 9.89 | 2.77 | 16.9 | 59.1 | ~200 | 58.25 | |
| 940 | 9.49 | 370.2 | 6.37 | 1.95 | 15.9 | -93.5 | ~200 | 58.3 | |
| 945 | 8.98 | 363.6 | 5.37 | 1.55 | 15.8 | -103.2 | | 58.3 | |
| 950 | 8.96 | 363.5 | 5.15 | 1.34 | 15.7 | -106.7 | | | |
| 955 | 8.97 | 362.8 | 21.92 | ~~1.35~~ | 15.7 | -114.5 | | | → adjusted YSI, removed bubbles |
| 1000 | 8.89 | 363.0 | 5.20 | 0.89 | 15.6 | -121.8 | | | |
| 1005 | 8.88 | 363.1 | 5.82 | 0.84 | 15.6 | -124.5 | | | |
| 1010 | 8.88 | 363.2 | 6.75 | 0.84 | 15.6 | -126.1 | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): handheld

Comments: YSI DSS Pro Serial # (21L101919)
Sampled @ 1015

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-126S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 73.9 |
| **Date:** 6/19/23 | **Well Depth (ft):** 218.5 | **DTW (After Pump Placement):** 73.99 |
| **Sampler:** KO | **Well Diameter:** 2in | **Column Height:** 144.6 |
| **Weather:** Sunny 70°F | **Screen Interval:** 207-217ft | **Start Purge:** ~9:50 |
| | **Pump Intake Depth (ft):** ~212 ft | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 2ft Drop 210 ft Double Bonded | |

| Time | pH (S.U.) | Specific Conductivity µS ~~(mS/cm)~~ | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:55 | 8.00 | 412.8 | 5.37 | 2.72 | 18.5 | 83.3 | 200 | 73.99 | |
| 10:00 | 7.91 | 369.6 | 14.65 | 2.29 | 16.2 | -122.4 | 200 | 73.99 | |
| 10:05 | 7.93 | 368.4 | 35.88 | 2.22 | 16.0 | -136.4 | | | |
| 1010 | 7.94 | 367.1 | 30.94 | 0.76 | 15.9 | -148.5 | | | ← adjusted YSI, removed bubbles |
| 1015 | 7.95 | 366.3 | 84.60 | 0.70 | 15.9 | -153.1 | | | |
| 1020 | 7.94 | 365.8 | 93.95 | 0.62 | 15.9 | -155.5 | | | |
| 1025 | 7.96 | 365.8 | 85.50 | 0.56 | 15.9 | -158.5 | | | |
| 1030 | 7.96 | 365.8 | 87.88 | 0.51 | 15.8 | -160.8 | | | ← adjusted YSI " |
| 1035 | 7.96 | 367.7 | 2.21 | 0.46 | 15.8 | -165.1 | | | |
| 1040 | 7.96 | 367.5 | 2.65 | 0.46 | 15.8 | -164.9 | | | |
| 1045 | 7.96 | 366.7 | 3.49 | 0.44 | 15.8 | -167.2 | | | |
| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): (hand held)

Comments: YSI DSS Serial # 20F161339

Sampled @ 1050 (MW-126S)

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

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|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-126D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 72.65 |
| **Date:** 6/19/23 | **Well Depth (ft):** 334.7 | **DTW (After Pump Placement):** 73.01 |
| **Sampler:** AB/KO | **Well Diameter:** 2" | **Column Height:** 261.69 |
| **Weather:** 72°F | **Screen Interval:** 327 - 337 | **Start Purge:** 9:40 |
| | **Pump Intake Depth (ft):** 330ft | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** DROP: 150 Double Bonded: 180 | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:50 | 11.76 | 3.515 | 146.72 | 7.89 | 16.6 | -62.9 | 200 | 72.98 | AIR Bubbles likely causing high turbidity |
| 9:55 | 11.68 | 2.640 | 170.16 | 7.82 | 16.6 | -52.7 | 200 | 72.98 | |
| 10:00 | 11.67 | 2.284 | 35.69 | 7.29 | 16.5 | -58.2 | 200 | 72.98 | clear. |
| 10:05 | 11.57 | 2.153 | 17.51 | 6.66 | 16.4 | -52.4 | | | |
| 10:10 | 11.53 | 2.022 | 15.55 | 5.99 | 16.4 | -49.4 | | | |
| 10:15 | 11.48 | 1.870 | 35.14 | 5.73 | 16.4 | -49.2 | | | |
| 10:20 | 11.45 | 1.636 | 23.20 | 5.61 | 16.4 | -45.4 | | | |
| 10:25 | 11.42 | 1.512 | 24.16 | 5.13 | 16.4 | -43.2 | | | |
| 10:30 | 11.39 | 1.395 | 25.73 | 4.89 | 16.4 | -42.9 | | | |
| 10:35 | 11.36 | 1.323 | 27.16 | 4.69 | 16.4 | -43.0 | | | |
| 10:40 | 11.34 | 1.253 | 25.14 | 4.57 | 16.4 | -43.5 | | | |
| 10:45 | 11.34 | 1.213 | 26.11 | 4.57 | 16.4 | -43.2 | | | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): US Environmental - Pro DSS VSI 19/4100590

Comments: Sampled @ 10:50

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-127S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 13.73 |
| **Date:** 6/21/2023 | **Well Depth (ft):** 80.6 | **DTW (After Pump Placement):** 13.74 |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **Column Height:** - 66.86 |
| **Weather:** 63°F Cloudy | **Screen Interval:** 72-82 | **Start Purge:** 9.21 |
| | **Pump Intake Depth (ft):** | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:25 | 5.21 | .081 | 4.01 | 2.11 | 12.8 | 20.2 | 240 | 13.74 | Clear |
| 9:30 | 5.04 | .078 | 3.72 | 1.49 | 13.9 | 42.3 | 240 | 13.79 | |
| 9:35 | 5.09 | .079 | 1653 | 0.96 | 14.0 | 38.1 | 240 | 13.79 | |
| 9:40 | 5.25 | .084 | 57.80 | 0.68 | 14.0 | 27.8 | 240 | 13.79 | |
| 9:45 | 5.19 | .081 | 31.22 | 0.56 | 14.2 | 32.7 | " | 13.79 | |
| 9:50 | 5.26 | .083 | 67.78 | 0.45 | 14.2 | 30.1 | " | " | |
| 9:55 | 5.27 | .083 | 64.51 | 0.41 | 14.2 | 29.8 | " | " | |
| 10:00 | 5.28 | .083 | 55.90 | 0.38 | 14.1 | 27.8 | " | " | |
| 10:05 | 5.29 | .083 | 54.13 | 0.38 | 14.1 | 26.6 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): PRODSS YSI 20E100150

Comments: 10:08

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-~~20~~ 127D | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 14.16 |
| **Date:** 6/21/23 | **Well Depth (ft):** 145 ft | **DTW (After Pump Placement):** 14.15 |
| **Sampler:** AB/AR | **Well Diameter:** 2" | **Column Height:** 130.85 |
| **Weather:** 65°f Cloudy | **Screen Interval:** 136-146 | **Start Purge:** 9:21 |
| | **Pump Intake Depth (ft):** | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Double banded | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 9:25 | 5.45 | .1636 | 4.17 | .73 | 13.7 | -31.1 | 260 | 14.17 | |
| 9:30 | 5.37 | .1434 | 4.96 | .63 | 13.8 | -30.6 | 260 | 14.17 | |
| 9:35 | 5.34 | .1433 | 5.29 | .57 | 13.8 | -33.7 | 260 | 14.19 | |
| 9:40 | 5.36 | .1431 | 4.03 | .52 | 13.8 | -37.1 | 260 | 14.19 | |
| 9:45 | 5.36 | .1427 | 3.39 | .49 | 13.7 | -42.4 | 260 | 14.19 | |
| 9:50 | 5.35 | .1426 | 3.20 | .46 | 13.7 | -45.5 | 260 | 14.19 | |
| 9:55 | 5.34 | .1426 | 3.54 | .46 | 13.7 | -49.7 | 260 | 14.19 | |
| 10:00 | 5.37 | .1426 | 3.57 | .47 | 13.7 | -54.3 | 260 | " | |
| 10:05 | 5.35 | .1425 | 3.87 | .47 | 13.7 | -55.4 | 260 | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): PRO DSS (19K100590)

Comments:

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-128S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 12.41' |
| **Date:** 6/26/23 | **Well Depth (ft):** 20.62' | **DTW (After Pump Placement):** 12.51' |
| **Sampler:** LO | **Well Diameter:** 2in | **Column Height:** 8.21' |
| **Weather:** Sunny / cloudy 76°F | **Screen Interval:** 11 - 21 ft | **Start Purge:** 1020 |
| | **Pump Intake Depth (ft):** 15 ft | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 20 ft Double Bonded Tubing | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1020 | 6.10 | 974 | 561.0 | 8.07 | 16.5 | 205.8 | 225 | 12.5' | Yellowish water |
| 1025 | 5.99 | 942 | 755.3 | 7.93 | 18.2 | 221.2 | 150 | 12.5' | |
| 1030 | 6.01 | 959 | [illegible] | 7.98 | 17.6 | 223.7 | 150 | | |
| 1035 | 6.02 | 970 | 688.4 | 7.97 | 17.7 | 225.9 | | | |
| 1040 | 6.02 | 955 | 530.5 | 7.90 | 17.4 | 229.9 | | | |
| 1045 | 6.01 | 939 | 289.7 | 7.89 | 17.4 | [illegible] | | | water is cloudy/yellow, more clear than prior |
| 1050 | 6.01 | 934 | 250.8 | 7.83 | 17.6 | 233.3 | | | |
| 1055 | 6.01 | 929 | 153.2 | 7.79 | 17.5 | 233.6 | | | |
| 1100 | 6.01 | 929 | 126.1 | 7.79 | 17.6 | 233.0 | | | |
| 1105 | 6.01 | 930 | 118.7 | 7.78 | 17.7 | 232.2 | | | |
| 1110 | 6.01 | 927 | 97.3 | 7.79 | 17.4 | 232.5 | | | |
| 1115 | 6.01 | 923 | 74.8 | 7.75 | 17.8 | 230.5 | | | |
| 1120 | 6.01 | 916 | 67.4 | 7.71 | 18.0 | 228.6 | | | |
| 1125 | 6.01 | 912 | 58.2 | 7.69 | 18.1 | 228.0 | | | |
| 1130 | 6.01 | 908 | 53.1 | 7.71 | 18.3 | 227.8 | | | |
| 1135 | 6.00 | 903 | 44.8 | 7.67 | 18.4 | 228.1 | | | |
| 1140 | 6.00 | 901 | 47.6 | 7.66 | 18.4 | 228.5 | | | |
| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

772.0 ↑ 233.6 ↑

Rental Equipment Details (Serial/Vendor): YSI Pro DSS Serial # (YSI) 21K100641

Comments: Note: orange silty bottom (from silt on DTW meter)

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-128S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** SAA |
| **Date:** SAA | **Well Depth (ft):** SAA | **DTW (After Pump Placement):** " |
| **Sampler:** " | **Well Diameter:** " | **Column Height:** " |
| **Weather:** " | **Screen Interval:** " | **Start Purge:** " |
| | **Pump Intake Depth (ft):** " | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder " | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** " | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1145 | 6.00 | 897 | 45.9 | 7.62 | 18.4 | 329.7 | 150 | 12.5 | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): SAA

Comments: Sampled @ 1150

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** MW-129S | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 12.68 |
| **Date:** 6/26/23 | **Well Depth (ft):** 22.68 | **DTW (After Pump Placement):** 12.69 |
| **Sampler:** LB | **Well Diameter:** 2 in | **Column Height:** |
| **Weather:** Cloudy 88°F | **Screen Interval:** 12 - 22' | **Start Purge:** 1430 |
| | **Pump Intake Depth (ft):** | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** Double Bonded 2.96 22 ft | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1430 | 6.61 | 385.9 | 716.6 | 2.83 | 16.6 | 133.2 | 200 | 12.69 | high turb. orange water colored in well |
| 1435 | 6.44 | 387.4 | 583.5 | 2.76 | 17.5 | 136.5 | 150 | 12.69 | |
| 1440 | 6.45 | 388.9 | 546.2 | 2.83 | 17.9 | 138.4 | 150 | | |
| 1445 | 6.46 | 388.0 | 544.5 | [illegible] | 17.7 | 135.8 | | | |
| 1450 | 6.45 | 389.2 | 176.0 | 3.11 | 17.5 | 137.9 | | | |
| 1455 | 6.44 | 389.9 | 139.1 | 3.15 | 17.6 | 137.6 | | | |
| 1500 | 6.44 | 389.4 | 127.0 | 3.17 | 17.6 | 137.4 | | | |
| 1505 | 6.44 | 389.5 | 115.5 | 3.30 | 17.5 | 138.0 | | | |
| 1510 | 6.44 | 389.4 | 105.8 | 3.31 | 17.5 | 138.0 | | | |
| 1510 | 6.44 | 389.3 | 103.0 | 3.32 | 17.5 | 137.9 | | | |
| 1515 | 6.44 | 389.2 | 92.1 | 3.34 | 17.5 | 137.8 | | | |
| 1520 | 6.44 | 389.5 | 87.3 | 3.38 | 17.5 | 137.5 | | | |
| 1525 | 6.45 | 389.5 | 92.2 | 3.42 | 17.6 | 137.6 | | | |
| 1530 | sampled MW-129S | | | | | | | | |
| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor):

Comments: YSI Pro DSS Serial # 18C105176 handheld # 18C105176

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** P-35 | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 13.72 |
| **Date:** 06/28/23 | **Well Depth (ft):** 17.55 | **DTW (After Pump Placement):** 13.55 |
| **Sampler:** KO/AL | **Well Diameter:** 4" | **Column Height:** 4.00 |
| **Weather:** SUNNY | **Screen Interval:** 6 - 21 | **Start Purge:** 11:46 |
| | **Pump Intake Depth (ft):** 14 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** DB POLY | |

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 11:50 | 5.76 | 3116 | 450.02 | 2.68 | 18.0 | 50.02 | 150 | 13.55 | ORANGE - COLORED |
| 11:55 | 5.83 | 3025 | 289.02 | .95 | 17.0 | 51.4 | 150 | 13.72 | ↓ |
| 12:00 | 5.84 | 2981 | 299.01 | .81 | 17.5 | 44.4 | " | 13.72 | |
| 12:05 | 5.84 | 3177 | 312.40 | .73 | 17.4 | 33.3 | " | 13.72 | |
| 12:10 | 5.82 | 3429 | 277.18 | .59 | 17.5 | 4.4 | " | " | |
| 12:15 | 5.84 | 3541 | 294.00 | .56 | 17.2 | -1.0 | " | " | |
| 12:20 | 5.85 | 3765 | 210.17 | .44 | 16.5 | -20.3 | " | " | |
| 12:25 | 5.85 | 3840 | 163.11 | .38 | 16.6 | -31.2 | " | " | |
| 12:30 | 5.85 | 3979 | 136.11 | .33 | 16.7 | -37.6 | " | " | |
| 12:35 | 5.86 | 4075 | 100.76 | .28 | 17.2 | -44.1 | " | " | |
| 12:40 | 5.86 | 4145 | 86.72 | .25 | 16.8 | -48.8 | " | " | |
| 12:45 | 5.86 | 4226 | 75.64 | .23 | 16.2 | -52.1 | " | " | |
| 12:50 | 5.87 | 4269 | 64.02 | .21 | 15.9 | -55.9 | " | " | |
| 12:55 | 5.87 | 4313 | 59.01 | .20 | 15.6 | -57.2 | " | " | |
| 1:00 | 5.87 | 4344 | 53.06 | .18 | 15.8 | -57.1 | " | " | |
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| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

Rental Equipment Details (Serial/Vendor): PRO DSS YSI (19K101408)

Comments: *INVERTED YSI

integral consulting inc.

