OPERATIONS PERMIT 359288-02
RE-ISSUANCE

Sussex Regional Recharge Facility (SRRF)

January16, 2025

PREPARED FOR:

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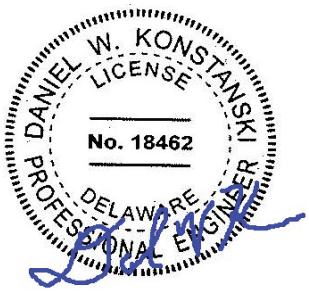

1 Executive Summary

1.1 Purpose

§6.5.4

This Operation Permit Re-Issuance is being submitted to the Department of Natural Resources and Environmental Control (DNREC) for the facility known as the Southern Regional Recharge Facility (SRRF), previously referred to as Artesian Northern Sussex Regional Water Recharge Facility (ANSRWRF). SRRF is a regional wastewater treatment and disposal facility owned and operated by Artesian Wastewater Management, Inc. (AWMI) serving customers throughout Sussex County. SRRF currently operates under DNREC Operations Permit No. 359288-02.

AWMI is in the process of submitting a request for a revised Operations Permit which will enable the SRRF facility to treat additional flows beyond the currently permitted 625,000 gallons per day. However, as that process is not yet complete, AWMI is submitting this permit renewal application and CMR in accordance with Section §6.5.4 of the Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems.

Note: throughout this document, applicable sections in the regulations are provided for ease of review using the notation **§6.5,** in reference to the DNREC Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems, as amended January 11, 2014. These are not intended to provide an exhaustive cross-referencing.

2 Permit Renewal Application Package

2.1 Summary

§6.5.4.2

This section addresses the requirements of Section §6.5.4.1 pertaining to various documents which must be submitted as part of the permit renewal application package.

2.1.1 DNREC Application Form

§6.5.4.2.1

This form as has been completed and is being submitted as part of the application package.

2.1.2 Applicable DNREC Fees

§6.5.4.2.2

These fees are being paid by check which have been mailed separately to the DNREC offices. Documentation which references this permit application was included with the payment.

2.1.3 Request for Permit Modifications

§6.5.4.2.3

No modifications are being requested as part of this renewal application.

2.1.4 Revised O&M Plan

§6.5.4.2.4

No changes to the previously submitted O&M Plan have been made by AWMI. Accordingly, the copy of the O&M plan currently on file with DNREC remains valid and no changes are being submitted as part of this renewal application.

3 Compliance Monitoring Report (CMR)

3.1 Summary

§6.5.4.3

The Compliance Monitoring Report (CMR) for SRRF was completed by BrightFields, Inc. and is included as Appendix A of this renewal application. Its various sections were completed, signed and sealed as required by the following professionals as per the regulations.

Casey M. Hoffman
Environmental Analyst

J. Matthew Brainard
Senior Program Manager

Peter M. Demicco, P.G.
Delaware Registration S4-0000406

Mr. Russel L. Losco, M.A., P.G., C.P.S.S
Class D License 2202

3.1.1 Soils Report

§6.5.4.3.1

This report can be found in Appendix A of the CMR. It was signed and sealed by Mr. Russel L. Losco, M.A., P.G., C.P.S.S.

3.1.2 Hydrogeologic Suitability Report

§6.5.4.3.2

This report can be found in Section 3 of the CMR beginning on page 4 of the document. It was signed and sealed by Peter Demicco P.G.

3.1.3 Engineering/Operation Report

§6.5.4.3.3

The following sections of this document address the items required for the Engineering/Operation Report. It is signed as part of this document by Daniel Konstanski, P.E.

3.1.3.1 Operation & Maintenance Concerns and/or Changes

§6.5.4.3.3.1.1

No major deviations from the previously submitted O&M plans have been required during the previous permit period. Standard maintenance procedures such as checking tires on irrigation rigs, changing oil on equipment, and checking lines for leaks were performed as planned. The only major additional item added to the SRRF system was the painting of level lines on the lagoon liner which was detailed to DNREC in a previous submission at the time it was completed.

3.1.3.2 Date and Summary of Compliance Items

§6.5.4.3.3.1.2

The following summarizes the compliance items experienced during the previous permit period:

Response to March Notice of Violation (NOV):
The March NOV issued to Artesian identified several compliance issues and operational improvements needed since SRRF began operation. In response, Artesian has developed a comprehensive action plan addressing these findings:

- **Predictive Nitrogen Balance Sheets**: Implemented to enhance nutrient management.
- **Monthly Meetings**: Regular discussions with the Department to ensure continued compliance.
- **Revised DMR Templates**: Improved templates to streamline reporting and enhance compliance.
- **Operational Protocols**: Updated laboratory quality assurance practices and integrated the Water Information Management System (WIMS) for improved data management.
- **Lagoon Level Accuracy**: Introduced paint markers for cross-verification and committed to replacing transducers as needed.
- **Fecal Coliform Protocols**: Strengthened procedures for exceedances, including immediate corrective actions, detailed sampling, and disinfection processes if required.
- **Non-Compliance Notifications**: Reinforced adherence to timely and thorough reporting protocols with the Department.

This action plan underscores Artesian's commitment to maintaining regulatory compliance and addressing operational deficiencies proactively.

April 2024 Violation
Issue: Overspray in multiple zones ranging from 0.03–0.37 inches.

Background:
This violation occurred during the transition to a newly issued permit with updated requirements. The changes in permit conditions contributed to some initial confusion regarding operational compliance.

Corrective Actions:

- The DRC and backup DRC conducted a thorough review of the updated permit to ensure a clear understanding of the new requirements.
- Revised spray spreadsheets reflecting the updated loading rates are now in use for accurate reporting.
- Daily reviews and operator findings are being documented and monitored to ensure compliance with the new permit conditions.
- Monthly reporting and operational reviews with DNREC have been scheduled to provide ongoing oversight and address any questions or concerns related to the updated permit requirements.

Older violations that are wrapped up in the overall one:

2023 Violations and Corrective Actions

- **April 2023:** Fecal exceedance.
    - Shut down spray immediately, Monitored Allen Harim levels to maintain 2.5 mg/L chlorine levels and asked to adjust levels as needed, and utilized an in-house pathogen detection system.
- **July 2023:** Fecal exceedance.
    - Shut down spray immediately, collected additional samples, verified compliance with Allen Harim, and resolved the issue through re-sampling.
- **February 2023:** Overspray due to misunderstanding of a new spray week start date.
    - Rested over sprayed areas for one week, notified DNREC verbally, and awaited further guidance.

2022 Violations and Corrective Actions

- **May 2022:** BOD and TSS exceedances.
    - Implemented operational changes and increased oversight.
- **June 2022:** Overspray.
    - Added buffer zones to prevent future overspray.
- **July 2022:**
    - **Fecal exceedance:** Increased Allen Harim sampling to monitor and mitigate exceedances.
    - **BOD exceedance:** Resolved operational inconsistencies.
- **January 2022:** Missed sodium sample.
    - Reviewed sampling schedules for consistency.
- **August 2022:** Overspray due to equipment failure.
    - Repaired broken saddle and implemented additional equipment checks.

2021 Violations and Corrective Actions

- **July & August 2021:** Fecal exceedances.
    - Conducted re-sampling to confirm compliance.
- **September 2021:** Fecal and suspended solids exceedance.

Addressed lagoon sampling inconsistencies and relied on Allen Harim data for accuracy

3.1.3.3 Active Spreadsheet

§6.5.4.3.3.1.2

As per the data included in the Annual Reports submitted for the years of operation during the last permit period no significant variances between the predicted and actual values calculated in the SRRF Active Spreadsheets was observed. Accordingly, no updates are required to the Active Spreadsheets already on file with DNREC.

3.1.4 Vegetative Management Plan

§6.5.4.3.4

AWMI consulted with Tak Keen who prepared the original Vegetative Management Plan (VMP) on which the SRRF crop uptake calculations were based. He provided a letter certifying that the original 2017 VMP is still valid and requires no modifications. This letter is included in Appendix G of the CMR.

3.1.5 Biosolids Management

§6.5.4.3.5

No Biosolids were generated by the SRRF facility during the permit period. Accordingly, this section of the regulations does not apply.

3.1.6 Overall Conclusions and Recommendations

§6.5.4.3.6

The data presented in this 5-year CMR indicates general compliance with permit conditions. To date, the most important issue has been fecal coliform in the effluent discharge. The issue was addressed in the AWMI response to the DNREC Notice of Violation dated April 19, 2024. New procedures were developed to replace the existing Operations Contingency Plan to improve effluent discharge samples. It is important to note that from a hydrogeological suitability view of groundwater and surface water impacts, post-effluent sampling is very important. **The data from both the groundwater monitoring wells and surface water sampling indicate that the fecal coliform exceedances are not reaching these water bodies**.

Nitrogen as nitrate in groundwater is another compound of concern. The pre-spray data indicates that high concentrations (over 10 mg/L) existed on the site prior to spray. **Nitrate data, to date in monitoring wells, indicate a slow, but significant decline overall concentrations even with the average nitrate discharge over 11 mg/L**. Crop uptake of this nitrate is occurring at the site. The lysimeter nitrate data, however, do not indicate much removal of nitrates as the running average of nitrate is still over 10 mg/L in some of the lysimeters. The lysimeter data does appear to be susceptible to non-spray anthropogenic nitrogen from an unknown source. Lysimeter LY-1F in particular has nitrate concentrations as high as 120 mg/L, far above the spray effluent concentration. Recently, lysimeter LY-3G is also showing concentrations above 33 mg/L which must be from another source than the spray (average concentration of 11 mg/L). Lysimeters could be subject to installation impacts especially if any excess fertilizer remained in the top soil during installation.

Historically, phosphorous is another contaminant of concern as possible exceedance of the soil uptake ability can occur. **Data to date does not indicate any issue with phosphate loading at this time**.

The metal monitoring to date does not indicate any non-compliance with these parameters.

To date, groundwater mounding does not appear to be of concern. **Data indicates that groundwater elevation is controlled by seasonal recharge and rainfall, not spray**. Water levels in wells MW-1G, MW-4L and MW-4F have had water levels less than 3 feet below grade. However, these wells are not in areas receiving direct spray. The piezometers were monitored during the wet season, as required by the permit. However, the permit does not explicitly state that high water in the piezometers above both the 3-foot and 2-foot depth to water from grade require specific actions.