Integral Consulting Inc. – Groundwater Sampling Field Data Log

Lab ID #: 03060

| | | |
|---|---|---|
| **Site:** West Deptford, NJ | **Well Location ID** P-65 | |
| **Project Number:** CF1165.2501.02A/3202.01 | **Well Permit ID:** NA | **DTW (Before Pump Placement):** 13.92' |
| **Date:** 6/26/23 | **Well Depth (ft):** 29.4' | **DTW (After Pump Placement):** 13.95' |
| **Sampler:** KC | **Well Diameter:** 4 in | **Column Height:** 15.48' |
| **Weather:** Sunny, some clouds, 81°F | **Screen Interval:** 13-28' | **Start Purge:** 1235 |
| | **Pump Intake Depth (ft):** 20.5 | **Purge Method:** Low-Flow |
| **PID Readings (Background):** NA | **Pump Type:** GeoTech Bladder | **Sample Method:** Pump |
| **Below Cap:** NA | **Tubing Type:** 21' Double Bonded Tubing | |

* Started over, left purge rate too low & lost water

| Time | pH (S.U.) | Specific Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temp (°C) | ORP (mV) | Purge Rate (mL/min) | Depth to Water (ft bgs) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1235 | 6.17 | 385.6 | 154.8 | 4.14 | 18.2 | 169.8 | 230 | 13.95 | |
| 1240 | 6.14 | 384.2 | 139.3 | 2.39 | 18.5 | 175.9 | | | |
| ~~1245~~ * | ~~6.18~~ | ~~195~~ | | | | | | | |
| 1245 | 6.15 | 392.6 | 127.3 | 1.95 | 20.2 | 173.0 | 215 | 13.95 | |
| 1250 | 6.14 | 382.6 | 127.0 | 1.94 | 17.8 | 175.8 | 225 | 13.95 | |
| 1255 | 6.13 | 384.2 | 107.1 | 1.61 | 18.9 | 180.3 | 125 | | |
| 1300 | 6.13 | 384.9 | 115.5 | 1.58 | 18.3 | 182.7 | | | |
| 1305 | 6.13 | 385.1 | 89.7 | 1.40 | 18.1 | 186.3 | | | |
| 1310 | 6.12 | 383.3 | 93.6 | 1.36 | 18.0 | 187.3 | | | |
| 1315 | 6.12 | 384.0 | 96.0 | 1.30 | 17.8 | 189.1 | | | |
| 1320 | Sampled | | | | | | | | |
| | +/- 0.1 S.U. | +/- 3% | +/-10% OR < 5 NTU | +/-10% | +/-3% | +/-10mV | <500 mL/min | +/- 0.3 ft | |

→ 186.3

Rental Equipment Details (Serial/Vendor):

Comments: YSI Pro DSS Serial # 21K100641 Handheld #18C105176

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

Site / Project Number: West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01
Personnel: AB/KO
Instrument (Make/Model): PRODSS YSI
Date: 6/19/23
Serial Number: 19K100590
Start Time: 8:12
End Time: 8:47

| NIST Temperature Calibration (From Rental Company) | | | Specific Conductance 1.413 or 1.000 Solution | | | Ox-Redux Potential (ORP) (Optional) | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 16.3 | °C | Standard: | 947 | ms/cm$^c$ | Standard: | | mV |
| Reading: | 16.5 | °C | Temp: | 22.3 | °C | Temp: | | °C |
| Deviation: | < 1 | % | Initial Read: | 990 | ms/cm$^c$ | Initial Read: | | mV |
| | | | Cal. Read: | 948 | ms/cm$^c$ | Cal. Read: | | mV |
| | | | Perc. Recovery: | 0.001 | % | Perc. Recovery: | | % |
| Correction Factor: | 0 | °C | Pass if ± 1% | | | | | |

| Three Point pH Calibration | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 4.00 | S.U. | Standard: | 7.01 | S.U. | Standard: | 10.03 | S.U. |
| Temp: | 21.7 | °C | Temp: | 22.2 | °C | Temp: | 22.3 | °C |
| Initial Read: | 4.83 | S.U. | Initial Read: | 7.74 | S.U. | Initial Read: | 9.89 | S.U. |
| Cal. Read: | 4.00 | S.U. | Cal. Read: | 7.01 | S.U. | Cal. Read: | 10.03 | S.U. |
| Difference: | 0 | S.U. | Difference: | 0 | S.U. | Difference: | 0 | S.U. |
| Pass if ± 0.05 S.U. | | | Pass if ± 0.05 S.U. | | | Pass if ± 0.05 S.U. | | |

| pH Initial Check | | | Turbidity Two Point Calibration | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 7.01 | S.U. | Standard: | 0.00 | NTU | Standard: | 126 | NTU |
| Temp: | 23.1 | °C | Probe Temp: | 21.9 | °C | Probe Temp: | 23.9 | °C |
| Reading: | 7.10 | S.U. | Initial Read: | -3.24 | NTU | Initial Read: | 125.22 | NTU |
| Difference: | 0.9 | S.U. | Cal. Read: | 0.0 | NTU | Cal. Read: | 125.17 | NTU |
| Pass if ± 0.1 S.U. | | | Difference: | 0.0 | NTU | Difference: | .83 | NTU |
| | | | Pass if ± 1/10 | | | Pass if ± 1/10 | | |

**Dissolved Oxygen** (*Use either membrane or optical boxes as applicable*)

| Water-Sat. Air Calibration | | | Zero Check (**Membrane**) | | | Air-Sat. Water Check (**Optical**) | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 100 | % | Standard: | 0 | mg/L | Temp: | 21.5 | °C |
| Probe Temp: | 21.9 | °C | Probe Temp: | 21.9 | °C | True DO (chart): | 8.68 | mg/L |
| Baro. Pressure: | 760.7 | in Hg | Reading: | 0 | mg/L | Reading: | 8.68 | mg/L |
| Initial Read: | 101.2 | % | Difference: | 0 | mg/L | Perc. Recovery: | 0 | % |
| Cal. Read: | 100.1 | % | | | | | | |
| Perc. Recovery: | 0.01 | % | Pass if ± 0.3 mg/L | | | Pass if between 95.8 - 104.8% | | |

8.09
7.98

| Winkler Val: | [redacted] | mg/L |
|---|---|---|
| Cal. Read: | [redacted] | mg/L |
| Pass if ± 0.3 mg/L | | |

Analyst Signature

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| Drift Checks: *(every 3 hours)* | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 12:22/26.9 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

Site / Project Number: West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01
Personnel: AB/KO
Instrument (Make/Model): PRO DSS YSI
Date: 6/19/23
Serial Number: 20E100150
Start Time: 8:13
End Time: 8:48

| NIST Temperature Calibration (From Rental Company) | | | Specific Conductance 1.413 or 1.000 Solution | | | Ox-Redux Potential (ORP) (Optional) | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 16.3 | °C | Standard: | 930 | ms/cm$^c$ | Standard: | | mV |
| Reading: | 16.5 | °C | Temp: | 21.4 | °C | Temp: | | °C |
| Deviation: | <1.0 | % | Initial Read: | 990 | ms/cm$^c$ | Initial Read: | | mV |
| | | | Cal. Read: | 931 | ms/cm$^c$ | Cal. Read: | | mV |
| | | | Perc. Recovery: | 0.001 | % | Perc. Recovery: | | % |
| Correction Factor: | 0 | °C | **Pass if ± 1%** | | | | | |

| Three Point pH Calibration | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 4.00 | S.U. | Standard: | 7.01 | S.U. | Standard: | 10.02 | S.U. |
| Temp: | 22.3 | °C | Temp: | 22.7 | °C | Temp: | 22.9 | °C |
| Initial Read: | 3.88 | S.U. | Initial Read: | 6.89 | S.U. | Initial Read: | 9.98 | S.U. |
| Cal. Read: | 4.00 | S.U. | Cal. Read: | 7.00 | S.U. | Cal. Read: | 10.03 | S.U. |
| Difference: | 0 | S.U. | Difference: | 0.01 | S.U. | Difference: | 0.01 | S.U. |
| **Pass if ± 0.05 S.U.** | | | **Pass if ± 0.05 S.U.** | | | **Pass if ± 0.05 S.U.** | | |

| pH Initial Check | | | Turbidity Two Point Calibration | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 7.01 | S.U. | Standard: | 0.00 | NTU | Standard: | 126 | NTU |
| Temp: | 22.9 | °C | Probe Temp: | 24.2 | °C | Probe Temp: | 23.8 | °C |
| Reading: | 7.06 | S.U. | Initial Read: | -1.39 | NTU | Initial Read: | 122.4 | NTU |
| Difference: | 0.05 | S.U. | Cal. Read: | 0.00 | NTU | Cal. Read: | 120.0 | NTU |
| **Pass if ± 0.1 S.U.** | | | Difference: | 0.00 | NTU | Difference: | 0.4 | NTU |
| | | | **Pass if ± 1/10** | | | **Pass if ± 1/10** | | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | | Zero Check (**Membrane**) | | | Air-Sat. Water Check (**Optical**) | | |
| Standard: | 100.0 | % | Standard: | 0 | mg/L | Temp: | 24.2 | °C |
| Probe Temp: | 24.1 | °C | Probe Temp: | 23.9 | °C | True DO (chart): | 8.23 | mg/L |
| Baro. Pressure: | 760.8 | in Hg | Reading: | 0 | mg/L | Reading: | 8.42 | mg/L |
| Initial Read: | 105.3 | % | Difference: | 0 | mg/L | Perc. Recovery: | ~~8.23~~ 102.3% | % |
| Cal. Read: | 104.3 | % | | | | | | |
| Perc. Recovery: | 0.3 | % | **Pass if ± 0.3 mg/L** | | | **Pass if between 95.8 - 104.8%** | | |

| Winkler Val: | | mg/L | Analyst Signature |
|---|---|---|---|
| Cal. Read: | | mg/L | |
| **Pass if ± 0.3 mg/L** | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 12:30 / 25.6 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 6.99 | ✓ | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | Megan. Barron | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/19/2023 | Serial Number: | 19K101415 |
| Start Time: | 8:20 | End Time: | 9:11 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 15.3 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 15.4 °C | Temp: | 21.4 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 1.009 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 100 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 21.7 °C | Temp: | 21.3 °C | Temp: | 21.3 °C |
| Initial Read: | 3.99 S.U. | Initial Read: | 7.02 S.U. | Initial Read: | 10.02 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.01 S.U. | Difference: | 0.02 S.U. | Difference: | 0.02 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 21.7 °C | Probe Temp: | 21.4 °C | Probe Temp: | 21.4 °C |
| Reading: | 6.99 S.U. | Initial Read: | 0 NTU | Initial Read: | 119.13 NTU |
| Difference: | 0.01 S.U. | Cal. Read: | 0.0 NTU | Cal. Read: | 126.00 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0 NTU | Difference: | 6.87 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
| Standard: | 100 % | Standard: | 0. mg/L | Temp: | 21.5 °C |
| Probe Temp: | 20.6 °C | Probe Temp: | 21.1 °C | True DO (chart): | 8.68 mg/L |
| Baro. Pressure: | 760.1 in Hg | Reading: | 0.0 mg/L | Reading: | 8.74 mg/L |
| Initial Read: | 99.9 % | Difference: | 0.0 mg/L | Perc. Recovery: | 100.7 % |
| Cal. Read: | 100.0 % | | | | |
| Perc. Recovery: | 100 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |
| Winkler Val: | 8.05 mg/L | | | Analyst Signature | |
| Cal. Read: | 7.98 mg/L | | | Megan Barron | |
| **Pass if ± 0.3 mg/L** | | | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 13:00 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 6.98 | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

#### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | M. Barron | Instrument (Make/Model): | YSI PRODSS |
| Date: | 6/19/2023 | Serial Number: | 21K104086 |
| Start Time: | 8:20 | End Time: | 9:11 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 15.3 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 15.4 °C | Temp: | 21.4 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 1.004 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 100.4 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 21.7 °C | Temp: | 21.5 °C | Temp: | 21.3 °C |
| Initial Read: | 3.97 S.U. | Initial Read: | 6.99 S.U. | Initial Read: | 10.04 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.03 S.U. | Difference: | 0.01 S.U. | Difference: | 0.04 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 21.7 °C | Probe Temp: | 21.4 °C | Probe Temp: | 21.4 °C |
| Reading: | 6.91 S.U. | Initial Read: | 0 NTU | Initial Read: | 127.29 NTU |
| Difference: | 0.01 S.U. | Cal. Read: | 0.0 NTU | Cal. Read: | 126.00 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0.0 NTU | Difference: | 1.29 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 21.5 °C |
| Probe Temp: | 20.6 °C | Probe Temp: | 20.8 °C | True DO (chart): | 8.68 mg/L |
| Baro. Pressure: | 760.1 in Hg | Reading: | 0.0 mg/L | Reading: | 8.76 mg/L |
| Initial Read: | 100.6 % | Difference: | 0.0 mg/L | Perc. Recovery: | 100.7 % |
| Cal. Read: | 100.0 % | | | | |
| Perc. Recovery: | 100.6 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |

| | | |
|---|---|---|
| Winkler Val: | 8.06 mg/L | Analyst Signature |
| Cal. Read: | 7.98 mg/L | |
| **Pass if ± 0.3 mg/L** | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 13:00 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 7.00 | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

20E100150

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | AB/AR | Instrument (Make/Model): | ProDSS/YSI |
| Date: | 6/20/2023 | Serial Number: | ~~19K10259~~0 |
| Start Time: | 7:05 | End Time: | 7:56 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 16.3 °C | Standard: | 940 ms/cm$^c$ | Standard: | mV |
| Reading: | 16.5 °C | Temp: | 22.2 °C | Temp: | °C |
| Deviation: | <1 % | Initial Read: | 981 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 941 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 0 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | Pass if ± 1% | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4.00 S.U. | Standard: | 7.01 S.U. | Standard: | 10.03 S.U. |
| Temp: | 22.1 °C | Temp: | 22.1 °C | Temp: | 21.9 °C |
| Initial Read: | 4.03 S.U. | Initial Read: | 6.95 S.U. | Initial Read: | 9.97 S.U. |
| Cal. Read: | 4.02 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.04 S.U. |
| Difference: | 0.02 S.U. | Difference: | 0.01 S.U. | Difference: | 0.01 S.U. |
| Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7.01 S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 21.8 °C | Probe Temp: | 22.6 °C | Probe Temp: | 22.5 °C |
| Reading: | 7.11 S.U. | Initial Read: | -2.44 NTU | Initial Read: | 119.40 NTU |
| Difference: | .1 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 119.40 NTU |
| Pass if ± 0.1 S.U. | | Difference: | 0 NTU | Difference: | 6.6 NTU |
| | | Pass if ± 1/10 | | Pass if ± 1/10 | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
| Standard: | 100.5 % | Standard: | 0 mg/L | Temp: | 22.6 °C |
| Probe Temp: | 22.6 °C | Probe Temp: | 22.7 °C | True DO (chart): | 8.45 mg/L |
| Baro. Pressure: | 763.7 in Hg | Reading: | 0 mg/L | Reading: | 8.72 mg/L |
| Initial Read: | 96.3 % | Difference: | 0 mg/L | Perc. Recovery: | 100.03 % |
| Cal. Read: | 100.7 % | Pass if ± 0.3 mg/L | | Pass if between 95.8 - 104.8% | |
| Perc. Recovery: | <0 % | | | | |
| Winkler Val: | 8.01 mg/L | | | | |
| Cal. Read: | 7.98 mg/L | | | | |
| Pass if ± 0.3 mg/L | | | | | |