Sussex Regional Recharge Facility (SRRF) Permit Renewal

Compliance Monitoring Report

January 2025

Prepared For:

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Prepared By:

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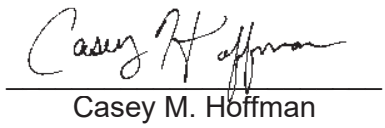
BrightFields, Inc.
Environmental Services

INTERNAL QUALITY CONTROL SHEET

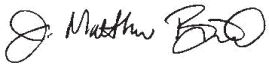
BrightFields, Inc. has prepared this Compliance Monitoring Report on behalf of Artesian Wastewater Management, Inc. (AWMI) for operation permit re-issuance at the Sussex Regional Recharge Facility (SRRF). The SRRF is currently operating under Permit No. 359288-02 issued by the State of Delaware Department of Natural Resources and Environmental Control (DNREC) on March 18, 2020, and amended on April 2, 2024. This report was prepared in accordance with the DNREC requirements for Operation Permit Re-Issuance outlined in the Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems; Chapter 60, Section 6.5.4.3. This report was prepared in accordance with Permit requirements and reviewed by the following BrightFields' personnel:

Prepared By:



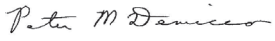
Casey M. Hoffman
Environmental Analyst

Reviewed by:



J. Matthew Brainard
Senior Program Manager

Reviewed and Approved by:



Peter M. Demicco, P.G.
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1.0 INTRODUCTION

This 5-year Compliance Monitoring Report (CMR) was prepared on behalf of Artesian Wastewater Management, Inc. (AWMI) for operation permit renewal for the Sussex Regional Recharge Facility (SRRF), formerly known as the Artesian Northern Sussex Regional Reclamation Facility (ANSRRF). The SRRF is currently operating under Permit No. 359288-02 issued by the State of Delaware Department of Natural Resources and Environmental Control (DNREC) on March 18, 2020, and amended on April 2, 2024. This CMR was prepared in accordance with the DNREC requirements for Operation Permit Re-Issuance outlined in the Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems; Chapter 60, Section 6.5.4.3. Monitoring data used to prepare this CMR was collected by AWMI.

The SRRF lagoon and treatment facility is located at 12941 Isaacs Road, Milton, Delaware on Sussex County Tax Parcel Number: 2.35-6.00-28.09 (**Figure 1**). The facility consists of approximately 1,700 acres of farm fields and a 90-million-gallon storage lagoon. The active SRRF facility layout for active Fields F and G including irrigation pivots is shown in **Figure 2**. The wooded area on Field G is also part of the spray area. The complete spray field designations are shown in **Figure 3**. Of the spray fields, only Fields F and G are currently being used.

The SRRF Permit No. 359288-02 was issued for Phase 1 on March 18, 2020. Phase 1 includes spray of Allen Harim wastewater on Fields F and G. The amended Permit issued on April 2, 2024, includes Phase 2 operation with an advanced wastewater treatment facility under construction (Construction Permit 349288-03) and spray on Fields D, E, F, and G. The SRRF facility layout is shown on **Figure 2** and the spray fields associated with the SRRF are shown on **Figure 3**.

Treated effluent is discharged via spray irrigation of privately owned agricultural land, under a lease held in perpetuity by AWMI as the wastewater utility provider. The spray fields have been permanently placed in an Agricultural Preservation Easement by the Delaware Agricultural Lands Preservation Foundation.

This CMR was prepared in accordance with the DNREC requirements for Operation Permit Re-Issuance outlined in the Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems; Chapter 60, Section 6.5.4.3. Monitoring data used to prepare this CMR was collected by AWMI. The facility currently only accepts wastewater from

one source, the Allen Harim Foods Harbeson Processing Facility (Allen Harim). The SRRF receives treated wastewater from Allen Harim via an approximately 8-mile pipeline. Operations began with the initiation of wastewater received from Allen Harim on June 24, 2021. Initial effluent spray started on July 1, 2021.

2.0 SOILS REPORT

A Soils report is required in accordance with DNREC Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems, Section 6.5.4.1.1. An evaluation of site conditions and soil chemistry was conducted by Mr. Russel L. Losco, M.A., P.G., C.P.S.S. of Lanchester Soil Consultants, Inc. A report detailing the scope and findings of the evaluation is included as **Appendix A**.

3.0 HYDROGEOLOGIC SUITABILITY REPORT

3.1 INTRODUCTION (DNREC 6.5.4.3.2.1)

The Hydrogeologic Suitability Report (HSR) is detailed in Section 6.5.4.3.2.1 Hydrogeological Reports and is to be signed and sealed by a Delaware-licensed professional geologist (PG). In this HSR, Brightfields evaluates the impacts of Phase 1 spray effluent on the groundwater and surface water quality of the site and immediate downgradient areas. To evaluate those impacts, Brightfields reviewed water elevations and water quality of the influent and effluent, monitoring wells, lysimeters, piezometers, and surface water associated with the SRRF. Issues with permit compliance are reviewed only with respect to events that could impact groundwater and surface water quality. The focus of the report is on influent and effluent water quality and the resulting impact on water quality.

3.2 NUMBER OF UNITS SERVED BY THE SYSTEM (DNREC 6.5.4.3.2.1.1)

3.2.1 Current Permit Phase 1

The SRRF is currently authorized by Permit No. 359288-02 to receive treated poultry processing wastewater (effluent) from the Allen Harim wastewater treatment system. The poultry processing facility's wastewater treatment system is owned by Allen Harim Foods, LLC and is operated in accordance with State Permit No. 597261-01 (as amended). The average daily flow of treated effluent received at the SRRF is 1.5 million gallons per day (MGD) with a peak flow of 2.0 MGD. Once received, treated effluent is retained and aerated in a synthetically lined lagoon prior to being discharged via spray irrigation to approximately 1,714 acres of agricultural fields located in Sussex County, Delaware. Treated effluent is discharged (via spray irrigation) to Fields F, and G. AWMI annual reports provide a calculation on equivalent dwelling units (edu) as required in Section 6.5.4.3.2.1.1 and is not repeated in this HSR.

3.2.2 Ongoing Phase 2 Construction

Upon completion of a proposed advanced wastewater treatment system (see AWMI's Phase 2 process flow diagram in **Appendix B**) authorized by Construction Permit No. 359288-03, and upon receiving written approval from the Department, the SRRF will be authorized to receive and

treat wastewater from within AWMI's domestic wastewater service territories in Sussex County, Delaware. The wastewater treatment system will include a three million gallon (MG) combined equalization and off-spec water diversion lagoon, a headworks system consisting of screening and grit removal, an influent lift station, a Hybrid Bardenpho treatment process, two cloth media filters, a UV system for disinfection, and an effluent lift station to pump treated effluent to the existing 90 MG storage lagoon constructed as part of Phase 1. Treated wastewater from the SRRF treatment system will be mixed with the treated effluent from Allen Harim's treatment system within the existing 90 MG storage lagoon and discharged (via spray irrigation) to the agricultural fields previously permitted under Phase 1 (see Spray Fields in **Figure 3**).

Also included in the scope of Phase 2 is the addition of Rapid Infiltration Basins (RIBs) on the field north of the lined storage lagoons. The RIB study is ongoing as presented in the Letter of Intent dated May 25, 2018.

3.3 MONITORING WELL NETWORK (DNREC 6.5.4.3.2.1.2)

Figure 2 presents an aerial view of the locations of the monitoring wells, lysimeters and piezometers required in the permit. There have been no changes to the monitoring wells, piezometers, or lysimeters since the start of sampling.

3.4 SUMMARY OF WELL INFORMATION (DNREC 6.5.4.3.2.1.3)

The location and construction of the monitoring wells, piezometers and lysimeters are summarized in Tables 1, 2 and 3.

3.5 METERED FLOW OF INFLUENT AND EFFLUENT (DNREC 6.5.4.3.2.1.4)

Metered flow demonstrating the volumes versus time must be plotted for the average monthly influent, average monthly effluent and daily peak influent flows. **Figure 4** presents the average daily and maximum daily influent flow rates in gallons per day (GPD) monthly for the facility from Allen Harim from the initiation of the system. The daily maximum and average daily influent volume are in compliance with the permitted maximum influent flow (2.0 MGD) and average influent flow (1.5 daily MGD). The influent to the system has been steady from Allen Harim to date. Rainfall data is also presented in **Figure 4**. As the effluent pipeline from Allen Harim to the SRRF facility is a dedicated line, there is no evidence for any rainfall influent into the system.

Figure 5 presents the monthly total influent (gallons per month) from Allen Harim and the monthly total effluent (gallons per month) to the spray irrigation system for the CMR time period.

3.6 WATER TABLE HYDROGRAPHS AND UNSATURATED ZONE THICKNESS (DNREC 6.5.4.3.2.1.5)

Water table hydrographs have been developed for the monitoring wells and piezometers associated with the SRRF. The below-referenced hydrographs illustrate water levels as feet relative to mean sea level (ft msl) or feet below the ground surface (ft bgs) and compare these levels with precipitation data from the Delaware Environmental Observation System (DEOS) station in Ellendale, Delaware.

Figure 6a shows the water levels (ft msl) for the Field G monitoring wells plotted with rainfall data. **Figure 6b** presents the water levels in feet below the ground surface (ft bgs) for Field G plotted with rainfall data. Figure 6b illustrates the unsaturated zone thickness for the monitoring wells. Water level and elevation data are included in table format within **Appendix C**.

Figure 7a shows the water levels (ft msl) for the Field F and Lagoon monitoring wells plotted with rainfall data. **Figure 7b** presents the unsaturated zone for Field F and Lagoon monitoring wells (ft bgs) plotted with DEOS rainfall data. Water level and elevation data are included in table format within **Appendix C**.

Figure 8a presents the hydrographs for the piezometers located mostly on Field G including rainfall data. The piezometers are only monitored during the wet season, December to April, and are located at points of lowest elevation (depressions) on the site. **Figure 8b** presents the unsaturated zone for piezometers (ft bgs). Water level and elevation data are included in table format within **Appendix C.**

The Permit includes the Part II.A.3 Monitoring Wells (and Part II.A.4 for Enhanced Monitoring which is currently not applicable) maintain a depth to water at least 3 feet below grade or additional weekly monitoring will be started for that monitoring well. The additional monitoring is continued until the groundwater returns to more than three feet below grade. If groundwater levels are less than two feet below grade, spray should be suspended in the field section around the non-compliant well (Permit Section Part III.6.A).

Spray was initiated in July 2021. There is no obvious upward trend observed in the hydrographs in either Fields G or F at the initiation of spray. Initial spray occurred in the summer months. Water level hydrographs indicate that summer spray does not impact groundwater elevations due mostly to evapotranspiration. Summer evapotranspiration has prevented any apparent recharge to groundwater following spray initiation. Throughout the period of the hydrograph, rainfall in the non-growing season dominates the movement of water elevations, not spray. The lack of spray impact on the water level across the site is most evident in **Figure 7b** where water levels in Field F closely track with the water levels from the Lagoon area (MW-1L to MW-4L) that do not receive spray irrigation. These data indicate negligible to small, up to one foot, mounding of water levels due to spray.

The Field G upgradient well MW-1G recorded water levels as high as 0.53 feet below grade on several occasions following large winter rainfall events. The water level in well MW-1G also was less than two feet below grade in March 2021 prior to any effluent spray. In the spring of 2024, MW-1G had water levels less than two feet below grade when the highest water elevations across the entire site were at their maximum.

In the wet season of 2023 to 2024, statewide groundwater levels were near the highest level since record levels measured in 2010 (**Figure 9,** Delaware Geological Survey Well NG11-37 near Field A). Therefore, the high-water level in MW-1G at less than two feet below grade are believed not to be a result of spray irrigation. Well MW-1G is the upgradient well and not specifically associated with any spray field. The closest other monitoring well is MW-3G and well water levels only approach feet below grade, but never exceeds less than 3 feet and does not require additional weekly monitoring. The permit requires additional weekly monitoring when wells reach 3 feet below grade. Continuous transducer data has been recorded in Well MW-1G and is available for this time interval, if needed.

The water levels in both wells MW-4F and MW-4L are consistently close to and above 3 feet from grade during the annual wet season (**Figure 7b**) including the pre-spray background period. These wells do not go above the two-foot limit at any time. In addition, both wells generally track together. Both wells are close to the downgradient discharge zones near wetlands and have very shallow construction depths. Well MW-4L is on the lagoon site which does not receive any spray irrigation. MW-4F is in a similar hydrogeologic position to MW-4L. These high-water elevations are related to wet weather conditions and are not related to excessive spray application. Other

wells in Field F and Lagoon monitoring wells are nearly always greater than 6 feet below grade even in the wettest time period of 2024. A recommendation for additional water level monitoring is presented in the Conclusions section of this report

The piezometers are monitored only during the wet period of the year, December to April. In 2024, most of the piezometers had water levels at or above two feet below grade. Piezometer PZ-3G is located within a swale that feeds into Ingrams Branch (**see Figure 2**) and water levels rose above grade. PZ-4G is also located close to the same swale. These piezometers are not specifically included in Part II.A.5 paragraph referencing compliance to water level bgs3 feet. The paragraph references specifically only monitoring wells in Part II.A.3 and Part II.A.4.

3.7 PRECIPITATION DATA (DNREC 6.5.4.3.2.1.6)

Precipitation data for the five-year period were obtained from the Delaware Environmental Observation System (DEOS) station in Ellendale, Delaware. **Figures 6a and 7a** present rainfall data and the water elevations in monitoring wells in Fields G and F. **Figure 8a** presents rainfall data and the water elevations in piezometers. In general, the late spring months have the highest water levels due to infiltration of winter and spring when precipitation and evapotranspiration are at a minimum. The spring water levels for 2024 are at the highest water levels since the record year of 2010 (**Figure 9**) due to very high rainfall events from December 2023 through March 2024. **Figure 9** illustrates that for the area near Milton, the 2024 spring water levels are second highest on record exceeded by 2010 water levels.

August 2023 had the highest amount of summertime rainfall totaling nearly 9 inches. The rainfall did not have an impact on water elevation indicating that summer recharge generally does not occur even under spray irrigation and high rainfall conditions. Summer water levels are not recorded in the piezometers as monitoring only occurs in the winter wet season.

3.8 GROUNDWATER ELEVATION AND FLOW (DNREC 6.5.4.3.2.1.7)

Figure 10 presents the <u>average</u> water table elevation map from May 11, 2023. Most of the average water table elevations occurred during April to May 2023. Winter precipitation was relatively low in the winter of 2023 (**Figures 6a and 9**) and the result was typical average water levels occurring during this time frame. Groundwater flow is generally to the east-northeast at a

gradient of 1.7 feet per 1,000 feet. The east-northeasterly gradient was expected due to data developed during the Preliminary Geologic Investigation Assessment (PGIA) of the Design Development Report (DDR).

Figure 11 presents the lowest seasonal water elevations from the site which occurred during August 2023. As with the average water elevation, groundwater flow is generally to the east-northeast at a gradient of 1.6 feet per 1,000 feet.

Figure 12 presents the highest water elevations from the site which occurred in April 2024. As with the average water elevation, groundwater flow is generally to the east-northeast at a gradient of 1.8 feet per 1,000 feet.

The original PGIA report (August 7, 2009) was developed in July 2009. Groundwater mounding analysis used Win-Flow (Version 3.0 from Environmental Simulations, Inc.) to simulate steady state groundwater flow directions and mounding from spray irrigation. Mounding analysis was conducted as a steady state simulation using annual average estimates. An analysis was conducted for each field A through G.

Field F and Field G analyses were conducted using a generalized average groundwater recharge rate of 15.33 inches of rainfall annually. Recharge of 15.33 inches per year is generally considered the average to slightly above annual recharge for the Columbia aquifer (Johnson, 1976). The recharge from spray was included as an average annual recharge of 2.5 inches to account for the spray less any evapotranspiration. The mounding analysis resulted in the development of maximum groundwater mounds of three to four feet near the center of the simulated spray application area. The steady state mounding analyses would include additional groundwater leaving the spray application areas because of increased hydraulic gradients of the water table. The overall simulations were conservative and would overestimate the mounding, especially in the middle to upgradient areas of the site.

The groundwater flow direction in the 2009 PGIA report was nearly the same as the current measured groundwater flow for the CMR. The average groundwater map (**Figure 10)** for the CMR closely matches the steady state groundwater map of the 2009 PGIA for both direction of flow, and elevation of water levels across the site. **Figure 10** illustrates an average water elevation from MW-1G to MW-3F of 34.2 to 13.8 feet msl. **Figure 11** illustrates a low-water

elevation from MW-1G to MW-3F of 30.2 to 12.2 feet msl. **Figure 12** illustrates a high-water elevation from MW-1G to MW-3F of 36.9 to 16.3 feet msl.

The steady state WinFlow model illustrates a simulated upgradient elevation of over 35 feet near MW-1G to 16 feet simulated near MW-3F and MW-4F. The steady state model should reproduce the high ground water map with some variations based on extremely wet versus extremely dry rainfall conditions. The high-water levels from 2024 should match the average to high projected PGIA maps from 2009. The 2009 model mounding and high-water map **Figure 12** match closely. The PGIA estimated 3 to 4 feet of mounding. Comparison of **Figures 10 and 12** appear to validate the PGIA modeling with the PGIA perhaps slightly overestimating the ground water mound.

The 2014 high water elevation map (**Figure 12**) and the hydrographs (**Figures 6a, 7a and 8a**) do not indicate any excessive or unexplained buildup of water levels on Fields F and G. The hydrograph water levels on Figure 7a from the Field F and the Lagoon (MW-1L to MW-4L) generally track together also indicating no excess buildup of water beneath the site.

3.9 EVAULATION OF GROUNDWATER MOUNDING (DNREC 6.5.4.3.2.1.8)

The peak observed (or interpolated) mound beneath each system or basin must be reported as a percentage of the simulated (or predicted) mound. The development of a groundwater map using the highest measured elevations (**Figure 12**) and mounding analysis from the 2009 PGIA closely match. The PGIA estimated up to 3 to 4 feet of potential water elevation impact while current data indicates 1 to 3 feet of peak mound development near the areas of highest irrigation on both Fields G and F. The percentage of the observed mounds represents between 25 to 75 percent of the predicted mound development that was projected. The 2009 report used an estimated 2.5 inches of additional recharge from spray. The actual spray irrigation volumes are much higher but are maximized in the growing season months with the highest evapotranspiration. Spray irrigation generally is significantly reduced in late fall to spring non-growing season periods with spray allowed a range of 0.20 to 0.58 inch per month crop areas and closer to 1.0 to 1.4 inches in the Field G wooded areas.

The close match of highest water elevation map and simulated high water elevation verify the assumption of 2.5 inches average evapotranspiration per year used in the model. No excess buildup of groundwater has occurred at the site.

3.10 EVALUTION OF GROUNDWATER AND EFFLUENT QUALITY (DNREC 6.5.4.3.2.1.9)

Influent Water Quality Requirements

Water quality data for the SRRF system influent (Allen Harim facility effluent) is presented in table format within **Appendix D**. Sampling results were compared to specific permit limitations (where applicable) and EPA Primary and Secondary Drinking Water Standards (where applicable). Permit parameters include continuous data for Total Residual Chlorine (TRC) and turbidity; monthly data for biochemical oxygen demand (BOD_5), Total Suspended Solids (TSS), Total Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite as Nitrogen, pH, and Total Phosphorus; and quarterly data for Chloride, Potassium and Sodium. The influent continuous data monthly minimum, average, and maximum were evaluated from the reported Discharge Monitoring Report (DMR) monthly data. These data are included in table format within **Appendix D**.

The Permit requirements for TRC in Part II.2.and II.2.b are monthly monitoring of the influent and effluent. Part II.2.b specifically requires additional disinfection of the influent (Allen Harim facility effluent) by AWMI when concentrations of TRC in the Allen Harim facility effluent are below 1 milligram per liter (mg/L). The monthly average TRC for the Allen Harim facility effluent ranged from 1.89 to 3.94 mg/L. No single influent value below 1.0 was recorded. Therefore, no additional chlorination was required by AWMI based on TRC concentrations. However, some additional chlorination was required for fecal coliform, discussed below.

Continuous turbidity results, also evaluated from monthly average data (as reported in monthly DMRs), indicate a maximum turbidity of 4.3 nephelometric turbidity units (NTU) which is less than the maximum permit limit for turbidity of 5 NTU.

Monthly average BOD_5 has generally been under 9.0 mg/L based on results of the original 2020 permit. One influent exception from Allen Harim on February 2023 had a monthly average of 13.0 mg/L monthly average and an unusually high result of 23.0 mg/L. The 23.0 mg/L result skewed the monthly average. The permitted BOD_5 limit is 10 mg/L. The new Permit has sampling

requirements at both Allen Harim influent and the SRRF effluent. The recent post June 2024 BOD_5 data indicate monthly and individual samples did not exceed 10.0 mg/L.