Analyst Signature

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 1211 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 7.03/24.2 | ✓ | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.\,Cond. = \frac{Cond.\,Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\,Recovery = \frac{Read\,Value}{True\,Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | AB/AR | Instrument (Make/Model): | ~~YSI 6000~~ |
| Date: | 6/20/2023 | Serial Number: | Pro DSS / YSI |
| Start Time: | 7:09 | End Time: | 7:54 |

19K100540

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 16.3 °C | Standard: | 940 ms/cm$^c$ | Standard: | mV |
| Reading: | 16.5 °C | Temp: | 22.8 °C | Temp: | °C |
| Deviation: | 1.1 % | Initial Read: | 939 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 942 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 0 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4.00 S.U. | Standard: | 7.01 S.U. | Standard: | 10.03 S.U. |
| Temp: | 21.7 °C | Temp: | 21.6 °C | Temp: | 21.6 °C |
| Initial Read: | 4.03 S.U. | Initial Read: | 6.97 S.U. | Initial Read: | 9.98 S.U. |
| Cal. Read: | 4.03 S.U. | Cal. Read: | 6.97 S.U. | Cal. Read: | 10.08 S.U. |
| Difference: | 0.03 S.U. | Difference: | 0.04 S.U. | Difference: | 0.05 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7.01 S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 22.6 °C | Probe Temp: | 22.0 °C | Probe Temp: | 22.2 °C |
| Reading: | 7.1 S.U. | Initial Read: | -3.28 NTU | Initial Read: | 121.47 NTU |
| Difference: | .09 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126.4 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0 NTU | Difference: | 0.4 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 22.0 °C |
| Probe Temp: | 21.9 °C | Probe Temp: | 22.0 °C | True DO (chart): | 8.53 mg/L |
| Baro. Pressure: | 763.8 in Hg | Reading: | 0 mg/L | Reading: | 8.79 mg/L |
| Initial Read: | 96.7 % | Difference: | 0 mg/L | Perc. Recovery: | 103 % |
| Cal. Read: | 100.1 % | | | | |
| Perc. Recovery: | 40 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |
| Winkler Val: | 8.09 mg/L | | | Analyst Signature | |
| Cal. Read: | 7.98 mg/L | | | | |
| **Pass if ± 0.3 mg/L** | | | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| Drift Checks: | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| *(every 3 hours)* | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 12:15 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 7.04/24.2 | ✓ | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | Megan B. | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/20/2023 | Serial Number: | 21L104086 |
| Start Time: | 0800 7:55 | End Time: | 8:53 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 15.3 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 15.4 °C | Temp: | 22.9 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 1.006 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 22.5 °C | Temp: | 22.5 °C | Temp: | 22.4 °C |
| Initial Read: | 4.01 S.U. | Initial Read: | 7.04 S.U. | Initial Read: | 10.01 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.01 S.U. | Difference: | 0.04 S.U. | Difference: | 0.01 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 22.5 °C | Probe Temp: | 22.5 °C | Probe Temp: | 22.5 °C |
| Reading: | 7.00 S.U. | Initial Read: | 0 NTU | Initial Read: | 126.5 NTU |
| Difference: | 0 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0 NTU | Difference: | 0.5 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

**Dissolved Oxygen** (*Use either membrane or optical boxes as applicable*)

| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
|---|---|---|---|---|---|
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 22.9 °C |
| Probe Temp: | 22.5 °C | Probe Temp: | 22.5 °C | True DO (chart): | 8.59 mg/L |
| Baro. Pressure: | 760.2 in Hg | Reading: | 0.0 mg/L | Reading: | 8.53 mg/L |
| Initial Read: | 99.9 % | Difference: | 0.0 mg/L | Perc. Recovery: | 99.3 % |
| Cal. Read: | 100.0 % | | | | |
| Perc. Recovery: | 100.0 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |

| | | | |
|---|---|---|---|
| Winkler Val: | 8.06 mg/L | Analyst Signature | |
| Cal. Read: | 7.98 mg/L | | |
| **Pass if ± 0.3 mg/L** | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| *(every 3 hours)* | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 12:00 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 7.01 | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

#### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | Megan B. | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/20/2023 | Serial Number: | 19K101415 |
| Start Time: | 7:55 | End Time: | 8:53 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 15.3 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 15.4 °C | Temp: | 22.7 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 0.995 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 22.2 °C | Temp: | 22.5 °C | Temp: | 22.2 °C |
| Initial Read: | 3.99 S.U. | Initial Read: | 6.98 S.U. | Initial Read: | 9.97 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.01 S.U. | Difference: | 0.02 S.U. | Difference: | 0.03 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 22.5 °C | Probe Temp: | 22.5 °C | Probe Temp: | 22.5 °C |
| Reading: | S.U. | Initial Read: | 0 NTU | Initial Read: | 127.2 NTU |
| Difference: | S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0 NTU | Difference: | 1.2 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

**Dissolved Oxygen** *(Use either membrane or optical boxes as applicable)*

| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
|---|---|---|---|---|---|
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 22.6 °C |
| Probe Temp: | 22.5 °C | Probe Temp: | 22.5 °C | True DO (chart): | 8.53 mg/L |
| Baro. Pressure: | 760.3 in Hg | Reading: | 0.0 mg/L | Reading: | 8.53 mg/L |
| Initial Read: | 99.8 % | Difference: | 0.0 mg/L | Perc. Recovery: | 100 % |
| Cal. Read: | 100 % | | | | |
| Perc. Recovery: | 100.0 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |

| | | | |
|---|---|---|---|
| Winkler Val: | 8.05 mg/L | Analyst Signature | |
| Cal. Read: | 7.98 mg/L | | |
| **Pass if ± 0.3 mg/L** | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| *(every 3 hours)* | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 12:00 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 7.01 | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.\,Cond. = \frac{Cond.\,Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\,Recovery = \frac{Read\,Value}{True\,Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral

Site / Project Number: West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01
Personnel: MJ
Instrument (Make/Model): YSI ProDSS
Date: 6-20-23
Serial Number: 20E100148
Start Time: 0805
End Time: 0857

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 15.5 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 15.7 °C | Temp: | 21.4 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 0.996 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 100 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4.00 S.U. | Standard: | 7.02 S.U. | Standard: | 10.05 S.U. |
| Temp: | 21.7 °C | Temp: | 21.1 °C | Temp: | 21.4 °C |
| Initial Read: | 3.95 S.U. | Initial Read: | 6.98 S.U. | Initial Read: | 9.89 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.02 S.U. | Cal. Read: | 10.05 S.U. |
| Difference: | 0 S.U. | Difference: | 0 S.U. | Difference: | 0 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7.02 S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 21.3 °C | Probe Temp: | 21.0 °C | Probe Temp: | 21.0 °C |
| Reading: | 7.10 S.U. | Initial Read: | -4.56 NTU | Initial Read: | 123.82 NTU |
| Difference: | 0.08 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** ✓ | | Difference: | 0 NTU | Difference: | 0 NTU |
| | | **Pass if ± 1/10** NTU→FNU | | **Pass if ± 1/10** NTU→FNU | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
| Standard: | 100.5 % | Standard: | 0 mg/L | Temp: | 21.4 °C |
| Probe Temp: | 21.0 °C | Probe Temp: | 21.0 °C | True DO (chart): | 8.68 mg/L |
| Baro. Pressure: | 764.1 in Hg | Reading: | 0 mg/L | Reading: | 8.86 mg/L |
| Initial Read: | 99.5 % | Difference: | 0 mg/L | Perc. Recovery: | 102.1 % |
| Cal. Read: | 100.5 % | | | | |
| Perc. Recovery: | 100 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |

| | | |
|---|---|---|
| Winkler Val: 8.11 mg/L<br>Cal. Read: 7.98 mg/L<br>**Pass if ± 0.3 mg/L** | | Analyst Signature: |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

**Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060**

integral

Site / Project Number: West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01
Personnel: MJ
Date: 6-20-23
Start Time: 0805
Instrument (Make/Model): YSI ProDSS
Serial Number: 20E100146
End Time: 0857

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 16.3 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 16.6 °C | Temp: | 21.5 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 1.028 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| Correction Factor: | 0 °C | Perc. Recovery: | 100 % | Perc. Recovery: | % |
| | | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4.00 S.U. | Standard: | 7.02 S.U. | Standard: | 10.05 S.U. |
| Temp: | 22.1 °C | Temp: | 20.9 °C | Temp: | 21.3 °C |
| Initial Read: | 3.94 S.U. | Initial Read: | 6.98 S.U. | Initial Read: | 9.88 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.02 S.U. | Cal. Read: | 10.05 S.U. |
| Difference: | 0 S.U. | Difference: | 0 S.U. | Difference: | 0 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7.02 S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 21.2 °C | Probe Temp: | 21.0 °C | Probe Temp: | 21.0 °C |
| Reading: | 7.06 S.U. | Initial Read: | -0.60 NTU | Initial Read: | 140.50 NTU |
| Difference: | 0.04 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0 NTU | Difference: | 0 NTU |
| ✓ | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |
| | | NTU → FNU | | | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
| Standard: | 100.6 % | Standard: | 0 mg/L | Temp: | 21.2 °C |
| Probe Temp: | 21.0 °C | Probe Temp: | 21.0 °C | True DO (chart): | 8.68 mg/L |
| Baro. Pressure: | 764.6 in Hg | Reading: | 0 mg/L | Reading: | 8.90 mg/L |
| Initial Read: | 104.1 % | Difference: | 0 mg/L | Perc. Recovery: | 102.5 % |
| Cal. Read: | 100.6 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |
| Perc. Recovery: | 100 % | | | | |

| | | |
|---|---|---|
| Winkler Val: | 8.13 mg/L | Analyst Signature |
| Cal. Read: | 7.98 mg/L | |
| **Pass if ± 0.3 mg/L** | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

Site / Project Number: West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01
Personnel: M. Barron
Instrument (Make/Model): YSI PRO DSS
Date: 6/21/2023
Serial Number: 19K101415
Start Time: 7:30
End Time: 8:20

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 15.3 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 15.4 °C | Temp: | 20.6 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 0.999 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 21.2 °C | Temp: | 21.4 °C | Temp: | 21.2 °C |
| Initial Read: | 3.99 S.U. | Initial Read: | 6.98 S.U. | Initial Read: | 9.96 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.01 S.U. | Difference: | 0.02 S.U. | Difference: | 0.04 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 21.4 °C | Probe Temp: | 21.2 °C | Probe Temp: | 21.2 °C |
| Reading: | 7.01 S.U. | Initial Read: | 0.0 NTU | Initial Read: | 125.59 NTU |
| Difference: | 0.01 S.U. | Cal. Read: | 0.0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0.0 NTU | Difference: | 1.59 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

**Dissolved Oxygen** (*Use either membrane or optical boxes as applicable*)

| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
|---|---|---|---|---|---|
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 20.2 °C |
| Probe Temp: | 21.4 °C | Probe Temp: | 21.5 °C | True DO (chart): | 8.84 mg/L |
| Baro. Pressure: | 764.7 in Hg | Reading: | 0.0 mg/L | Reading: | 8.81 mg/L |
| Initial Read: | 100.6 % | Difference: | 0.0 mg/L | Perc. Recovery: | 99.6 % |
| Cal. Read: | 100.0 % | | | | |
| Perc. Recovery: | 100.6 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |

| | | |
|---|---|---|
| Winkler Val: | 8.05 mg/L | Analyst Signature |
| Cal. Read: | 7.98 mg/L | MR |
| **Pass if ± 0.3 mg/L** | | |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 11:10 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 6.99 | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

### Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

**Methods**

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

**Drift Check Notes**

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

**Equations**

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

**pH Standards Temperature Quick Chart - See SOP for full tables:**

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

**Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:**

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | M. Barron | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/21/2023 | Serial Number: | 21K104086 |
| Start Time: | 7:30 | End Time: | 8:20 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 15.3 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 15.4 °C | Temp: | 21.3 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 1.001 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 21.3 °C | Temp: | 21.6 °C | Temp: | 20.8 °C |
| Initial Read: | 4.02 S.U. | Initial Read: | 7.03 S.U. | Initial Read: | 10.03 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.02 S.U. | Difference: | 0.03 S.U. | Difference: | 0.03 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 21.6 °C | Probe Temp: | 20.8 °C | Probe Temp: | 20.8 °C |
| Reading: | 6.99 S.U. | Initial Read: | 0 NTU | Initial Read: | 127.12 NTU |
| Difference: | 0.01 S.U. | Cal. Read: | 0.0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0.0 NTU | Difference: | 1.12 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 20.6 °C |
| Probe Temp: | 21.5 °C | Probe Temp: | 21.5 °C | True DO (chart): | 8.89884 mg/L |
| Baro. Pressure: | 764.7 in Hg | Reading: | 0.0 mg/L | Reading: | 8.89 mg/L |
| Initial Read: | 100.4 % | Difference: | 0.0 mg/L | Perc. Recovery: | 8.8 / 100.5 % |
| Cal. Read: | 100.0 % | | | | |
| Perc. Recovery: | 100.4 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |

| | | | |
|---|---|---|---|
| Winkler Val: | 8.06 mg/L | Analyst Signature | |
| Cal. Read: | 7.98 mg/L | | |
| **Pass if ± 0.3 mg/L** | | | |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 11:10 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 7.01 | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

### Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

**Methods**

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

**Drift Check Notes**

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

**Equations**

$$Spec.\,Cond. = \frac{Cond.\,Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\,Recovery = \frac{Read\,Value}{True\,Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