TSS influent results were similar to BOD_5 with all monthly average results below 10 mg/L except September 2021 with monthly average result of 13 ppm. All other monthly average results were 6.4 ppm or lower and a maximum of 9.6 ppm for any individual sample except for September 2021. On September 23, 2022 AWMI noted the result and submitted a 5-day exceedance letter for this sampling event.

Figure 13 presents the total nitrogen laboratory analysis for the influent coming from Allen Harim. For reference, the total nitrogen in the effluent to the spray fields is also included**.** Influent nitrogen (as N) design concentration is 27.7 mg/L. If total nitrogen exceeds 34.6 mg/L, additional sampling is required. Generally, average monthly total nitrogen in the influent was below 27.7 mg/L except for two months where concentrations were 28.38 mg/L (June 2024) and 30.2 mg/L (November 2021). No exceedance of the 34.6 mg/L concentration occurred. Decreasing linear trends for both the influent and effluent total nitrogen are noted on the graphs.

Ammonia nitrate results for the influent were also obtained and were generally below 1.0 mg/L. One anomalous ammonia result was obtained at 3.4 mg/L in November 2021 the same time period as one the high nitrogen results noted above. Ammonia concentration tends to follow results for total nitrogen. Similarly, average nitrate concentration tends to follow results observed in the trends of total nitrogen. The highest nitrate was 27.5 mg/L also from June 2024.

Figure 14 presents the reported minimum and maximum pH for the system influent. Permit range for pH varies from a low of 5.5 to a high of 9.0 standard units. **Figure 14** illustrates that pH is within permit limits.

Total phosphorus does not have an individual influent/effluent limit per se but is limited to 31.2 lbs/acre per field/zone/pivot. Samples indicate 1.1 mg/L was the highest recorded individual total phosphorus concentration (November 2023), but with an average influent value (all samples) of only 0.28 mg/L. For reference, the effluent total phosphorus concentration is nearly the same with a highest value of 1.02 mg/L and an average value of 0.22 mg/L. Groundwater monitoring well results, discussed below, do not indicate any phosphorous impact from spray irrigation.

Chloride, potassium and sodium samples are collected quarterly from the influent. There are no specific requirements for these compounds in the permit. Chloride has a secondary drinking water standard of 250 mg/L. Potassium and sodium do not have secondary drinking water standards. Sodium has Drinking Water Advisory: Consumer Acceptability Advice and Health Effects Analysis on Sodium (EPA, 2003). Influent concentration ranges for chloride, potassium, and sodium during the monitoring period were 127 to 153 mg/L, 30.8 to 73.5 mg/L and 120 to 160 mg/L, respectively

Effluent Water Quality Requirements

Water quality data for the spray effluent is also included in table format within **Appendix D**. Permit parameters include two monthly (bi-monthly) samples for Total Nitrogen and Fecal Coliform; monthly samples for Ammonia Nitrogen, Nitrate + Nitrite as Nitrogen, Organic Nitrogen, Total Phosphorus and Total Residual Chlorine; and annual sampling for Cadmium, Copper, Lead, Nickel, and Zinc.

Total Nitrogen **(Figure 13**) and nitrate plus nitrite (**Figure 15**) in the effluent are below the 27.7 mg/L design limit for the Permit. **Figure 15** illustrates a downward trend in the nitrate plus nitrate in the effluent. To date, average total nitrogen in the effluent is 15.4 mg/L and average nitrate plus nitrite is 11.0 mg/l.

Samples for ammonia nitrate were generally low with a maximum monthly result at 2.06 mg/L and an average of 0.40 mg/L. There is no permit limit for ammonia nitrate.

The Permit limit for fecal coliform concentration of disinfected treated wastewater discharged to the spray fields shall not exceed 20 Col/100 mL Based on effluent monthly data, the effluent typically reports <2 colonies per 100 mL (Note: 2 Col/100 mL laboratory detection limit). Average reported value is close to 12 Col/100 mL but is skewed by several anomalously high values. The July 2021 sample showed fecal coliform of 60 Col/100 mL which resulted in a 5-day compliance letter in September 2021. Similarly, in July 2022 fecal coliform was reported at 50 Col/100 mL which generated a 5-day compliance letter dated July 2022. This letter noted that sodium hypochlorite was added directly to the lagoon at this time. This happened again on July 2023, monthly average of 89 col/100 mL were recorded. A 5-day compliance letter was also sent with this exceedance. Warm July conditions probably contributed to the exceedances. A final exceedance occurred on November 11, 2023, at 69 Col/100 mL, which also generated a 5-day

compliance letter. In the following two weeks of November conformance with the fecal coniform limit was re-established. Corrective action sampling immediately followed the fecal coliform issue.

As stated above, the effluent phosphorus is nearly exactly the same with a highest value of 1.02 mg/L and an average value of 0.22 mg/L. The phosphorous limit is based on number of pounds per acre contributed from the spray effluent. **Figure 16** presents both influent and effluent phosphorus data.

TRC for the effluent is not required but is required for the influent unless disinfection of the influent is required. As discussed above, average influent concentration was maintained above 1 mg/L. Influent TRC concentrations are to range from 1.0 mg/L up to no more than 4.0 mg/L. The monthly average TRC for the effluent ranged from 0.06 to 3.1 mg/L. Similarly to the influent concentrations, average monthly TRC effluent was 0.38 mg/L.

Annual cadmium, copper, lead, nickel, and zinc concentrations to date have all been relatively low, close to laboratory detection limits and below Drinking water standards

Effluent Volume Reporting Requirements

The Permit includes specific limitations on the volume of spray application including monthly total, maximum daily, average daily and number of days sprayed to all fields/zones/pivots combined, total effluent to each zone (gallons) and number of days sprayed to each field/zone/pivot, and, nitrogen and phosphorous loading rate to each zone/pivot (lbs/acre/zone). As required in the permit, the effluent volumes are tabulated according to crop type, field location and woods versus fields. The DMRs present these calculations and therefore, the calculations were not repeated in this HSR. The HSR is focused on groundwater and surface water quality.

Two specific non-compliance issues have been reported by AWMI in 5-day non-compliance letters. This includes a September 19, 2022, overspray of 1.86 inches in Zone 6 over the allotted 1.65 inches due to a broken pipe saddle. The second issue was reported in February 2023 where overspray occurred in zones G-100 through G-118 due to improper weekly readings where the operators started the weekly spray a day early. Both exceedances resulted in immediate decreases in spray in the following compliance period.

Ground Water Quality Monitoring Requirements

This part of the CMR focuses on the water quality results from the monitoring wells and lysimeters. Water quality data for monitoring wells for the spray system is presented in table format within **Appendix E**. Permit parameters include monthly data for depth to water; quarterly laboratory analysis for ammonia nitrogen, chloride, fecal coliform, nitrate plus nitrite as nitrogen, sodium, total dissolved solids, total nitrogen, total phosphorus; quarterly field analysis for dissolved oxygen, pH, temperature, specific conductance; and annual laboratory analysis for arsenic, cadmium, chromium, copper, hardness, iron, lead, manganese, mercury, nickel, selenium, sulfate, and zinc.

Figures 17 and 18 present the nitrate data for Field G and Field F/Lagoon wells, respectively. For Field G, the monitoring wells, except MW-1G at nearly non-detect (upgradient well) and MW-4G at 8.44 mg/L (close to 10 mg/L) were all above 10 mg/L prior to the start of the system spray. High nitrates within agricultural fields in Sussex County are a common occurrence. **Figure 17** illustrates a general downward trend in Field G for nitrates from the start of spray in July 2021. **Figure 18** illustrates similar declines in nitrate from the Field F wells. Well MW-4F is near the downgradient discharge point and does not appear to have been affected yet by spray discharge and has no trend. The Lagoon wells, where there is no spray, do not appear to show any concentration trends. The table below shows the minimum, maximum and average nitrate concentrations during the spray period compared to the average background nitrate concentration prior to spraying. Background water quality data for monitoring wells is included in **Appendix E.**

WELL ID	MINIMUM (mg/L)	MAXIMUM (mg/L)	AVERAGE (mg/L)	AVERAGE BACKGROUND (mg/L)
MW-1G	0.21	8.28	0.57	0.2
MW-2G	11.70	23.70	15.68	18.40
MW-3G	9.26	25.80	14.63	15.17
MW-4G	4.58	11.50	7.19	8.44
MW-5G	12.20	21.80	15.88	17.40
MW-6G	13.80	16.50	15.13	14.97
MW-7G	12.20	21.80	16.96	18.80
MW-8G	2.82	30.60	13.73	10.35
MW-9G	12.10	21.80	17.26	14.87
MW-1F	5.04	10.60	8.02	11.02
MW-2F	9.75	27.90	15.47	16.10
MW-3F	2.84	14.90	10.55	20.60

WELL ID	MINIMUM (mg/L)	MAXIMUM (mg/L)	AVERAGE (mg/L)	AVERAGE BACKGROUND (mg/L)
MW-4F	21.40	25.50	23.39	22.73
MW-5F	13.00	21.00	16.07	21.20
MW-1L	2.03	6.14	3.42	6.72
MW-2L	2.95	13.80	6.74	15.41
MW-3L	2.81	14.00	7.21	7.63
MW-4L	2.61	9.59	5.60	8.75

Notes:
Shaded - Only Nitrate + Nitrite was reported.

Minimum, Maximum and Average were calculated using Minimum Reporting Limit (MRL) when analyte was not detected.

Figures 19 and 20 present ammonia data from Field G and Field F/Lagoon wells, respectively. These data sets show a marked decline in ammonia results from the start of spray. The lack of agricultural fertilizers appears to show improvement in water quality. The presence of dissolved oxygen in the sampling results for the wells indicate any ammonia nitrogen present would be quickly transformed to nitrate. The table below summarizes the minimum, maximum and average concentrations during the spray period compared to the average background ammonia concentration prior to spraying. Background water quality data for the monitoring wells is included in **Appendix E.**

WELL ID	MINIMUM (mg/L)	MAXIMUM (mg/L)	AVERAGE (mg/L)	AVERAGE BACKGROUND (mg/L)
MW-1G	0.007	0.27	0.02	0.05
MW-2G	0.007	0.007	0.007	0.05
MW-3G	0.007	0.05	0.01	0.05
MW-4G	0.007	0.19	0.03	0.05
MW-5G	0.007	0.19	0.02	0.05
MW-6G	0.007	0.35	0.03	0.05
MW-7G	0.007	0.07	0.01	0.05
MW-8G	0.007	0.007	0.007	0.05
MW-9G	0.007	0.45	0.03	0.05
MW-1F	0.007	0.007	0.007	0.05
MW-2F	0.007	0.13	0.02	0.05
MW-3F	0.007	0.12	0.01	0.05
MW-4F	0.007	0.007	0.007	0.05
MW-5F	0.007	1.26	0.07	0.05
MW-1L	0.007	0.007	0.007	0.05
MW-2L	0.007	0.06	0.01	0.05

WELL ID	MINIMUM (mg/L)	MAXIMUM (mg/L)	AVERAGE (mg/L)	AVERAGE BACKGROUND (mg/L)
MW-3L	0.007	0.007	0.007	0.06
MW-4L	0.01	0.12	0.02	0.06

Notes:

Minimum, Maximum and Average were calculated using Method Detection Limit (MDL) when analyte was not detected.

Figures 21 and 22 present pH field data from Field G and Field F/Lagoon wells, respectively. The range of pH for these plots is typical of native groundwater in the Columbia aquifer with a range of roughly 4.5 to 6. The pH data does not appear to have any trend from the start of spray and appears to be relatively stable. The table below summarizes the minimum, maximum and average pH concentrations during the spray period compared to the average background pH concentration prior to spraying. Background water quality data for the monitoring wells is included in **Appendix E.**

WELL ID	MINIMUM (mg/L)	MAXIMUM (mg/L)	AVERAGE (mg/L)	AVERAGE BACKGROUND (mg/L)
MW-1G	4.61	5.44	5.20	5.60
MW-2G	4.58	5.65	5.00	4.98
MW-3G	4.61	6.02	5.04	4.84
MW-4G	5.37	6.55	5.84	5.52
MW-5G	4.82	5.86	5.31	5.29
MW-6G	4.74	5.79	5.23	5.07
MW-7G	4.31	5.11	4.70	4.39
MW-8G	5.04	5.51	5.32	5.43
MW-9G	4.78	5.74	5.12	5.17
MW-1F	4.85	5.93	5.22	5.33
MW-2F	4.00	4.62	4.31	4.33
MW-3F	4.40	4.96	4.77	4.69
MW-4F	4.03	6.13	5.50	5.59
MW-5F	5.37	6.13	5.65	5.00
MW-1L	4.61	5.44	5.19	5.04
MW-2L	4.56	6.77	5.07	4.78
MW-3L	4.52	5.43	4.93	4.64
MW-4L	4.87	6.22	5.58	5.58

Figures 23a and 23b present sodium chloride data from Field G with the plots split from MW-1G to MW-5G on **Figure 23a** and MW-6G to MW-9G on **Figure 23b**. **Figures 24 and 25** present

sodium and chloride data from Field F and the Lagoon wells, respectively. In general, monitoring well MW-1G, the upgradient well, has a very low sodium and chloride concentration typical of groundwater without any anthropogenic impacts. Most of the wells have relatively low sodium (<15 mg/L) and chloride (<60 mg/L) concentrations. There is a slow upward increase in some of the Field G and F monitoring wells. The effluent water is higher in sodium and chloride, so some upward trend is expected. Monitoring well MW-1L appears to have the highest concentrations of sodium and chloride. Road salt is believed to be the source as the well is immediately adjacent to Isaacs Road and this area receives no spray. Monitoring well MW-3F has a spike in sodium chloride concentrations prior to the start of spray. Monitoring well MW-3F is adjacent to Reynolds Pond Road and may also show road salt impacts. MW-5F has a considerable spike in sodium chloride. Monitoring well MW-5F is near the Field F center pivot F-2. Possible anthropogenic effects unrelated to spray may be impacting the area near the center pivots on Field F. The table below summarizes the minimum, maximum and average sodium and chloride concentrations during the spray period compared to the average background concentrations prior to spraying. Background water quality data for the monitoring wells is included in **Appendix E.**

WELL ID	SODIUM				CHLORIDE			
	MINIMUM (mg/L)	MAXIMUM (mg/L)	AVERAGE (mg/L)	AVERAGE BACKGROUND (mg/L)	MINIMUM (mg/L)	MAXIMUM (mg/L)	AVERAGE (mg/L)	AVERAGE BACKGROUND (mg/L)
MW-1G	2.39	6.48	4.36	4.73	10.30	14.30	11.61	10.63
MW-2G	5.06	10.50	7.79	8.97	23.40	28.60	26.14	30.87
MW-3G	6.79	14.50	10.32	9.67	19.90	40.30	31.65	37.07
MW-4G	1.56	6.80	4.41	4.27	9.86	28.60	17.40	17.00
MW-5G	4.88	14.50	8.57	7.80	22.50	56.90	28.62	23.80
MW-6G	5.57	9.72	7.65	7.10	22.80	26.60	24.95	25.90
MW-7G	5.20	10.20	7.44	6.77	20.70	28.80	25.24	31.00
MW-8G	3.53	9.36	6.45	6.80	10.60	31.00	20.15	16.90
MW-9G	5.29	31.00	11.40	6.63	24.20	75.50	37.36	23.13
MW-1F	7.20	14.20	10.66	5.40	31.70	44.60	36.76	20.00
MW-2F	3.20	7.94	5.25	3.47	8.85	17.70	12.08	13.13
MW-3F	7.10	27.90	16.75	13.47	2.06	52.10	33.07	33.60
MW-4F	5.32	8.59	7.06	5.70	21.20	27.10	23.94	25.60
MW-5F	5.07	47.20	17.63	6.50	17.90	118.00	72.87	26.10
MW-1L	11.00	36.80	21.60	29.98	23.40	98.10	53.68	61.80
MW-2L	1.36	5.36	3.82	8.85	4.96	15.00	9.59	23.76
MW-3L	1.24	4.53	3.21	6.08	3.43	20.50	7.67	19.73
MW-4L	0.88	3.70	2.53	14.73	4.18	14.50	7.39	10.91

Other monthly parameters include fecal coliform and phosphorous. Fecal coliform was not detected in any monitoring wells except for MW-4L (20 Col/100ml) and MW-4F (2 Col/100ml), which are both located in areas where no spray occurs. These data indicate that the effluent fecal coliform does not impact the groundwater and is probably removed in the shallow oxygenated soils.

Phosphorous detections were mostly non-detects or low concentrations (below 0.1 mg/L). The phosphate detections were usually in the background data before spray water would have any impact. Data indicate detected phosphorous was in the groundwater prior to the spray starting in July 2021. The Well MW-4L, in the non-spray area of the lagoon had the highest and most persistent phosphorous detections further indicating that any phosphorous in the discharge is not reaching the groundwater.

The annual laboratory analysis for arsenic, cadmium, chromium, copper, hardness, iron, lead, manganese, mercury, nickel, selenium, sulfate, and zinc shows metals below primary and secondary drinking water standards.

Lysimeter Water Quality Monitoring Requirements

Four lysimeters have been installed at the site with three in Field G and one on Field F. Lysimeters. LY-2G and LY-1F were installed immediately adjacent to the center pivots G-1 and F-2, respectively. LY-1G is installed in the wooded area of Field G and LY-3G is installed at the edge of center pivot G-3 adjacent to the railroad that bisects the western part of Field G.

Figure 26 presents the nitrate results from the lysimeters. The Field F lysimeter, LY-1F, had an anomalous spike of nitrate over 120 mg/L with increasing concentrations starting at or before the start of spray in 2022. Lysimeter LY-2G also had an anomalous spike in nitrate up to 39.1 mg/L which started increasing prior to the start of spray. Both results suggest an anthropogenic source other than the spray effluent close to the center pivots. Spillage or storage of fertilizer near the center pivots prior to any spray may explain these results. The spray effluent averages close to 11 mg/L nitrate and nitrite and cannot be related to the very high nitrate results.

Three of the lysimeters had initial concentrations above 10 mg/L prior to the start of spray. Only lysimeter LY-1G, located in the woods, had a concentration below 1 mg/L at the start of spray. Lysimeter LY-1G began to show the influence of spray irrigation water several months after

system startup. The other lysimeters generally began to show decreasing nitrate concentration matching system effluent nitrate except lysimeter LY-3G which has increased to 33.4 mg/L nitrate in the fall of 2024. Lysimeter LY-3G is near the railroad tracks and may have an additional anthropogenic source of nitrogen.

The 12-month moving average of the lysimeter nitrate concentration is reported in the DMR's. Based on some initial anthropogenic effects the 12-month moving average should drop over the next few quarters to more closely reflect spray effluent without any anthropogenic effects. Lysimeters are problematic on initial installation due to contaminated surface soils dropped into the boring during installation. Over time the moving average should approach effluent values.

Figure 27 presents the sodium and chloride results from the lysimeters. The lysimeters show increases in concentration after the start of spray. For lysimeters LY-1G and LY-1F, concentrations increase above the concentrations in the spray effluent. Some mobilization in salts must have occurred in these two lysimeters, but concentrations soon dropped back to and below effluent concentrations. Interestingly, the total dissolved solids plot (**Figure 28**) results tend to show a downward trend compared to sodium and chloride.

Surface Water Quality Monitoring Requirements

Surface Water samples are obtained from the six locations as depicted on the Site Map (**Figure 2**). The surface water sampling locations include Ingram Branch and Sowbridge Branch (East of Reynolds Pond) at designated state coordinates. The upstream sampling location (SW-1) has typically been dry. No samples are able to be collected when the stream is dry

Quarterly laboratory analysis of grab samples or field sampling tests include Ammonia as Nitrogen, BOD_5, Chloride, Dissolved Oxygen, Enterococcus, Fecal Coliform, Nitrate + Nitrite, Nitrogen, pH (field), Sodium, Specific Conductance (field), Temperature (field), TDS, Total Nitrogen, Total Phosphorus (mg/L), mg/Land TSS.

The results from the stream sampling indicate no impacts to water quality at any of the surface water sampling locations. **Figures 29, 30,** and **31** illustrate essentially no change with chlorides, sodium and nitrogen in any of the surface water sampling results to date. Of primary concern is the fecal coliform detections in the system effluent. The fecal coliform are not impacting groundwater as discussed above in the groundwater monitoring section. In addition, there are no

reported instances of surface water runoff from any application of spray. Taken together, the coliform detections in the surface water are not from the spray effluent.