**pH Standards Temperature Quick Chart - See SOP for full tables:**

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

**Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:**

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | AB/AR | Instrument (Make/Model): | Pro DSS YSI |
| Date: | 6/21/23 | Serial Number: | 19K100590 |
| Start Time: | 7:49 | End Time: | 8:26 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 16.3 °C | Standard: | 926 ms/cm$^c$ | Standard: | mV |
| Reading: | 16.5 °C | Temp: | 21.0 °C | Temp: | °C |
| Deviation: | <1 % | Initial Read: | 966 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 926 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 0 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | Pass if ± 1% | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4.00 S.U. | Standard: | 7.02 S.U. | Standard: | 10.05 S.U. |
| Temp: | 21.5 °C | Temp: | 20.8 °C | Temp: | 20.9 °C |
| Initial Read: | 3.99 S.U. | Initial Read: | 7.04 S.U. | Initial Read: | 10.17 S.U. |
| Cal. Read: | 3.98 S.U. | Cal. Read: | 7.02 S.U. | Cal. Read: | 10.06 S.U. |
| Difference: | 0.02 S.U. | Difference: | 0.00 S.U. | Difference: | 0.01 S.U. |
| Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7.02 S.U. | Standard: | 0.00 NTU | Standard: | 126 NTU |
| Temp: | 20.4 °C | Probe Temp: | 20.7 °C | Probe Temp: | 22.7 °C |
| Reading: | 7.01 S.U. | Initial Read: | 0.64 NTU | Initial Read: | 125.16 NTU |
| Difference: | 0.01 S.U. | Cal. Read: | 0.64 NTU | Cal. Read: | 122.98 NTU |
| Pass if ± 0.1 S.U. | | Difference: | 0.64 NTU | Difference: | 3.02 NTU |
| | | Pass if ± 1/10 | | Pass if ± 1/10 | |

| Dissolved Oxygen (Use either membrane or optical boxes as applicable) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
| Standard: | 100.0 % | Standard: | 0 mg/L | Temp: | 20.7 °C |
| Probe Temp: | 20.7 °C | Probe Temp: | 20.7 °C | True DO (chart): | 8.84 mg/L |
| Baro. Pressure: | 765.9 in Hg | Reading: | 0 mg/L | Reading: | 9.03 mg/L |
| Initial Read: | 98.1 % | Difference: | 0 mg/L | Perc. Recovery: | ~~8.84~~ 1.02 % |
| Cal. Read: | 100.0 % | | | | |
| Perc. Recovery: | 0 % | Pass if ± 0.3 mg/L | | Pass if between 95.8 - 104.8% | |
| Winkler Val: | 8.09 mg/L | | | Analyst Signature | |
| Cal. Read: | 7.98 mg/L | | | | |
| Pass if ± 0.3 mg/L | | | | | |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 12:30 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 7.02/23.1 | ✓ | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

### Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

**Methods**

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

**Drift Check Notes**

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

**Equations**

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

**pH Standards Temperature Quick Chart - See SOP for full tables:**

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

**Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:**

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

Site / Project Number: West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01
Personnel: AB/AR
Date: 6/21/2023
Start Time: 7:49 AM
Instrument (Make/Model): Pro DSS YSI
Serial Number: 20E100150
End Time: 8:25

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 16.3 °C | Standard: | 900 ms/cm$^c$ | Standard: | mV |
| Reading: | 16.5 °C | Temp: | 20.8 °C | Temp: | °C |
| Deviation: | 1.1 % | Initial Read: | 957 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 900 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 0 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | Pass if ± 1% | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 21.0 °C | Temp: | 20.5 °C | Temp: | 20.6 °C |
| Initial Read: | 4.02 S.U. | Initial Read: | 6.98 S.U. | Initial Read: | 10.7 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.02 S.U. | Cal. Read: | 10.5 S.U. |
| Difference: | 0 S.U. | Difference: | .04 S.U. | Difference: | .2 S.U. |
| Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 20.2 °C | Probe Temp: | 19.9 °C | Probe Temp: | 19.9 °C |
| Reading: | 7.03 S.U. | Initial Read: | -1.38 NTU | Initial Read: | 120.35 NTU |
| Difference: | .03 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 120.10 NTU |
| Pass if ± 0.1 S.U. | | Difference: | 0 NTU | Difference: | 6.25 NTU |
| | | Pass if ± 1/10 | | Pass if ± 1/10 | |

| Dissolved Oxygen (Use either membrane or optical boxes as applicable) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
| Standard: | 100.6 % | Standard: | 0 mg/L | Temp: | 19.7 °C |
| Probe Temp: | 19.9 °C | Probe Temp: | 19.9 °C | True DO (chart): | 9.84 mg/L |
| Baro. Pressure: | 765.9 in Hg | Reading: | 0 mg/L | Reading: | 9.19 mg/L |
| Initial Read: | 101.0 % | Difference: | 0 mg/L | Perc. Recovery: | 103.9 % |
| Cal. Read: | 100.6 % | Pass if ± 0.3 mg/L | | Pass if between 95.8 - 104.8% | |
| Perc. Recovery: | 0 % | | | | |
| Winkler Val: | 8.01 mg/L | | | Analyst Signature | |
| Cal. Read: | 7.98 mg/L | | | | |
| Pass if ± 0.3 mg/L | | | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| *(every 3 hours)* | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 12:40 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 7.03/7.31 | ✓ | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | AB/AR | Instrument (Make/Model): | PRO DSS YSI |
| Date: | 6/22/23 | Serial Number: | 19K100590 |
| Start Time: | 7:19 | End Time: | 7:43 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 16.3 °C | Standard: | .858 ms/cm$^c$ | Standard: | mV |
| Reading: | 16.5 °C | Temp: | 17.1 °C | Temp: | °C |
| Deviation: | <1 % | Initial Read: | .880 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | .858 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 0 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4.00 S.U. | Standard: | 7.03 S.U. | Standard: | 10.10 S.U. |
| Temp: | 17.0 °C | Temp: | 17.0 °C | Temp: | 16.4 °C |
| Initial Read: | 4.05 S.U. | Initial Read: | 6.98 S.U. | Initial Read: | 9.98 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.03 S.U. | Cal. Read: | 10.14 S.U. |
| Difference: | 0.0 S.U. | Difference: | 0.0 S.U. | Difference: | 0.04 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7.03 S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 17.1 °C | Probe Temp: | 17.1 °C | Probe Temp: | 17.2 °C |
| Reading: | 7.02 S.U. | Initial Read: | -2.93 NTU | Initial Read: | 124.07 NTU |
| Difference: | 0.01 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 124.05 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0 NTU | Difference: | 1.95 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
| Standard: | 100.0 % | Standard: | 0 mg/L | Temp: | 17.1 °C |
| Probe Temp: | 17.0 °C | Probe Temp: | 17.0 °C | True DO (chart): | 9.37 mg/L |
| Baro. Pressure: | 763.6 in Hg | Reading: | 0 mg/L | Reading: | 9.70 mg/L |
| Initial Read: | 102.9 % | Difference: | 0 mg/L | Perc. Recovery: | 96.6 % |
| Cal. Read: | 100.0 % | | | | |
| Perc. Recovery: | 0 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |

| | | | |
|---|---|---|---|
| Winkler Val: | 8.09 mg/L | Analyst Signature | |
| Cal. Read: | 7.98 mg/L | | |
| **Pass if ± 0.3 mg/L** | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 11:30 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 7.03/7.04 | ✓ | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | AB/AR | Instrument (Make/Model): | PRO DSS YSI |
| Date: | 6/22/23 | Serial Number: | 20E100150 |
| Start Time: | 7:20 | End Time: | 7:44 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 16.3 °C | Standard: | 858 ms/cm$^c$ | Standard: | mV |
| Reading: | 16.5 °C | Temp: | 16.9 °C | Temp: | °C |
| Deviation: | 21 % | Initial Read: | .888 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 858 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 0 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | Pass if ± 1% | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4.00 S.U. | Standard: | 7.04 S.U. | Standard: | 10.10 S.U. |
| Temp: | 16.7 °C | Temp: | 16.7 °C | Temp: | 16.5 °C |
| Initial Read: | 4.07 S.U. | Initial Read: | 6.99 S.U. | Initial Read: | 10.64 S.U. |
| Cal. Read: | 4.01 S.U. | Cal. Read: | 7.04 S.U. | Cal. Read: | 10.14 S.U. |
| Difference: | 0.01 S.U. | Difference: | 0.0 S.U. | Difference: | 0.04 S.U. |
| Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7.04 S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 16.8 °C | Probe Temp: | 16.8 °C | Probe Temp: | 17.7 °C |
| Reading: | 7.01 S.U. | Initial Read: | -2.24 NTU | Initial Read: | 119.98 NTU |
| Difference: | 0.03 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 119.04 NTU |
| Pass if ± 0.1 S.U. | | Difference: | 0 NTU | Difference: | 6.96 NTU |
| | | Pass if ± 1/10 | | Pass if ± 1/10 | |

| Dissolved Oxygen (Use either membrane or optical boxes as applicable) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
| Standard: | 100.5 % | Standard: | 0 mg/L | Temp: | 16.7 °C |
| Probe Temp: | 16.7 °C | Probe Temp: | 16.7 °C | True DO (chart): | 9.56 mg/L |
| Baro. Pressure: | 763.6 in Hg | Reading: | 0 mg/L | Reading: | 9.76 mg/L |
| Initial Read: | 102.2 % | Difference: | 0 mg/L | Perc. Recovery: | 97.9 % |
| Cal. Read: | 100.5 % | | | | |
| Perc. Recovery: | 0 % | Pass if ± 0.3 mg/L | | Pass if between 95.8 - 104.8% | |
| Winkler Val: | 8.01 mg/L | | | Analyst Signature | |
| Cal. Read: | 7.98 mg/L | | | | |
| Pass if ± 0.3 mg/L | | | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 11:31 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 7.07/17.5° | ✓ | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | C. Westenberger | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/22/2023 | Serial Number: | 21K104086 |
| Start Time: | 7:30 | End Time: | 8:30 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 15.3 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 15.4 °C | Temp: | 17.9 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 1.008 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 0.08 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 17.8 °C | Temp: | 17.8 °C | Temp: | 17.7 °C |
| Initial Read: | 3.98 S.U. | Initial Read: | 7.02 S.U. | Initial Read: | 10.01 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.02 S.U. | Difference: | 0.02 S.U. | Difference: | 0.01 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 17.7 °C | Probe Temp: | 17.7 °C | Probe Temp: | 17.7 °C |
| Reading: | 7.01 S.U. | Initial Read: | 0.4 NTU | Initial Read: | 126.0 NTU |
| Difference: | 0.1 S.U. | Cal. Read: | 0.0 NTU | Cal. Read: | 126.0 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0.4 NTU | Difference: | 0.0 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

| Dissolved Oxygen (Use either membrane or optical boxes as applicable) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 16.4 °C |
| Probe Temp: | 17.2 °C | Probe Temp: | 17.2 °C | True DO (chart): | 9.76 mg/L |
| Baro. Pressure: | 763.4 in Hg | Reading: | 0.0 mg/L | Reading: | 9.75 mg/L |
| Initial Read: | 100 % | Difference: | 0 mg/L | Perc. Recovery: | 99.8 % |
| Cal. Read: | 100 % | | | | |
| Perc. Recovery: | 100 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |

| | | |
|---|---|---|
| Winkler Val: | 8.06 mg/L | Analyst Signature |
| Cal. Read: | 7.98 mg/L | |
| **Pass if ± 0.3 mg/L** | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.\,Cond. = \frac{Cond.\,Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\,Recovery = \frac{Read\,Value}{True\,Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | C. Westenberger | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/22/2023 | Serial Number: | 19K101415 |
| Start Time: | 7:30 | End Time: | 8:30 |

| NIST Temperature Calibration (From Rental Company) | | | Specific Conductance 1.413 or 1.000 Solution | | | Ox-Redux Potential (ORP) (Optional) | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 15.3 | °C | Standard: | 1.000 | ms/cm$^c$ | Standard: | | mV |
| Reading: | 15.4 | °C | Temp: | 17.8 | °C | Temp: | | °C |
| Deviation: | 0 | % | Initial Read: | 1.002 | ms/cm$^c$ | Initial Read: | | mV |
| | | | Cal. Read: | 1.000 | ms/cm$^c$ | Cal. Read: | | mV |
| | | | Perc. Recovery: | | % | Perc. Recovery: | | % |
| Correction Factor: | 0 | °C | **Pass if ± 1%** | | | | | |

| Three Point pH Calibration | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 4. | S.U. | Standard: | 7. | S.U. | Standard: | 10. | S.U. |
| Temp: | 17.58 | °C | Temp: | 17.6 | °C | Temp: | 17.6 | °C |
| Initial Read: | 3.95 | S.U. | Initial Read: | 7.04 | S.U. | Initial Read: | 10.03 | S.U. |
| Cal. Read: | 4.00 | S.U. | Cal. Read: | 7.00 | S.U. | Cal. Read: | 10.00 | S.U. |
| Difference: | 0.05 | S.U. | Difference: | 0.04 | S.U. | Difference: | 0.03 | S.U. |
| **Pass if ± 0.05 S.U.** | | | **Pass if ± 0.05 S.U.** | | | **Pass if ± 0.05 S.U.** | | |

| pH Initial Check | | | Turbidity Two Point Calibration | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 7. | S.U. | Standard: | 0 | NTU | Standard: | 126 | NTU |
| Temp: | 17.6 | °C | Probe Temp: | 17.6 | °C | Probe Temp: | 17.6 | °C |
| Reading: | 6.99 | S.U. | Initial Read: | 0.0 | NTU | Initial Read: | 125.96 | NTU |
| Difference: | 0.1 | S.U. | Cal. Read: | 0.0 | NTU | Cal. Read: | 126.00 | NTU |
| **Pass if ± 0.1 S.U.** | | | Difference: | 0.0 | NTU | Difference: | 0.06 | NTU |
| | | | **Pass if ± 1/10** | | | **Pass if ± 1/10** | | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | | Zero Check (**Membrane**) | | | Air-Sat. Water Check (**Optical**) | | |
| Standard: | 100 | % | Standard: | 0 | mg/L | Temp: | 16.3 | °C |
| Probe Temp: | 16.9 | °C | Probe Temp: | 16.9 | °C | True DO (chart): | 9.68 | mg/L |
| Baro. Pressure: | 76.4 | in Hg | Reading: | 0.1 | mg/L | Reading: | 9.63 | mg/L |
| Initial Read: | 100 | % | Difference: | 0.1 | mg/L | Perc. Recovery: | 100.7 | % |
| Cal. Read: | 100 | % | **Pass if ± 0.3 mg/L** | | | **Pass if between 95.8 - 104.8%** | | |
| Perc. Recovery: | 100 | % | | | | | | |

| | | | |
|---|---|---|---|
| Winkler Val: | 8.05 | mg/L | Analyst Signature |
| Cal. Read: | 7.98 | mg/L | |
| **Pass if ± 0.3 mg/L** | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| *(every 3 hours)* | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.\,Cond. = \frac{Cond.\,Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\,Recovery = \frac{Read\,Value}{True\,Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | AB/AR | Instrument (Make/Model): | PRODSS YSI |
| Date: | 6/23/23 | Serial Number: | 21K100641 |
| Start Time: | 7:15 | End Time: | 7:52 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 19.4 °C | Standard: | 813 ms/cm$^c$ | Standard: | mV |
| Reading: | 19.7 °C | Temp: | 19.2 °C | Temp: | °C |
| Deviation: | 3.41 % | Initial Read: | 1117 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 893 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 0 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | Pass if ± 1% | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4.00 S.U. | Standard: | 7.03 S.U. | Standard: | 10.07 S.U. |
| Temp: | 19.1 °C | Temp: | 19.1 °C | Temp: | 19.2 °C |
| Initial Read: | 4.02 S.U. | Initial Read: | 6.95 S.U. | Initial Read: | 9.93 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.03 S.U. | Cal. Read: | 10.7 S.U. |
| Difference: | 0 S.U. | Difference: | ~~-.03~~ 0 S.U. | Difference: | 0 S.U. |
| Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7.03 S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 19.1 °C | Probe Temp: | 18.6 °C | Probe Temp: | 18.6 °C |
| Reading: | 6.95 S.U. | Initial Read: | -4.7 NTU | Initial Read: | 117.8 NTU |
| Difference: | .08 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 117.8 NTU |
| Pass if ± 0.1 S.U. | | Difference: | 0 NTU | Difference: | 8.2 NTU |
| | | Pass if ± 1/10 | | Pass if ± 1/10 | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
| Standard: | 100.1 % | Standard: | 0 mg/L | Temp: | 18.6 °C |
| Probe Temp: | 18.6 °C | Probe Temp: | ~~0~~ 18.6 °C | True DO (chart): | 9.03 mg/L |
| Baro. Pressure: | 760.9 in Hg | Reading: | 0 mg/L | Reading: | 9.37 mg/L |
| Initial Read: | 101.7 % | Difference: | 0 mg/L | Perc. Recovery: | 103.8 % |
| Cal. Read: | 100.1 % | | | | |
| Perc. Recovery: | 0 % | Pass if ± 0.3 mg/L | | Pass if between 95.8 - 104.8% | |
| Winkler Val: | 9.1 mg/L | | | Analyst Signature | |
| Cal. Read: | 9.18 mg/L | | | | |
| Pass if ± 0.3 mg/L | | | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 11:15 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 7.04/24.2 | ✓ | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.\,Cond. = \frac{Cond.\,Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\,Recovery = \frac{Read\,Value}{True\,Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral

Site / Project Number: West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01
Personnel: AB/AR
Date: 6/23/23
Start Time: 9:13
Instrument (Make/Model): PROSS VSI
Serial Number: 19K101408
End Time: 7:52

| NIST Temperature Calibration (From Rental Company) | | | Specific Conductance 1.413 or 1.000 Solution | | | Ox-Redux Potential (ORP) (Optional) | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 19.7 | °C | Standard: | .865 | ms/cm$^c$ | Standard: | | mV |
| Reading: | 19.6 | °C | Temp: | 18.9 | °C | Temp: | | °C |
| Deviation: | <1 | % | Initial Read: | 1050 | ms/cm$^c$ | Initial Read: | | mV |
| | | | Cal. Read: | 865 | ms/cm$^c$ | Cal. Read: | | mV |
| Correction Factor: | 0 | °C | Perc. Recovery: | 0 | % | Perc. Recovery: | | % |
| | | | Pass if ± 1% | | | | | |

| Three Point pH Calibration | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 4.00 | S.U. | Standard: | 7.03 | S.U. | Standard: | 10.07 | S.U. |
| Temp: | 18.9 | °C | Temp: | 18.9 | °C | Temp: | 19.0 | °C |
| Initial Read: | 4.14 | S.U. | Initial Read: | 6.95 | S.U. | Initial Read: | 9.97 | S.U. |
| Cal. Read: | 4.00 | S.U. | Cal. Read: | 7.03 | S.U. | Cal. Read: | 10.69 | S.U. |
| Difference: | 0 | S.U. | Difference: | 0 | S.U. | Difference: | 0.02 | S.U. |
| Pass if ± 0.05 S.U. | | | Pass if ± 0.05 S.U. | | | Pass if ± 0.05 S.U. | | |

| pH Initial Check | | | Turbidity Two Point Calibration | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 7.03 | S.U. | Standard: | 0.00 | NTU | Standard: | 126 | NTU |
| Temp: | 18.9 | °C | Probe Temp: | 18.9 | °C | Probe Temp: | 18.9 | °C |
| Reading: | 6.98 | S.U. | Initial Read: | -4.36 | NTU | Initial Read: | 126.87 | NTU |
| Difference: | 0.05 | S.U. | Cal. Read: | 0 | NTU | Cal. Read: | 126.12 | NTU |
| Pass if ± 0.1 S.U. | | | Difference: | 0 | NTU | Difference: | 0.12 | NTU |
| | | | Pass if ± 1/10 | | | Pass if ± 1/10 | | |

| Dissolved Oxygen (Use either membrane or optical boxes as applicable) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | | Zero Check (Membrane) | | | Air-Sat. Water Check (Optical) | | |
| Standard: | 100.2 | % | Standard: | 0 | mg/L | Temp: | 18.9 | °C |
| Probe Temp: | 18.9 | °C | Probe Temp: | 18.9 | °C | True DO (chart): | ~~9.01~~ 9.01 | mg/L |
| Baro. Pressure: | 761.4 | in Hg | Reading: | 0 | mg/L | Reading: | 9.32 | mg/L |
| Initial Read: | 102.1 | % | Difference: | 0 | mg/L | Perc. Recovery: | 103.4 | % |
| Cal. Read: | 100.3 | % | Pass if ± 0.3 mg/L | | | Pass if between 95.8 - 104.8% | | |
| Perc. Recovery: | <1 | % | | | | | | |
| Winkler Val: | 9.11 | mg/L | | | | Analyst Signature | | |
| Cal. Read: | 9.18 | mg/L | | | | | | |
| Pass if ± 0.3 mg/L | | | | | | | | |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | 11:15 | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | 7.00/25.4 | ✓ | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

### Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

**Methods**

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

**Drift Check Notes**

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

**Equations**

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

**pH Standards Temperature Quick Chart - See SOP for full tables:**

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

**Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:**

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

Site / Project Number: West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01
Personnel:
Date: 6/23/2023
Start Time: 7:45
Instrument (Make/Model): YSI PRO DSS
Serial Number: ~~18C100676~~ 20F000291
End Time: 8:35

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 19.7 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 19.8 °C | Temp: | 18.7 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 1.004 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 0.04 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | Pass if ± 1% | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 19.0 °C | Temp: | 19.0 °C | Temp: | 19.1 °C |
| Initial Read: | 3.98 S.U. | Initial Read: | 6.99 S.U. | Initial Read: | 10.02 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.02 S.U. | Difference: | 0.01 S.U. | Difference: | 0.02 S.U. |
| Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 19.1 °C | Probe Temp: | 19.1 °C | Probe Temp: | 19.1 °C |
| Reading: | 6.99 S.U. | Initial Read: | 0.5 NTU | Initial Read: | 127.4 NTU |
| Difference: | 0.01 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| Pass if ± 0.1 S.U. | | Difference: | 0.5 NTU | Difference: | 1.4 NTU |
| | | Pass if ± 1/10 | | Pass if ± 1/10 | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 18.8 °C |
| Probe Temp: | 18.2 °C | Probe Temp: | 19.1 °C | True DO (chart): | 9.18 mg/L |
| Baro. Pressure: | 759.7 in Hg | Reading: | 0 mg/L | Reading: | 9.20 mg/L |
| Initial Read: | 100.1 % | Difference: | 0 mg/L | Perc. Recovery: | 100.2 % |
| Cal. Read: | 100 % | | | | |
| Perc. Recovery: | 100.1 % | Pass if ± 0.3 mg/L | | Pass if between 95.8 - 104.8% | |

| | | |
|---|---|---|
| Winkler Val: | 9.01 mg/L | Analyst Signature |
| Cal. Read: | 9.18 mg/L | |
| Pass if ± 0.3 mg/L | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| *(every 3 hours)* | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/23/2023 | Serial Number: | ~~18F100181~~ 18C103637 |
| Start Time: | 7:45 | End Time: | 8:35 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 18.9 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 18.9 °C | Temp: | 18.6 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 1.002 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 0.02 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 19.0 °C | Temp: | 18.9 °C | Temp: | 19.0 °C |
| Initial Read: | 4.03 S.U. | Initial Read: | 7.04 S.U. | Initial Read: | 9.99 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.03 S.U. | Difference: | 0.04 S.U. | Difference: | 0.01 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 19.0 °C | Probe Temp: | 19.0 °C | Probe Temp: | 19.0 °C |
| Reading: | 7.01 S.U. | Initial Read: | 0.2 NTU | Initial Read: | 129.7 NTU |
| Difference: | 0.01 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0.2 NTU | Difference: | 3.7 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 18.6 °C |
| Probe Temp: | 18.2 °C | Probe Temp: | 19.0 °C | True DO (chart): | 9.37 mg/L |
| Baro. Pressure: | 760.3 in Hg | Reading: | 0 mg/L | Reading: | 9.40 mg/L |
| Initial Read: | 100.3 % | Difference: | 0 mg/L | Perc. Recovery: | 100.3 % |
| Cal. Read: | 100 % | | | | |
| Perc. Recovery: | 100.3 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |
| Winkler Val: | 9.02 mg/L | | | Analyst Signature | |
| Cal. Read: | 9.18 mg/L | | | | |
| **Pass if ± 0.3 mg/L** | | | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| *(every 3 hours)* | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral

Site / Project Number: West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01
Personnel: M. Barron
Instrument (Make/Model): YSI PRO DSS
Date: 6/26/2023
Serial Number: 19K101408
Start Time: 7:00 ~
End Time: 7:53

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 19.0 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 19.7 °C | Temp: | 21.8 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 1.004 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 100.4 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | Pass if ± 1% | 100.4 | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 21.3 °C | Temp: | 21.6 °C | Temp: | 25.9 °C |
| Initial Read: | 3.99 S.U. | Initial Read: | 7.02 S.U. | Initial Read: | 9.99 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.1 S.U. | Difference: | 0.02 S.U. | Difference: | 0.01 S.U. |
| Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 7.01 °C | Probe Temp: | 21.6 °C | Probe Temp: | 21.6 °C |
| Reading: | 21.6 S.U. | Initial Read: | 0.7 NTU | Initial Read: | 118.12 NTU |
| Difference: | 0.01 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| Pass if ± 0.1 S.U. | | Difference: | 0 NTU | Difference: | 7.88 NTU |
| | | Pass if ± 1/10 | | Pass if ± 1/10 | |

**Dissolved Oxygen** *(Use either membrane or optical boxes as applicable)*

| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
|---|---|---|---|---|---|
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 22.5 °C |
| Probe Temp: | 22.8 °C | Probe Temp: | 22.8 °C | True DO (chart): | 8.56 mg/L |
| Baro. Pressure: | 754.5 in Hg | Reading: | 0 mg/L | Reading: | 8.56 mg/L |
| Initial Read: | 100.2 % | Difference: | 0 mg/L | Perc. Recovery: | 100.3 % |
| Cal. Read: | 100 % | Pass if ± 0.3 mg/L | | Pass if between 95.8 - 104.8% | |
| Perc. Recovery: | 100.2 % | | | | |

| | | |
|---|---|---|
| Winkler Val: | 9.11 mg/L | Analyst Signature |
| Cal. Read: | 9.18 mg/L | |
| Pass if ± 0.3 mg/L | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: *(every 3 hours)* | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.\,Cond. = \frac{Cond.\,Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\,Recovery = \frac{Read\,Value}{True\,Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | M. Baron | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/26/2023 | Serial Number: | 21K100641 |
| Start Time: | 7:00 | End Time: | 7:53 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 19.4 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 19.7 °C | Temp: | 22.2 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 1.009 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.00~~0.009~~ ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 100.9 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 21.6 °C | Temp: | 21.6 °C | Temp: | 26.3 °C |
| Initial Read: | 3.98 S.U. | Initial Read: | 7.03 S.U. | Initial Read: | 9.98 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.02 S.U. | Difference: | 0.03 S.U. | Difference: | 0.02 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 21.6 °C | Probe Temp: | 21.6 °C | Probe Temp: | 21.6 °C |
| Reading: | 6.99 S.U. | Initial Read: | 0.9 NTU | Initial Read: | 122.6 NTU |
| Difference: | 0.1 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0.9 NTU | Difference: | 3.40 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 24.9 °C |
| Probe Temp: | 24.9 °C | Probe Temp: | 24.9 °C | True DO (chart): | 8.25 mg/L |
| Baro. Pressure: | 754.0 in Hg | Reading: | 0 mg/L | Reading: | 8.23 mg/L |
| Initial Read: | 100.6 % | Difference: | 0 mg/L | Perc. Recovery: | 99.7 % |
| Cal. Read: | 100 % | | | | |
| Perc. Recovery: | 100.6 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |

| | | | |
|---|---|---|---|
| Winkler Val: | 9.10 mg/L | Analyst Signature | |
| Cal. Read: | 9.18 mg/L | | |
| **Pass if ± 0.3 mg/L** | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.\,Cond. = \frac{Cond.\,Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\,Recovery = \frac{Read\,Value}{True\,Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | M. Barron | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/26/2023 | Serial Number: | 18C103637 |
| Start Time: | 7:00 | End Time: | 7.53 |

| NIST Temperature Calibration *(From Rental Company)* | | Specific Conductance *1.413 or 1.000 Solution* | | Ox-Redux Potential (ORP) *(Optional)* | |
|---|---|---|---|---|---|
| Standard: | 18.9 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 18.9 °C | Temp: | 27.3 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 9.97 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 99.7 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 26.1 °C | Temp: | 26.7 °C | Temp: | 26.4 °C |
| Initial Read: | 4.01 S.U. | Initial Read: | 7.05 S.U. | Initial Read: | 9.99 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.01 S.U. | Difference: | 0.05 S.U. | Difference: | 0.01 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 21.6 °C | Probe Temp: | 21.6 °C | Probe Temp: | 21.6 °C |
| Reading: | 7.01 S.U. | Initial Read: | 0.1 NTU | Initial Read: | 117.00 NTU |
| Difference: | 0.1 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0.1 NTU | Difference: | 9.00 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

**Dissolved Oxygen** *(Use either membrane or optical boxes as applicable)*

| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
|---|---|---|---|---|---|
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 22.7 °C |
| Probe Temp: | 23.9 °C | Probe Temp: | 23.9 °C | True DO (chart): | 8.68 mg/L |
| Baro. Pressure: | 754.1 in Hg | Reading: | 0 mg/L | Reading: | 8.68 mg/L |
| Initial Read: | 100.4 % | Difference: | 0 mg/L | Perc. Recovery: | 100.0 % |
| Cal. Read: | 100 % | | | | |
| Perc. Recovery: | 100.4 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |

| | | | |
|---|---|---|---|
| Winkler Val: | 9.02 mg/L | Analyst Signature | |
| Cal. Read: | 9.18 mg/L | | |
| **Pass if ± 0.3 mg/L** | | | |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

### Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

**Methods**

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

**Drift Check Notes**

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

**Equations**

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

**pH Standards Temperature Quick Chart - See SOP for full tables:**

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

**Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:**

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | M. Barron | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/26/2023 | Serial Number: | 20F000291 |
| Start Time: | 7:00 | End Time: | 7.53 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 19.7 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 19.8 °C | Temp: | 25.8 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 9.99 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 9.99 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 26.3 °C | Temp: | 26.8 °C | Temp: | 26.7 °C |
| Initial Read: | 4.02 S.U. | Initial Read: | 7.04 S.U. | Initial Read: | 10.01 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.02 S.U. | Difference: | 0.04 S.U. | Difference: | 0.01 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 21.6 °C | Probe Temp: | 21.6 °C | Probe Temp: | 21.6 °C |
| Reading: | 7.01 S.U. | Initial Read: | 0.5 NTU | Initial Read: | 116. NTU |
| Difference: | 0.1 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0.5 NTU | Difference: | 10 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