3.11 RECOMMENDATIONS FOR FUTURE MONITORING, SYSTEM UPGRADES, OR ADJUSTMENTS (DNREC 6.5.4.3.2.1.11)

The data presented in this 5-year CMR indicates general compliance with permit conditions with some exceptions. To date, the most important issue has been fecal coliform in the effluent discharge. The issue was addressed in the AWMI response to the DNREC Notice of Violation dated April 19, 2024. New procedures were developed to replace the existing Operations Contingency Plan to improve effluent discharge samples. It is important to note that from a hydrogeological suitability view of groundwater and surface water impacts, post-effluent sampling is very important. The data from both the groundwater monitoring wells and surface water sampling indicate that the fecal coliform exceedances are not reaching these water bodies.

Also addressed in the DNREC letter was the issue of sampling Quality Assurance. The AWMI response to that issue was presented in their letter of April 19, 2024 and is not repeated here.

Nitrogen as nitrate in groundwater is another compound of concern. The pre-spray data indicates that high concentrations (over 10 mg/L) existed on the site prior to spray. Nitrate data, to date in monitoring wells, indicate a slow, but significant decline overall concentrations even with the average nitrate discharge over 11 mg/L. Crop uptake of this nitrate is occurring at the site. The lysimeter nitrate data, however, do not indicate much removal of nitrates as the running average of nitrate is still over 10 mg/L in some of the lysimeters. The lysimeter data does appear to be susceptible to non-spray anthropogenic nitrogen from an unknown source. Lysimeter LY-1F in particular has nitrate concentrations as high as 120 mg/L, far above the spray effluent concentration. Recently, lysimeter LY-3G is also showing concentrations above 33 mg/L which must be from another source than the spray (average concentration of 11 mg/L). Lysimeters could be subject to installation impacts especially if any excess fertilizer remained in the top soil during installation.

Historically, phosphorous is another contaminant of concern as possible exceedance of the soil uptake ability can occur. Data to date does not indicate any issue with phosphate loading at this time.

The metal monitoring to date does not indicate any non-compliance with these parameters.

To date, groundwater mounding does not appear to be of concern. Data indicates that groundwater elevation is controlled by seasonal recharge and rainfall, not spray. Water levels in wells MW-1G, MW-4L and MW-4F have had water levels less than 3 feet below grade. However, these wells are not in areas receiving direct spray. The piezometers were monitored during the wet season, as required by the permit. However, the permit does not explicitly state that high water in the piezometers above both the 3-foot and 2-foot depth to water from grade require specific actions.

4.0 ENGINEERING/OPERATION REPORT

An Engineering/Operation Report is required in accordance with DNREC Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems, Section 6.5.4.3.3. The report was prepared by AWMI and is included in **Appendix F**.

5.0 VEGETATIVE MANAGEMENT PLAN

A Vegetative Management Plan is required in accordance with DNREC Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems, Section 6.5.4.3.4. The report was prepared by AWMI and is included in **Appendix G**.

6.0 SUMMARY AND RECOMMENDATIONS

The SRRF wastewater treatment and disposal system has operated since June 2021. Effluent from the nearby Allen Harim facility is the only volume currently coming to the SRRF.

1. Data illustrates that the daily maximum (2.0 MGD) and average (1.5 MGD) influent volumes are in compliance with the permit. 2.0 MGD maximum and 1.5 daily MGD average influent volumes. There is no evidence of any additional influent into the system from rainfall.

2. Monitoring well, piezometer, and lysimeter data indicates there are no detrimental impacts on groundwater or surface water quality related to the operation of the wastewater treatment facility at SRRF. Nitrate concentrations higher than those of the spray effluent have been observed in lysimeter data, indicating a non-spray-related anthropogenic source.

3. The operating status of the disposal system based on data collected to date is acceptable and changes are not necessary at this time.

4. There are no recommended changes to monitoring practices based on the data collected to date with the exception of ground water elevations noted in recommendation 6 below. If monitoring data indicate continued nitrate concentration increases from the anthropogenic source(s), additional sampling to identify the source of contamination may be required.

5. Minor data transcription errors, in particular from the DMR values to the annual report, as well as missing data, were observed in the DMRs, and additional proofing of the laboratory reports is recommended.

6. To date, groundwater mounding does not appear to be of concern. Data indicates that groundwater elevation is controlled by seasonal recharge and rainfall, not effluent spray. The piezometers monitored during the wet season showed groundwater less than 2 feet from ground surface but indicative of high winter recharge in December 2023 to April 2024,

not spray water mounding. The permit does not explicitly state that high water in the piezometers above either the 3-foot and 2-foot depth to water from grade require specific actions. Specific wells should be equipped with telemetry ground water monitoring equipment to obtain near real time water levels in Wells G-1, G-3, and F-4. In addition, Piezometer PZ-3G also should be equipped with real time monitoring as this piezometer is the earliest monitoring point for observing wetland water levels.

7.0 REFERENCES

Johnson, R. H., 1976, Relation of ground water to surface water in four small basins of the Delaware Coastal Plain: Delaware Geological Survey Report of Investigations No. 24, Delaware Geological Survey, Newark Delaware, 56 pages.

Hem, J. H., 1985, Study and interpretation of the chemical characteristics of natural water: U. S. Geological Survey Water-Supply Paper 2254, 3rd edition, 261 p.

Longmire, Patrick, 2000, Geochemical modeling of aqueous systems: National Ground-Water Association, course notes and presentations, Westerville, Ohio.

McDonald, M. G. and Harbaugh, A. W., 1983, Techniques of Water-Resource Investigations of The U. S. Geological Survey; A modular three-dimensional finite difference ground-water Flow model: U. S. Geological Survey Open File Report 83-875.

Ramsey, K. W., 2001, Geologic map of the Ellendale and Milton Quadrangles: Delaware Geological Survey Maps Series No. 11, Delaware Geological Survey, Newark, Delaware, Map Scale 1:24,000 with discussion.

BrightFields, Inc.
Environmental Services

FIGURES

Figure 1

Site Location Map
Artesian SRRF Compliance Monitoring
Milton, Delaware

BrightFields, Inc.
Environmental Services

0823.53.51 **12/9/2024**

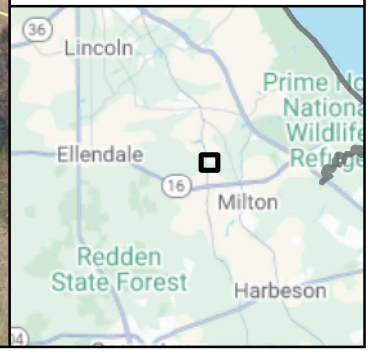
N
W E
S

0 200 400
Feet

Site Boundary

Tax Parcels

Source:
Delaware FirstMAP - Aerial 2022, Tax Parcels;
ESRI - World Topographic Map.



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Legend

- Groundwater Monitoring Wells
- Lysimeters
- Piezometers
- Surface Water Monitoring
- Irrigation Pivots at SRRF

N
W
E
S

0 500 1,000 2,000 3,000 4,000 Feet

FIGURE 2

SPRAY FIELDS

Location	Parcel	Acreage per parcel	Total for spray field
Field A	230-22.00-1.00	182.87	182.87
Field B	230-21.00-35.00	77.93	412.76
	230-21.00-35.01	113.69	
	230-21.00-13.00	221.14	
Field C	235-7.00-27.00	157.53	157.53
Field D	235-6.00-11.00	56.78	125.14
	235-6.00-11.01	6.22	
	235-6.00-11.02	10.46	
	235-7.00-164.00	32.45	
	235-7.00-1.00	19.23	
Field E	235-6.00-21.00	118.96	118.96
Field F	235-7.00-7.00	126.51	126.51
Field G	235-13.00-6.05	515.6	590.50
	235-13.00-6.06	74.9	
Total			**1714.27**

Source: Acreage based on survey approved by Sussex County Planning and Zoning Commission on 4/27/10. [PB 145 PG 23]

Location	Parcel	Acreage
SRRF	235-6.00-28.09	74.62

Source: Acreage based on survey approved by Sussex County Planning and Zoning Commission on 4/26/10. [PB 145 PG 30]

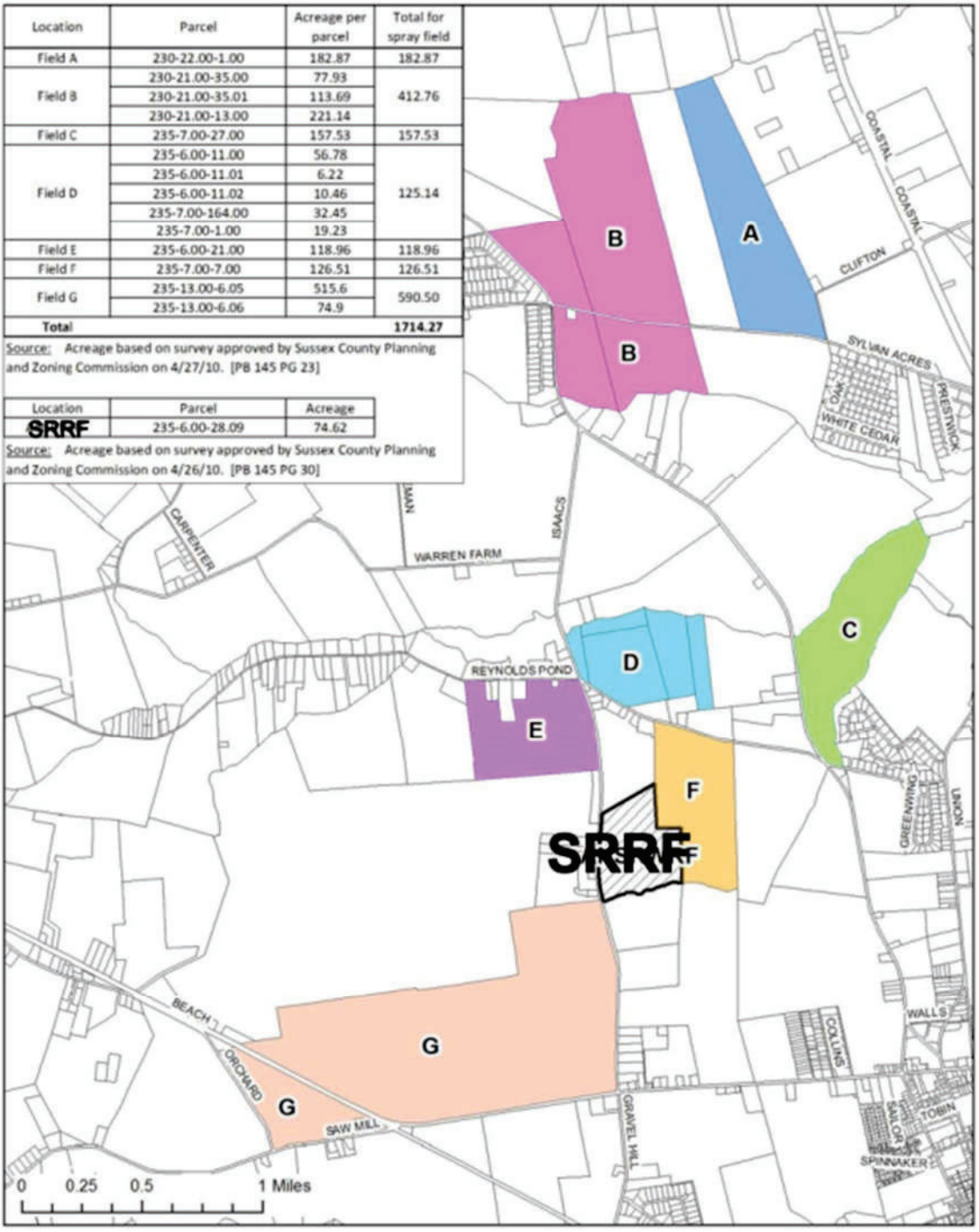


FIGURE 3

FIGURE 4
Average Daily and Maximum Daily Influent with Rainfall
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