**Dissolved Oxygen** *(Use either membrane or optical boxes as applicable)*

| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
|---|---|---|---|---|---|
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 23.1 °C |
| Probe Temp: | 24.2 °C | Probe Temp: | 24.2 °C | True DO (chart): | 9.01 mg/L |
| Baro. Pressure: | 753.4 in Hg | Reading: | 0 mg/L | Reading: | 9.05 mg/L |
| Initial Read: | 100.3 % | Difference: | 0 mg/L | Perc. Recovery: | 100.4 % |
| Cal. Read: | 100 % | | | | |
| Perc. Recovery: | 100.3 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |

| | | | |
|---|---|---|---|
| Winkler Val: | 9.01 mg/L | Analyst Signature | |
| Cal. Read: | 9.18 mg/L | | |
| **Pass if ± 0.3 mg/L** | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| *(every 3 hours)* | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | MS | Instrument (Make/Model): | |
| Date: | 6-26-23 | Serial Number: | |
| Start Time: | 1125 | End Time: | 1145 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 18.9 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 18.9 °C | Temp: | 25.6 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 0.967 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 100 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | Pass if ± 1% | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4.01 S.U. | Standard: | 7.00 S.U. | Standard: | ~~10~~ 9.95 S.U. |
| Temp: | 29.5 °C | Temp: | 26.2 °C | Temp: | 30.0 °C |
| Initial Read: | 4.09 S.U. | Initial Read: | 7.06 S.U. | Initial Read: | 9.85 S.U. |
| Cal. Read: | 4.01 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 9.95 S.U. |
| Difference: | 0 S.U. | Difference: | 0 S.U. | Difference: | 0 S.U. |
| Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | ~~7~~.699 S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 30.5 °C | Probe Temp: | 30.0 °C | Probe Temp: | 30.0 °C |
| Reading: | 7.09 S.U. | Initial Read: | 0.88 NTU | Initial Read: | 117.9 NTU |
| Difference: | 0.1 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| Pass if ± 0.1 S.U. | | Difference: | 0 NTU | Difference: | 0 NTU |
| | | Pass if ± 1/10 | | Pass if ± 1/10 | |
| | | FNU = NTU | | | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
| Standard: | 100.0 % | Standard: | mg/L | Temp: | 28.6 °C |
| Probe Temp: | 29.3 °C | Probe Temp: | °C | True DO (chart): | 7.75 mg/L |
| Baro. Pressure: | 757.2 in Hg | Reading: | mg/L | Reading: | 7.95 mg/L |
| Initial Read: | 103.3 % | Difference: | mg/L | Perc. Recovery: | 97.5 % |
| Cal. Read: | 100 % | Pass if ± 0.3 mg/L | | Pass if between 95.8 - 104.8% | |
| Perc. Recovery: | 100 % | | | | |
| Winkler Val: | 9.03 mg/L | | | Analyst Signature | |
| Cal. Read: | 9.18 mg/L | | | | |
| Pass if ± 0.3 mg/L | | | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | M. Barron | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/27/2023 | Serial Number: | 20F000291 |
| Start Time: | 7:35 | End Time: | 8:20 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 19.7 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 19.8 °C | Temp: | 23.3 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 1.001 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 100.1 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 22.0 °C | Temp: | 23.1 °C | Temp: | 23.5 °C |
| Initial Read: | 4.04 S.U. | Initial Read: | 6.99 S.U. | Initial Read: | 9.98 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.04 S.U. | Difference: | 0.01 S.U. | Difference: | 0.02 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 23.1 °C | Probe Temp: | 23.1 °C | Probe Temp: | 23.4 °C |
| Reading: | 6.99 S.U. | Initial Read: | 0.4 NTU | Initial Read: | 127.59 NTU |
| Difference: | 0.01 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0.4 NTU | Difference: | 1.59 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

| **Dissolved Oxygen** (*Use either membrane or optical boxes as applicable*) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 21.5 °C |
| Probe Temp: | 23.1 °C | Probe Temp: | 23.2 °C | True DO (chart): | 9.37 mg/L |
| Baro. Pressure: | 755.7 in Hg | Reading: | 0.1 mg/L | Reading: | 9.41 mg/L |
| Initial Read: | % | Difference: | 0.1 mg/L | Perc. Recovery: | 100.4 % |
| Cal. Read: | 100 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |
| Perc. Recovery: | % | | | | |

| | | | |
|---|---|---|---|
| Winkler Val: | 9.01 mg/L | Analyst Signature | Meg |
| Cal. Read: | 9.18 mg/L | | |
| **Pass if ± 0.3 mg/L** | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| *(every 3 hours)* | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.\,Cond. = \frac{Cond.\,Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\,Recovery = \frac{Read\,Value}{True\,Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | KO / AHC | Instrument (Make/Model): | YSI DSS |
| Date: | 6/27/23 | Serial Number: | 19K101408 |
| Start Time: | 740 | End Time: | |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 19.7 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 19.6 °C | Temp: | 22.6 °C | Temp: | °C |
| Deviation: | 10 % | Initial Read: | 1.003 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 100 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | Pass if ± 1% | | | |

lot 36C668 Mar/25

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4.00 S.U. | Standard: | 7.00 S.U. | Standard: | 10.00 S.U. |
| Temp: | 24.1 °C | Temp: | 24.1 °C | Temp: | 24.1 °C |
| Initial Read: | 3.91 S.U. | Initial Read: | 6.96 S.U. | Initial Read: | 9.96 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0 S.U. | Difference: | 0 S.U. | Difference: | 0 S.U. |
| Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | | Pass if ± 0.05 S.U. | |

lot 36C916 Mar/25 lot 36C914 Mar/25 lot 36C825 Exp Mar/25

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7.00 S.U. | Standard: | 0 F NTU | Standard: | 126 NTU |
| Temp: | 23.4 °C | Probe Temp: | 24.1 °C | Probe Temp: | 24.1 °C |
| Reading: | 7.05 S.U. | Initial Read: | 1.88 F NTU | Initial Read: | 144.25 NTU |
| Difference: | 0.05 S.U. | Cal. Read: | 0.00 F NTU | Cal. Read: | 126 NTU |
| Pass if ± 0.1 S.U. | | Difference: | 0 F NTU | Difference: | 0 NTU |
| | | Pass if ± 1/10 | | Pass if ± 1/10 | |

lot 36C1299 Exp 3/25 Exp 4/24 Lot 24001429

| Dissolved Oxygen (Use either membrane or optical boxes as applicable) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
| Standard: | 99.1 % | Standard: | 0 mg/L | Temp: | 24.2 °C |
| Probe Temp: | 24.2 °C | Probe Temp: | °C | True DO (chart): | 8.42 mg/L |
| Baro. Pressure: | 759 in Hg | Reading: | 0 mg/L | Reading: | 8.30 mg/L |
| Initial Read: | 99.3 % | Difference: | 0 mg/L | Perc. Recovery: | 98.6 % |
| Cal. Read: | 99.1 % | Ignore line | | | |
| Perc. Recovery: | 100 % | Pass if ± 0.3 mg/L | | Pass if between 95.8 - 104.8% | |

| | | | |
|---|---|---|---|
| Winkler Val: | 9.11 mg/L | Analyst Signature | |
| Cal. Read: | 9.18 mg/L | | |
| Pass if ± 0.3 mg/L | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | M. Barron | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/28/2023 | Serial Number: | 18C103637 |
| Start Time: | 7:40 | End Time: | 8:30 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 19.7 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 19.8 °C | Temp: | 20.2 °C | Temp: | °C |
| Deviation: | 0 % | Initial Read: | 9.98 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 0.02 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4. S.U. | Standard: | 7. S.U. | Standard: | 10. S.U. |
| Temp: | 20.4 °C | Temp: | 20.6 °C | Temp: | 21.0 °C |
| Initial Read: | 3.98 S.U. | Initial Read: | 7.04 S.U. | Initial Read: | 9.99 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.00 S.U. | Cal. Read: | 10.00 S.U. |
| Difference: | 0.02 S.U. | Difference: | 0.04 S.U. | Difference: | 0.01 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7. S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 20.6 °C | Probe Temp: | 21.1 °C | Probe Temp: | 21.2 °C |
| Reading: | 7.01 S.U. | Initial Read: | 0.5 NTU | Initial Read: | 127.42 NTU |
| Difference: | 7.00 S.U. | Cal. Read: | 0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0.5 NTU | Difference: | 1.42 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

| Dissolved Oxygen (Use either membrane or optical boxes as applicable) | | | | | |
|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | Zero Check (Membrane) | | Air-Sat. Water Check (Optical) | |
| Standard: | 100 % | Standard: | 0 mg/L | Temp: | 20.7 °C |
| Probe Temp: | 21.3 °C | Probe Temp: | 21.4 °C | True DO (chart): | 8.84 mg/L |
| Baro. Pressure: | 760.2 in Hg | Reading: | 0.2 mg/L | Reading: | 8.89 mg/L |
| Initial Read: | 100.7 % | Difference: | 0.2 mg/L | Perc. Recovery: | % |
| Cal. Read: | 100 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |
| Perc. Recovery: | 100.7 % | | | | |
| Winkler Val: | 9.01 mg/L | | | Analyst Signature | |
| Cal. Read: | 9.18 mg/L | | | | |
| **Pass if ± 0.3 mg/L** | | | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | M. Barron | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/28/2023 | Serial Number: | 20F000291 |
| Start Time: | 7:50 | End Time: | 8:30 |

| NIST Temperature Calibration (From Rental Company) | | | Specific Conductance 1.413 or 1.000 Solution | | | Ox-Redux Potential (ORP) (Optional) | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 18.9 | °C | Standard: | 1.000 | ms/cm$^c$ | Standard: | | mV |
| Reading: | 18.9 | °C | Temp: | 20.3 | °C | Temp: | | °C |
| Deviation: | 0 | % | Initial Read: | 1.005 | ms/cm$^c$ | Initial Read: | | mV |
| | | | Cal. Read: | 1.000 | ms/cm$^c$ | Cal. Read: | | mV |
| | | | Perc. Recovery: | 0.05 | % | Perc. Recovery: | | % |
| Correction Factor: | 0 | °C | **Pass if ± 1%** | | | | | |

| Three Point pH Calibration | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 4. | S.U. | Standard: | 7. | S.U. | Standard: | 10. | S.U. |
| Temp: | 20.4 | °C | Temp: | 20.6 | °C | Temp: | 21.0 | °C |
| Initial Read: | 4.04 | S.U. | Initial Read: | 7.02 | S.U. | Initial Read: | 10.03 | S.U. |
| Cal. Read: | 4.00 | S.U. | Cal. Read: | 7.00 | S.U. | Cal. Read: | 10.00 | S.U. |
| Difference: | 0.04 | S.U. | Difference: | 0.02 | S.U. | Difference: | 0.03 | S.U. |
| **Pass if ± 0.05 S.U.** | | | **Pass if ± 0.05 S.U.** | | | **Pass if ± 0.05 S.U.** | | |

| pH Initial Check | | | Turbidity Two Point Calibration | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 7. | S.U. | Standard: | 0 | NTU | Standard: | 126 | NTU |
| Temp: | 20.6 | °C | Probe Temp: | 20.6 | °C | Probe Temp: | 21.2 | °C |
| Reading: | 6.99 | S.U. | Initial Read: | 0.2 | NTU | Initial Read: | 125.18 | NTU |
| Difference: | 0.01 | S.U. | Cal. Read: | 0 | NTU | Cal. Read: | 126 | NTU |
| **Pass if ± 0.1 S.U.** | | | Difference: | 0.2 | NTU | Difference: | 1.18 | NTU |
| | | | **Pass if ± 1/10** | | | **Pass if ± 1/10** | | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | | Zero Check (Membrane) | | | Air-Sat. Water Check (Optical) | | |
| Standard: | 100 | % | Standard: | 0 | mg/L | Temp: | 20.8 | °C |
| Probe Temp: | ~~21.5~~ 7.3 | °C | Probe Temp: | 21.5 | °C | True DO (chart): | 9.18 | mg/L |
| Baro. Pressure: | 757.3 | in Hg | Reading: | 0 | mg/L | Reading: | 9.24 | mg/L |
| Initial Read: | 100.5 | % | Difference: | 0.1 | mg/L | Perc. Recovery: | | % |
| Cal. Read: | 100 | % | **Pass if ± 0.3 mg/L** | | | **Pass if between 95.8 - 104.8%** | | |
| Perc. Recovery: | 100.5 | % | | | | | | |

| | | | |
|---|---|---|---|
| Winkler Val: | 9.02 | mg/L | Analyst Signature |
| Cal. Read: | 9.18 | mg/L | |
| **Pass if ± 0.3 mg/L** | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| *(every 3 hours)* | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

Site / Project Number: West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01
Personnel: KO
Date: 6/28/23
Start Time: 827
Instrument (Make/Model): YSI DSS
Serial Number: 19K101408
End Time:

| NIST Temperature Calibration (From Rental Company) | | | Specific Conductance 1.413 or 1.000 Solution | | | Ox-Redux Potential (ORP) (Optional) | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 19.7 | °C | Standard: | 1.000 | ms/cm$^c$ | Standard: | | mV |
| Reading: | 19.6 | °C | Temp: | 23.5 | °C | Temp: | | °C |
| Deviation: | 10 | % | Initial Read: | 1.139 | ms/cm$^c$ | Initial Read: | | mV |
| | | | Cal. Read: | 1.000 | ms/cm$^c$ | Cal. Read: | | mV |
| | | | Perc. Recovery: | 100 | % | Perc. Recovery: | | % |
| Correction Factor: | 0 | °C | Pass if ± 1% | | | | | |

Lot: 266570 NOV/23

| Three Point pH Calibration | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 4.00 | S.U. | Standard: | 7.00 | S.U. | Standard: | 10.00 | S.U. |
| Temp: | 22.6 | °C | Temp: | 22.9 | °C | Temp: | 22.8 | °C |
| Initial Read: | 3.99 | S.U. | Initial Read: | 7.19 | S.U. | Initial Read: | 9.99 | S.U. |
| Cal. Read: | 4.00 | S.U. | Cal. Read: | 7.00 | S.U. | Cal. Read: | 10.00 | S.U. |
| Difference: | 0 | S.U. | Difference: | 0 | S.U. | Difference: | 0 | S.U. |
| Pass if ± 0.05 S.U. | | | Pass if ± 0.05 S.U. | | | Pass if ± 0.05 S.U. | | |

Lot 36C916 Mar/25 Lot 36C914 Mar/25 Lot 36C825 MAR/25

| pH Initial Check | | | Turbidity Two Point Calibration | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 7.00 | S.U. | Standard: | 0.00 | NTU | Standard: | 126 | NTU |
| Temp: | 23.7 | °C | Probe Temp: | 22.8 | °C | Probe Temp: | 22.8 | °C |
| Reading: | 7.05 | S.U. | Initial Read: | 3.63 | NTU | Initial Read: | 130.50 | NTU |
| Difference: | 0.05 | S.U. | Cal. Read: | 0.00 | NTU | Cal. Read: | 126 | NTU |
| Pass if ± 0.1 S.U. | | | Difference: | 0 | NTU | Difference: | 0 | NTU |
| | | | Pass if ± 1/10 | | | Pass if ± 1/10 | | |

| Dissolved Oxygen (Use either membrane or optical boxes as applicable) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | | Zero Check (Membrane) | | | Air-Sat. Water Check (Optical) | | |
| Standard: | 99.6 | % | Standard: | 0 | mg/L | Temp: | 23.6 | °C |
| Probe Temp: | 23.3 | °C | Probe Temp: | 22.8 | °C | True DO (chart): | 8.39 | mg/L |
| Baro. Pressure: | 756.9 | in Hg | Reading: | 0 | mg/L | Reading: | 8.46 | mg/L |
| Initial Read: | 100.8 | % | Difference: | 0 | mg/L | Perc. Recovery: | 100.83 | % |
| Cal. Read: | 99.6 | % | Pass if ± 0.3 mg/L | | | Pass if between 95.8 - 104.8% | | |
| Perc. Recovery: | 100 | % | | | | | | |
| Winkler Val: | 9.11 | mg/L | | | | | | |
| Cal. Read: | 9.18 | mg/L | | | | | | |
| Pass if ± 0.3 mg/L | | | | | | | | |