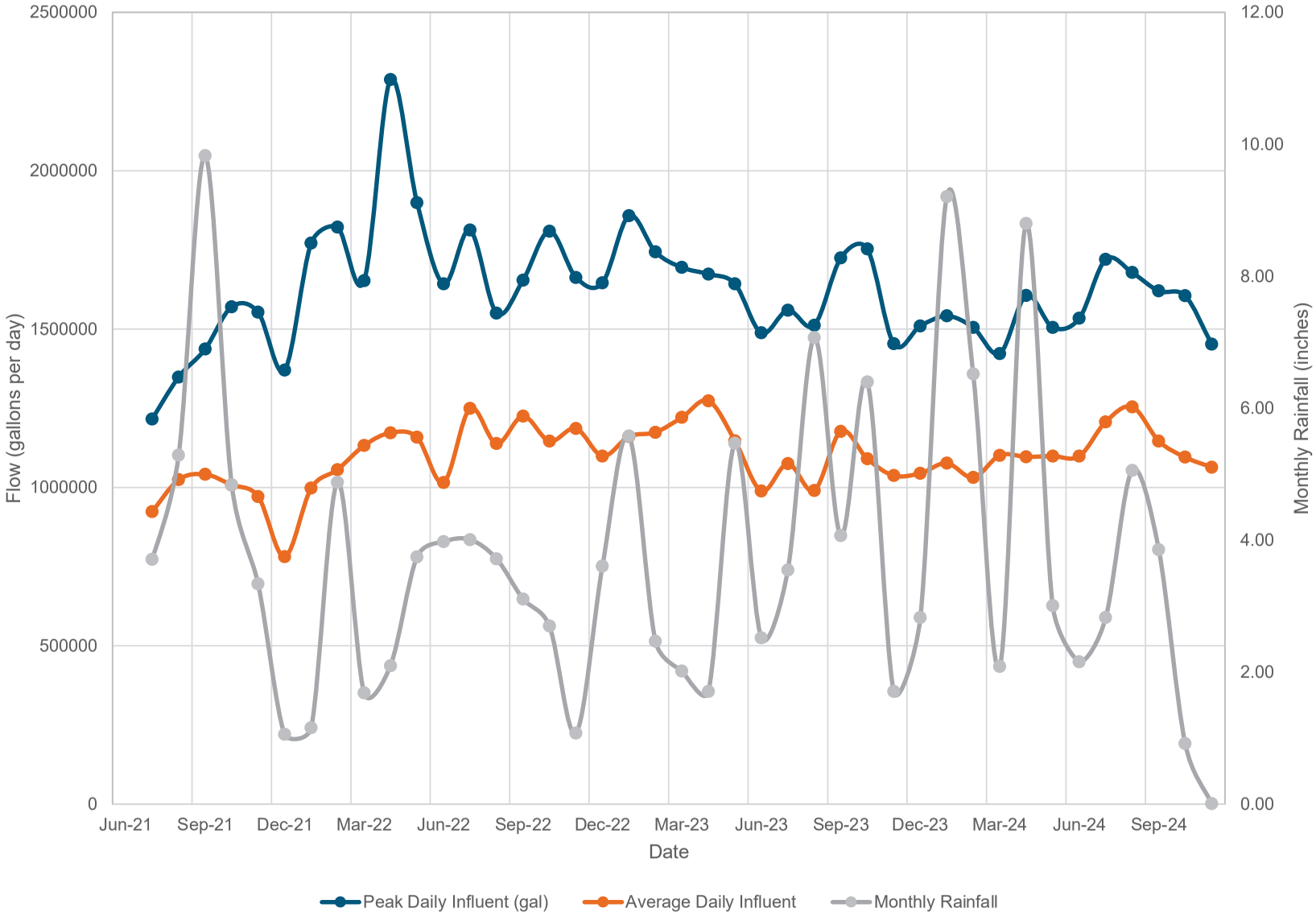


FIGURE 5
Monthly Total Influent and Effluent
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

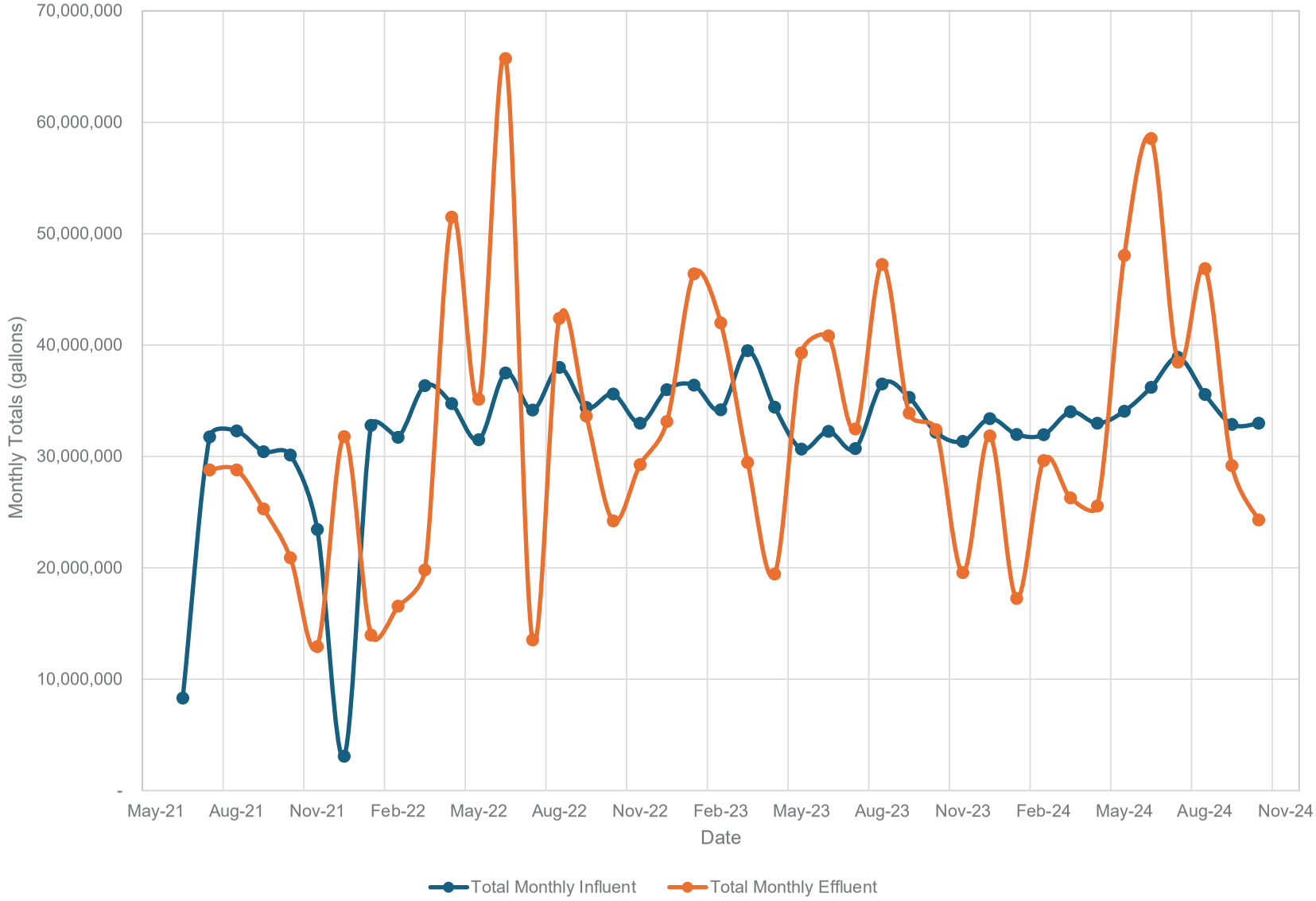


FIGURE 6a
Monitoring Well Hydrographs and Rainfall for Field G
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