Analyst Signature: Kathryn Donnell





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# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | M. Barron | Instrument (Make/Model): | YSI PRO DSS |
| Date: | 6/29/2023 | Serial Number: | 20F000291 |
| Start Time: | 7:40 | End Time: | 8:35 |

| NIST Temperature Calibration (From Rental Company) | | | Specific Conductance 1.413 or 1.000 Solution | | | Ox-Redux Potential (ORP) (Optional) | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 19.7 | °C | Standard: | 1.000 | ms/cm$^c$ | Standard: | | mV |
| Reading: | 19.8 | °C | Temp: | 22.2 | °C | Temp: | | °C |
| Deviation: | 0 | % | Initial Read: | 1.006 | ms/cm$^c$ | Initial Read: | | mV |
| | | | Cal. Read: | 1.000 | ms/cm$^c$ | Cal. Read: | | mV |
| | | | Perc. Recovery: | 0.006 | % | Perc. Recovery: | | % |
| Correction Factor: | 0 | °C | **Pass if ± 1%** | | | | | |

| Three Point pH Calibration | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 4. | S.U. | Standard: | 7. | S.U. | Standard: | 10. | S.U. |
| Temp: | 21.6 | °C | Temp: | 23.0 | °C | Temp: | 22.4 | °C |
| Initial Read: | 4.04 | S.U. | Initial Read: | 7.07 | S.U. | Initial Read: | 9.98 | S.U. |
| Cal. Read: | 4.00 | S.U. | Cal. Read: | 7.00 | S.U. | Cal. Read: | 10.00 | S.U. |
| Difference: | 0.04 | S.U. | Difference: | 0.07 | S.U. | Difference: | 0.02 | S.U. |
| **Pass if ± 0.05 S.U.** | | | **Pass if ± 0.05 S.U.** | | | **Pass if ± 0.05 S.U.** | | |

| pH Initial Check | | | Turbidity Two Point Calibration | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 7. | S.U. | Standard: | 0 | NTU | Standard: | 126 | NTU |
| Temp: | 23.0 | °C | Probe Temp: | 23.1 | °C | Probe Temp: | 22.7 | °C |
| Reading: | 6.99 | S.U. | Initial Read: | 0.5 | NTU | Initial Read: | 127.9 | NTU |
| Difference: | 0.01 | S.U. | Cal. Read: | 0 | NTU | Cal. Read: | 126 | NTU |
| **Pass if ± 0.1 S.U.** | | | Difference: | 0.5 | NTU | Difference: | 1.90 | NTU |
| | | | **Pass if ± 1/10** | | | **Pass if ± 1/10** | | |

| Dissolved Oxygen (*Use either membrane or optical boxes as applicable*) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | | Zero Check (**Membrane**) | | | Air-Sat. Water Check (**Optical**) | | |
| Standard: | 100 | % | Standard: | 0 | mg/L | Temp: | 21.2 | °C |
| Probe Temp: | 23.0 | °C | Probe Temp: | 23.0 | °C | True DO (chart): | 9.37 | mg/L |
| Baro. Pressure: | 757.1 | in Hg | Reading: | 0.2 | mg/L | Reading: | 9.39 | mg/L |
| Initial Read: | 100.3 | % | Difference: | 0.2 | mg/L | Perc. Recovery: | 100.2 | % |
| Cal. Read: | 100 | % | **Pass if ± 0.3 mg/L** | | | **Pass if between 95.8 - 104.8%** | | |
| Perc. Recovery: | 100.3 | % | | | | | | |

| | | | |
|---|---|---|---|
| Winkler Val: | 9.01 | mg/L | Analyst Signature |
| Cal. Read: | 9.18 | mg/L | |
| **Pass if ± 0.3 mg/L** | | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| *(every 3 hours)* | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

## Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| | | | |
|---|---|---|---|
| Site / Project Number: | West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01 | | |
| Personnel: | KO/AR | Instrument (Make/Model): | YSI Pro DSS |
| Date: | 6/29/23 | Serial Number: | 21L100641 |
| Start Time: | 740 | End Time: | 758 |

| NIST Temperature Calibration (From Rental Company) | | Specific Conductance 1.413 or 1.000 Solution | | Ox-Redux Potential (ORP) (Optional) | |
|---|---|---|---|---|---|
| Standard: | 19.4 °C | Standard: | 1.000 ms/cm$^c$ | Standard: | mV |
| Reading: | 19.7 °C | Temp: | 22.2 °C | Temp: | °C |
| Deviation: | 30 % | Initial Read: | 1.044 ms/cm$^c$ | Initial Read: | mV |
| | | Cal. Read: | 1.000 ms/cm$^c$ | Cal. Read: | mV |
| | | Perc. Recovery: | 100 % | Perc. Recovery: | % |
| Correction Factor: | 0 °C | **Pass if ± 1%** | | | |

| Three Point pH Calibration | | | | | |
|---|---|---|---|---|---|
| Standard: | 4.00 S.U. | Standard: | 7.02 S.U. | Standard: | 10.05 S.U. |
| Temp: | 21.6 °C | Temp: | 20.4 °C | Temp: | 21.5 °C |
| Initial Read: | 4.05 S.U. | Initial Read: | 7.09 S.U. | Initial Read: | 9.90 S.U. |
| Cal. Read: | 4.00 S.U. | Cal. Read: | 7.02 S.U. | Cal. Read: | 10.05 S.U. |
| Difference: | 0 S.U. | Difference: | 0 S.U. | Difference: | 0 S.U. |
| **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | | **Pass if ± 0.05 S.U.** | |

| pH Initial Check | | Turbidity Two Point Calibration | | | |
|---|---|---|---|---|---|
| Standard: | 7.02 S.U. | Standard: | 0 NTU | Standard: | 126 NTU |
| Temp: | 21.4 °C | Probe Temp: | 21.5 °C | Probe Temp: | 21.5 °C |
| Reading: | 7.08 S.U. | Initial Read: | 7.5 NTU | Initial Read: | 116.8 NTU |
| Difference: | 0.06 S.U. | Cal. Read: | 0.0 NTU | Cal. Read: | 126 NTU |
| **Pass if ± 0.1 S.U.** | | Difference: | 0 NTU | Difference: | 0 NTU |
| | | **Pass if ± 1/10** | | **Pass if ± 1/10** | |

**Dissolved Oxygen** (*Use either membrane or optical boxes as applicable*)

| Water-Sat. Air Calibration | | Zero Check (**Membrane**) | | Air-Sat. Water Check (**Optical**) | |
|---|---|---|---|---|---|
| Standard: | 100.3 % | Standard: | 0 mg/L | Temp: | 21.2 °C |
| Probe Temp: | 21.2 °C | Probe Temp: | 21.5 °C | True DO (chart): | 8.68 mg/L |
| Baro. Pressure: | 762.0 in Hg | Reading: | 0 mg/L | Reading: | 8.92 mg/L |
| Initial Read: | 99.1 % | Difference: | 0 mg/L | Perc. Recovery: | 102.8 % |
| Cal. Read: | 100.3 % | **Pass if ± 0.3 mg/L** | | **Pass if between 95.8 - 104.8%** | |
| Perc. Recovery: | 100 % | | | | |

| | | |
|---|---|---|
| Winkler Val: | 9.1 mg/L | Analyst Signature |
| Cal. Read: | 9.18 mg/L | |
| **Pass if ± 0.3 mg/L** | | |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | **± 0.2** |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.\,Cond. = \frac{Cond.\,Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\,Recovery = \frac{Read\,Value}{True\,Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

integral consulting inc.

Site / Project Number: West Deptford, NJ/CF1165.2501.02A/CF1165.3202.01
Personnel: KO / AR
Date: 6/29/23
Start Time: 740
Instrument (Make/Model): 19A101408 YSI ProDSS
Serial Number:
End Time: 758

| NIST Temperature Calibration (From Rental Company) | | | Specific Conductance 1.413 or 1.000 Solution | | | Ox-Redux Potential (ORP) (Optional) | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 19.7 | °C | Standard: | 1.00 | ms/cm$^c$ | Standard: | | mV |
| Reading: | 19.6 | °C | Temp: | 21.7 | °C | Temp: | | °C |
| Deviation: | 10 | % | Initial Read: | ~~.907~~ | ms/cm$^c$ | Initial Read: | | mV |
| | | | Cal. Read: | 1.00 | ms/cm$^c$ | Cal. Read: | | mV |
| | | | Perc. Recovery: | ~~100~~ | % | Perc. Recovery: | | % |
| Correction Factor: | 0 | °C | Pass if ± 1% | | | | | |

lot 36C608 MP24

| Three Point pH Calibration | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 4.00 | S.U. | Standard: | 7.02 | S.U. | Standard: | 10.05 | S.U. |
| Temp: | 21.2 | °C | Temp: | 21.0 | °C | Temp: | 21.3 | °C |
| Initial Read: | 3.98 | S.U. | Initial Read: | 7.04 | S.U. | Initial Read: | ~~9.88~~ | S.U. |
| Cal. Read: | 4.00 | S.U. | Cal. Read: | 7.02 | S.U. | Cal. Read: | 10.05 | S.U. |
| Difference: | 0 | S.U. | Difference: | 0 | S.U. | Difference: | 0 | S.U. |
| Pass if ± 0.05 S.U. | | | Pass if ± 0.05 S.U. | | | Pass if ± 0.05 S.U. | | |

lot 30C914 MAY'25

| pH Initial Check | | | Turbidity Two Point Calibration | | | | | |
|---|---|---|---|---|---|---|---|---|
| Standard: | 7.02 | S.U. | Standard: | 0 | NTU | Standard: | 126 | NTU |
| Temp: | 20.9 | °C | Probe Temp: | 21.3 | °C | Probe Temp: | 21.3 | °C |
| Reading: | ~~7.00~~ | S.U. | Initial Read: | 8.54 | NTU | Initial Read: | 122.11 | NTU |
| Difference: | ~~0.00~~ | S.U. | Cal. Read: | 0.0 | NTU | Cal. Read: | 126 | NTU |
| Pass if ± 0.1 S.U. | 10.07 | | Difference: | 0 | NTU | Difference: | 0 | NTU |
| ↓ | 7.09 | | Pass if ± 1/10 | | | Pass if ± 1/10 | | |

lot # 24001429 EXP 4/24

| Dissolved Oxygen (Use either membrane or optical boxes as applicable) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Water-Sat. Air Calibration | | | Zero Check (Membrane) | | | Air-Sat. Water Check (Optical) | | |
| Standard: | 100.3 | % | Standard: | 0 | mg/L | Temp: | 21.2 | °C |
| Probe Temp: | 21.0 | °C | Probe Temp: | 21.5 | °C | True DO (chart): | 8.68 | mg/L |
| Baro. Pressure: | 762.3 | in Hg | Reading: | 0 | mg/L | Reading: | 8.89 | mg/L |
| Initial Read: | 98.4 | % | Difference: | 0 | mg/L | Perc. Recovery: | 102.4 | % |
| Cal. Read: | 100.3 | % | Pass if ± 0.3 mg/L | | | Pass if between 95.8 - 104.8% | | |
| Perc. Recovery: | 100 | % | | | | | | |

| Winkler Val: | 9.11 | mg/L |
|---|---|---|
| Cal. Read: | 9.18 | mg/L |
| Pass if ± 0.3 mg/L | | |

Analyst Signature: Katrina Bonnell

# Integral Consulting Inc. - Groundwater Sampling Field Calibration Log: Laboratory Certification #03060

| Drift Checks: (every 3 hours) | 1ST CHECK | | 2ND CHECK | | 3RD CHECK | | |
|---|---|---|---|---|---|---|---|
| | Reading / Temp | Pass | Reading / Temp | Pass | Reading / Temp | Pass | Pass Criteria |
| Time | | -- | | -- | | -- | ------ |
| pH (7.0), S.U. | | | | | | | ± 0.2 |
| Conductivity (span), ms/cm[c] | | -- | | -- | | -- | ------ |
| Turbidity (span), NTU | | -- | | -- | | -- | ------ |
| Dissolved Oxygen (% Sat.) | | -- | | -- | | -- | ------ |

## Quick Reference Guide & Notes - Refer to Standard Operating Procedures for full details

**RETAIN ALL CALIBRATION DOCUMENTS PROVIDED WITH THE INSTRUMENT FOR 5 YEARS**

For grab sampling: duplicate samples shall be collected every 20 samples (at least daily). Integral will record and monitor relative percent difference (RPD).

Winkler calibration conducted by equipment rental company. Additional Winkler calibration details provided in rental documentation.

### Methods

pH - N.J.A.C. 7:18 - 3.3 (a) 3 and/or SM 4500-H B-11

Turbidity - SM2130 B-11

Specific Conductance - N.J.A.C. 7:18-3.3 (a) 6 and/or SM2510 B-2011

Membrane Dissolved Oxygen - N.J.A.C. 7:18-5.2 and 5.5 as appropriate and SM4500 OG-2011

Optical Dissolved Oxygen - HACH 10360-11

Temperature - N.J.A.C. 7:18 - 3.3 (a) 5 and/or SM2550 B-201

### Drift Check Notes

pH check 5 sample/3 hour check required of buffer 7. Record to significant to confirm range.

Optional QA check for DO (% Saturation), Turbidity, and Specific Conductance, but not required.

### Equations

$$Spec.Cond. = \frac{Cond.Reading}{1 + C_{temp} \times (T - 25)}$$

$$\%\ Recovery = \frac{Read\ Value}{True\ Value} * 100\%$$

Cond. Reading = non-specific conductivity reading

$C_{temp}$ = 0.0191

T = Temperature at time of reading

### pH Standards Temperature Quick Chart - See SOP for full tables:

| Temp °C | 0 | 10 | 15 | 20 | 25 | 30 | 35 |
|---|---|---|---|---|---|---|---|
| pH | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 |
| pH | 7.12 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 |
| pH | 10.20 | 10.12 | 10.08 | 10.04 | 10.00 | 9.96 | 9.92 |

### Saturated Dissolved Oxygen Quick Chart - See SOP for full tables:

| Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L | Temp °C | DO mg/L |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.16 | 17 | 9.37 | 22 | 8.53 | 27 | 7.87 | 32 | 7.32 |
| 5 | 12.37 | 18 | 9.18 | 23 | 8.39 | 28 | 7.75 | 33 | 7.22 |
| 10 | 10.92 | 19 | 9.01 | 24 | 8.25 | 29 | 7.64 | 34 | 7.13 |
| 15 | 9.76 | 20 | 8.84 | 25 | 8.11 | 30 | 7.53 | 35 | 7.04 |
| 16 | 9.56 | 21 | 8.68 | 26 | 7.99 | 31 | 7.42 | 40 | 6.59 |

# Appendix B

Laboratory Analytical Data Packages

# Appendix C

Data Validation Reports

# DATA VALIDATION REPORT

## Solvay Specialty Polymers
## 2023 June Groundwater Sampling

*Prepared for*
**Solvay Specialty Polymers**

*Prepared by*

319 SW Washington Street
Suite 1150
Portland, OR 97204

August 28, 2023

# CONTENTS

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| BFS | bifunctional surfactants |
| EPA | U.S. Environmental Protection Agency |
| LCS | laboratory control sample |
| LCSD | laboratory control sample duplicate |
| MDL | method detection limit |
| MFS | monofunctional surfactants |
| MRL | method reporting limit |
| MS | matrix spike |
| MSD | matrix spike duplicate |
| PFAS | per- and polyfluoroalkyl substances |
| QAPP | quality assurance project plan |
| QA/QC | quality assurance and quality control |
| RPD | relative percent difference |
| SDG | sample delivery group |
| SOP | standard operating procedure |

# 1 INTRODUCTION

This report presents the findings of the data validation of 57 groundwater samples analyzed for monofunctional surfactants (MFS) only, and 12 groundwater samples analyzed for MFS and bifunctional surfactants (BFS) and associated quality control samples. Sample Delivery Groups (SDGs) 410-131643-1, 410-131644-1, 410-131648-1, 410-131830-1, 410-132015-1, 410-132582-1, and 410-132991-1 are included in this report.

The sample results received a Stage 2B validation, which included a review of all laboratory summary forms of quality control data, including calibration information and instrument performance checks. The data validation was based upon criteria described in the U.S. Environmental Protection Agency (EPA) Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFAS) Analyzed Using EPA Method 537 (USEPA 2018), the quality assurance project plan (QAPP; Integral 2021), and the laboratory standard operating procedure (SOP).

The quality assurance and quality control (QA/QC) parameters reviewed are discussed in Section 2. The electronic data deliverables were compared to the hard copy data packages, and 100 percent of the results were verified.

# 2 FINDINGS

The data validation findings are provided in this section. The QA/QC parameters reviewed for each analytical parameter are discussed below.

## 2.1 SAMPLE RECEIPT AND HOLDING TIMES

All analyses were conducted within the holding times referenced in the method with the exceptions listed below. The samples were received with complete chain-of-custody forms and in good condition.

For SDG 410-132582-1, the original MFS analysis for samples P-6S, MW-1D, MW-6I, and MW-40I was performed within holding times; however, the samples were reanalyzed at a 100-fold dilution outside holding times for MFS_N2. The associated MFS_N2 results were detects and are **qualified as estimated (J-HT).**

## 2.2 BLANKS

Target analytes were not detected in the laboratory, field, or equipment blanks with the exceptions listed below:

- MFS_N3 was detected in equipment blank EB_062623 at a concentration greater than the method reporting limit (MRL). MFS_M3 and MFS_M4 were detected in the same equipment blank at concentrations less than the MRL.
- MFS_N2 and MFS_N3 were detected at concentrations less than the MRL in equipment blank EB_062723.
- All BFS target analytes, except BFS_A3B and BFS_AB2, and MFS_N2, MFS_N3, and MFS_M3 were detected in equipment blank EB_062923 at concentrations greater than the MRL. Target analytes BFS_A3B and BFS_AB2 were detected in the same equipment blank at concentrations less than the MRL.

Associated sample results that were detected at concentrations less than the reporting limit or less than 5 times the blank concentration are **qualified as not detected (U-FB)**. Associated sample results that were detected at concentrations greater than the reporting limit and greater than 5 times the blank concentration are not qualified. Associated sample results that were not detected are not qualified. Qualifications associated with the equipment blanks are summarized below.

| SDG | Sample | Detected Analyte(s) Qualified U-FB |
|---|---|---|
| 410-132582-1 | MW-121S | MFS_M3, MFS_N3 |
| | MW-129S | MFS_M4 |
| | DUP_062723 and MW-109S | MFS_N3 |
| 410-132991-1 | MW-42D | BFS_A2B2, BFS_A3B, BFS_AB2, BFS_AB3, BFS_B3 |

A number of analytes were detected at concentrations less than the MRL in the laboratory blanks. Associated sample results that were detected at concentrations less than the reporting limit are **qualified as not detected (U-LB)**. Associated sample results that were detected at concentrations greater than the reporting limit are not qualified. Associated sample results that were not detected are not qualified. Qualifications associated with the laboratory blanks are summarized below.

| SDG | Sample | Detected Analyte(s) Qualified U-LB |
|---|---|---|
| 410-131830-1 | MW-102D | BFS_AB3 |
| 410-132015-1 | MW-103D | BFS_A2B2 and BFS_AB3 |
| | DUP_062323 | BFS_A2B2 |
| 410-132991-1 | MW-42D | BFS_AB3 |

## 2.3 LABELED COMPOUND RECOVERY

A labeled compound was added to all field and laboratory quality control samples for BFS and MFS analysis as required by the laboratory SOP. The percent recovery values of the labeled compounds met the laboratory-specified control limits with the exceptions listed below.

For labeled compound recoveries below the lower control limit, but greater than 10 percent, associated sample results that were not detected are **qualified as estimated (UJ-SSR),** and associated sample results that were detected are **qualified as estimated (J-SSR).**

For labeled compound recoveries above the upper control limit, associated sample results that were detected are **qualified as estimated (J-SSR),** and associated sample results that were not detected are not qualified.

Sample results were not qualified for labeled compound recovery outliers for samples that were analyzed at a 10-fold or greater dilution.

Sample results qualified for labeled compound recovery outliers are listed below.

| SDG | Analytes | Sample(s) Qualified (J/UJ-SSR) |
|---|---|---|
| 410-131648-1 | All BFS target analytes | MW-113S and MW-113D |
| | All MFS target analytes | MW-112S |
| 410-131830-1 | All BFS target analytes | MW-118D and MW-102D |
| 410-132015-1 | All MFS target analytes | MW-123S |
| | All BFS target analytes | MW-103D |
| 410-132991-1 | All BFS target analytes | EB_062823 |
| | MFS_N3 | MW-19D |
| | All MFS target analytes except MFS_N2 | PZ-5 |

## 2.4 LABORATORY CONTROL SAMPLES

The percent recovery values of all laboratory control samples (LCSs) and laboratory control sample duplicates (LCSDs) were within the laboratory-specified control limits with the exceptions listed below. All relative percent difference (RPD) values between the LCS and LCSD were within the laboratory-specified control limits.

LCS recovery values for BFS_A2B3, BFS_A3B, BFS_A3B2, BFS_A4B, BFS_AB2, and BFS_B4 were greater than the upper control limit in LCS 410-394057/2-A.

LCS recovery values for all BFS target analytes except BFS_A2B2 and BFS_AB3 were greater than the upper control limit in LCS 410-395116/2-A.

LCS recovery values for all BFS target analytes except BFS_A2B2 and BFS_AB3 in LCS 410-395640/2-A and all BFS target analytes in the corresponding LCSD were greater than the upper control limit.

LCS and LCSD recovery values for BFS_A2B3, BFS_A3B, BFS_A3B2, BFS_A4B, BFS_AB2, BFS_B4 were greater than the upper control limit in LCS 410-401400/2-A and the corresponding LCSD.

For percent recoveries greater than the upper control limits, associated sample results with detections are **qualified as estimated (J-LCS)**.

| SDG | Sample(s) | Analyte(s) Qualified (J-LCS) |
|---|---|---|
| 410-131830-1 | MW-102D | All detected BFS results |
| 410-132015-1 | MW-103S, MW-103D, and DUP_062323 | All detected BFS results |
| 410-132582-1 | MW-128S and MW-129S | All detected BFS results |
| 410-132991-1 | EB_062923 and MW-42D | All detected BFS results |

The control limits for LCSs and duplicates reported by the laboratory for percent recovery values and RPDs were broader than the default control limits specified in the QAPP. The default control limits of 70 to 130 percent for percent recovery values and 30 percent difference for RPD values were used for validation of all data in this report.

## 2.5 MATRIX SPIKES AND MATRIX SPIKE DUPLICATES

The percent recoveries and RPDs for all matrix spikes (MSs) and matrix spike duplicates (MSDs) were within the laboratory control limits with the exceptions listed below:

- For SDG 410-131643-1, the percent recovery values for MFS_N3 in the MS, and all MFS target analytes except MFS_N5 in the MSD were above the upper control limits. The RPD between the MS and MSD results for MFS_N5 was above the laboratory control limit. All associated results in parent sample MW-126D were nondetect and are not qualified.
- For SDG 410-131648-1, the percent recovery values of MFS_M4, MFS_N4, and MFS_N5 were below the lower control limits, but greater than 10 percent in the MSD, and the RPDs between the MS and MSD results for those analytes were greater than the laboratory control limits. All associated results in the parent sample MW-120D were nondetects and are **qualified as estimated (UJ-MS)**.
- For SDG 410-132015-1, the percent recovery values for all BFS target analytes in the MS and MSD were above the upper control limits. BFS_AB2 and BFS_B3 were detected in parent sample MW-103S, and the results are **qualified as estimated (J-MS)**. All other associated sample results were nondetect and are not qualified.

  The percent recovery value for MFS_N2 was above the upper control limit in the MS, and the percent recovery values for MFS_N2 and MFS_N3 were above the upper control limits in the MSD. The result for MFS_N2 in parent sample MW-103S was a detect and is **qualified as estimated (J-MS).** The associated MFS_N3 result is not qualified because the MSD value is within 10 percent of the control limit and the MS recovery value is within the control limit.

  The percent recovery values for MFS_M4 and MFS_N4 were less than the lower control limit, but greater than 10 percent. The associated results in the parent sample MW-103S were nondetects and are **qualified as estimated (UJ-MS)**.

  The percent recovery values for MFS_N5 were less than 10 percent in the MS and the MSD. The MFS_N5 result in parent sample MW-103S was nondetect and is **qualified as rejected (R-MS)**.

  The RPD values between the MS and MSD were greater than the laboratory limits for MFS_M4 and MFS_N4. The associated results in the parent sample MW-103S were nondetect and are not qualified.

- For SDG 410-132582-1, the percent recovery values for MFS_N2 in the MS and for all MFS target analytes in the MSD were below the lower control limit. The percent recovery values for MFS_N2, MFS_N4, and MFS_N5 were less than 10 percent. The concentration of MFS_N2 in parent sample MW-111S was greater than 4 times the spike added, and the result is not qualified. The MFS_N4 and MFS_N5 results in parent sample MW-111S were nondetects and are **qualified as rejected (R-MS)**.

  The percent recovery values for MFS_M3, MFS_N3, and MFS_M4 were below the lower control limit, but greater than 10 percent. The MFS_N4 result in parent sample MW-111S was nondetect and is **qualified as estimated (UJ-MS)**. The MFS_M3 and MFS_N3 results in parent sample MW-111S were detects and are **qualified as estimated (J-MS).**

- An MS/MSD pair was not analyzed with the BFS and MFS analyses in SDGs 410-131644-1, 410-131830-1, and 410-132991-1, and the BFS analyses in SDGs 410-131643-1, 410-131648-1, and 410-132015-1.

- The MS/MSD control limits reported by the laboratory for percent recovery values and RPDs were broader than the default control limits specified in the QAPP. The default control limits of 70 to 130 percent for percent recovery values and 30 percent difference for RPD values were used for validation of all data in this report.

## 2.6 REPLICATES

Four field replicate pairs were reported.

| SDG | Analyses | Sample | Field Duplicate |
|---|---|---|---|
| 410-131643-1 | MFS | MW-126D | DUP_061923 |
| 410-131648-1 | MFS | MW-120D | DUP_062123 |
| 410-132015-1 | MFS and BFS | MW-103S | DUP_062323 |
| 410-132582-1 | MFS | MW-111S | DUP_062723 |

The control limits were met for all analytes, with the following exceptions.

- For SDG 410-132582-1, the RPD value for MFS_M3 in the sample and field replicate was outside the control limit. The MFS_M3 results in samples MW-111S and DUP_062723 are **qualified as estimated (J-REP)**.

  The value for MFS_N3 in the sample was a detect greater than the MRL, and the value for the field replicate was a detect at less than the MRL. The absolute difference between the values for MFS_N3 in the sample and the field replicate was greater than 2 times the MRL. The MFS_N3 results in samples MW-111S and DUP_062723 are **qualified as estimated (J-REP)**.

Laboratory duplicates were not performed for MFS and BFS analyses in SDGs 410-131644-1, 410-131830-1, and 410-132991-1, and for BFS analyses in SDGs 410-131643-1, 410-131648-1, and 410-132582-1.

## 2.7 REPORTED RESULTS

The laboratory "I" flagged a number of detected results because a signal to noise ratio was below the acceptance limit. The results are qualified as tentatively identified (NJ-EMPC) and are as follows.

| SDG | Sample(s) | Detected Analyte(s) Qualified (NJ-EMPC) |
|---|---|---|
| 410-131643-1 | MW-119D | MFS_N2 |
| | MW-108D and MW-108S | MFS_M3 |
| 410-131644-1 | MW-104S | MFS_M3 |
| | MW-114D and MW-107S | MFS_N3 |
| 410-131648-1 | MW-112S and MW-120D | MFS_M3 |
| 410-131830-1 | MW-116D and MW-102D | MFS_M3 |
| 410-132015-1 | MW-103S and DUP-062323 | MFS_M3 |
| 410-132582-1 | EB-062623, P-S6, MW-129S, MW-40S, DUP-062723, MW-40I, MW-111S, and MW-16S | MFS_M3 |
| | EB_062723 and M/H-2D | MFS_N2 |
| | MW-121S | MFS_M3 and MFS_N3 |
| | MW-10I | MFS_M3, MFS_M4, and MFS_N2 |
| | MW-128S | MFS_M3 and MFS_N2 |
| 410-132991-1 | P-2S, P-3S, PZ-6, MW-19I, EB-062923, and MW-5I | MFS_M3 |
| | MW-36D | MFS_N2 |

## 2.8 METHOD REPORTING LIMITS AND METHODOLOGY

The laboratory MRLs and method detection limits (MDLs) met the project-specified limits listed in the QAPP, with some exceptions. The MDLs for target analytes MFS_N2, MFS_N4, and MFS_N5 were greater than the MDLs listed in the QAPP. The QAPP states: "Control limits are updated periodically by the laboratories. Control limits that are in effect at the laboratory at the time of analysis will be used for sample analysis and data validation. These may differ slightly from the control limits shown in this table."

A number of samples for MFS and BFS analyses required dilutions and the MRLs were elevated accordingly.

The laboratory E-flagged the following results, indicating that the detected concentrations were above the instrument calibration range. These results are **qualified as estimated (J-UC)** and are summarized below.

| SDG | Sample(s) | Detected Analyte(s) Qualified (J-UC) |
|---|---|---|
| 410-132582-1 | MW-10I, P-6S, MW-128S, MW-1D, MW-109S, and M/H-2D | MFS_N2 |
| 410-132991-1 | MW-5I | MFS_N2 |

## 2.9 INITIAL CALIBRATION

Initial calibrations were analyzed on all instruments and met the acceptance criteria stated in the laboratory SOP.

## 2.10 CONTINUING CALIBRATION

Continuing calibrations were analyzed at the appropriate frequency and met the acceptance criteria stated in the laboratory SOP.

## 2.11 INTERNAL STANDARDS

Internal standards were added to all samples and met the acceptance criteria stated in the laboratory SOP.

# 3 OVERALL ASSESSMENT

## 3.1 DATA QUALIFICATION

A total of 720 results were reported. Of those results, 155 results (22 percent) were qualified as estimated or not detected. Three results were rejected, and completeness was calculated as 99.6 percent.

## 3.2 DATA USABILITY

The data meet the criteria set forth in the method and referenced quality assurance documents, with the exceptions noted above. All results, with the exception of three rejected results, are acceptable for their intended use.

# 4 REFERENCES

Eurofins. 2021. Client specific: Determination of monofunctional surfactants (MFS) in aqueous and solid samples by isotope dilution using LC/MS/MS. Document No. T-PFAS-WI34027, Version 3.1, Eurofins Lancaster Laboratories, Lancaster, PA. May.

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