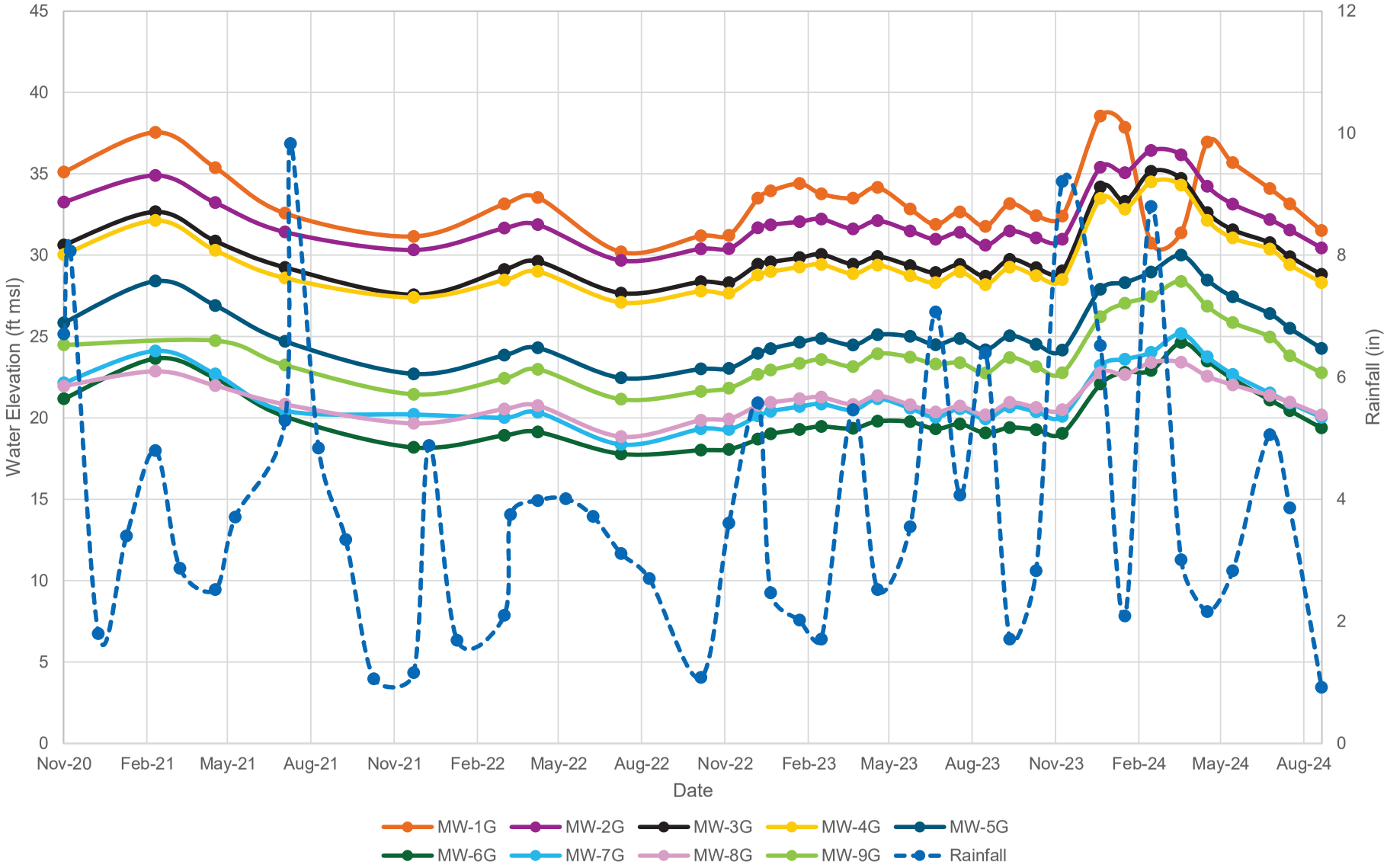


FIGURE 6b
Monitoring Well Depth to Water Below Grade and Precipitation for Field G
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

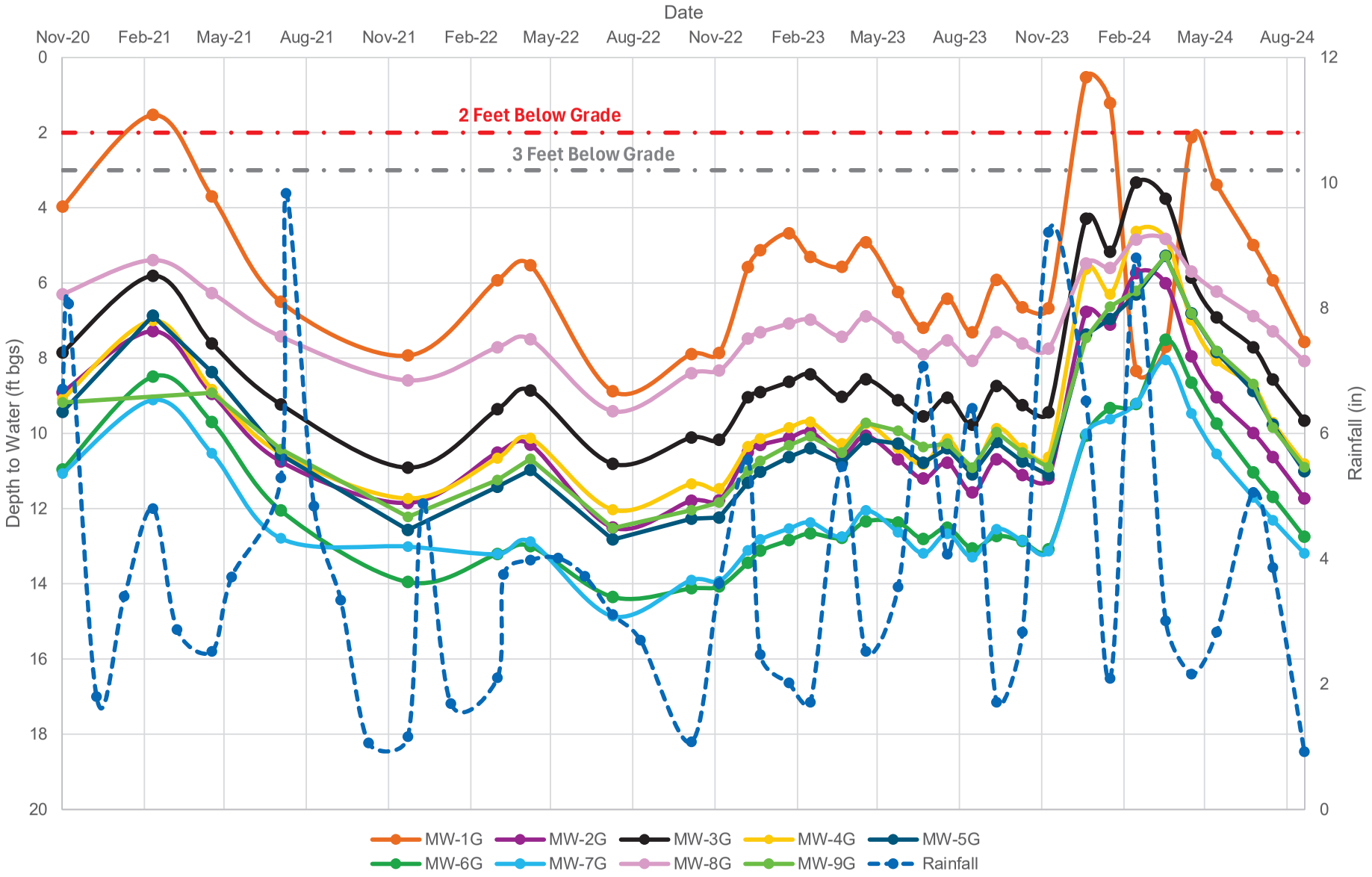


FIGURE 7a
Monitoring Well Hydrographs and Rainfall for Field F and Lagoon
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

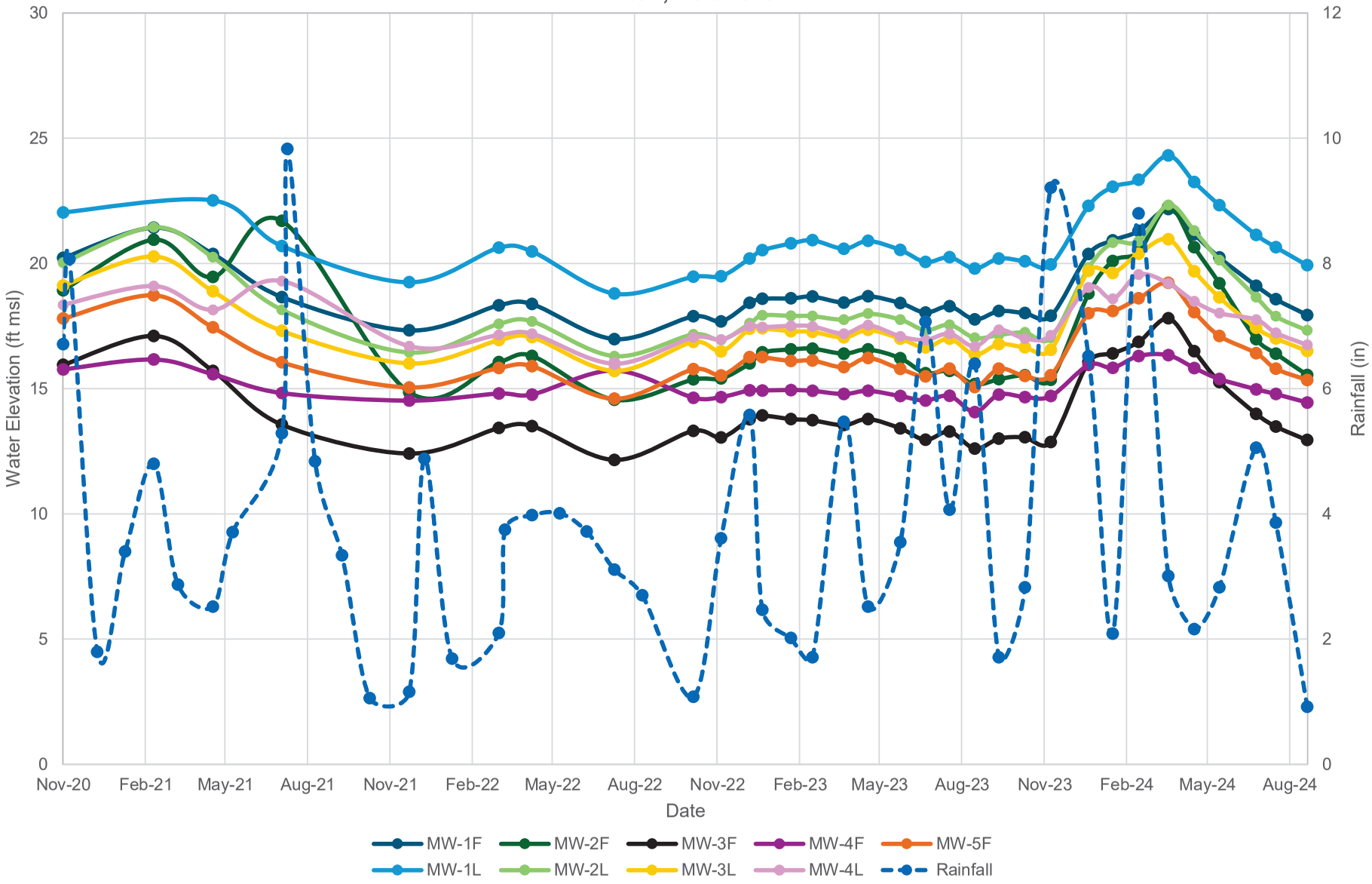


FIGURE 7b
Monitoring Well Depth to Water Below Grade and Precipitation Field F and Lagoon
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

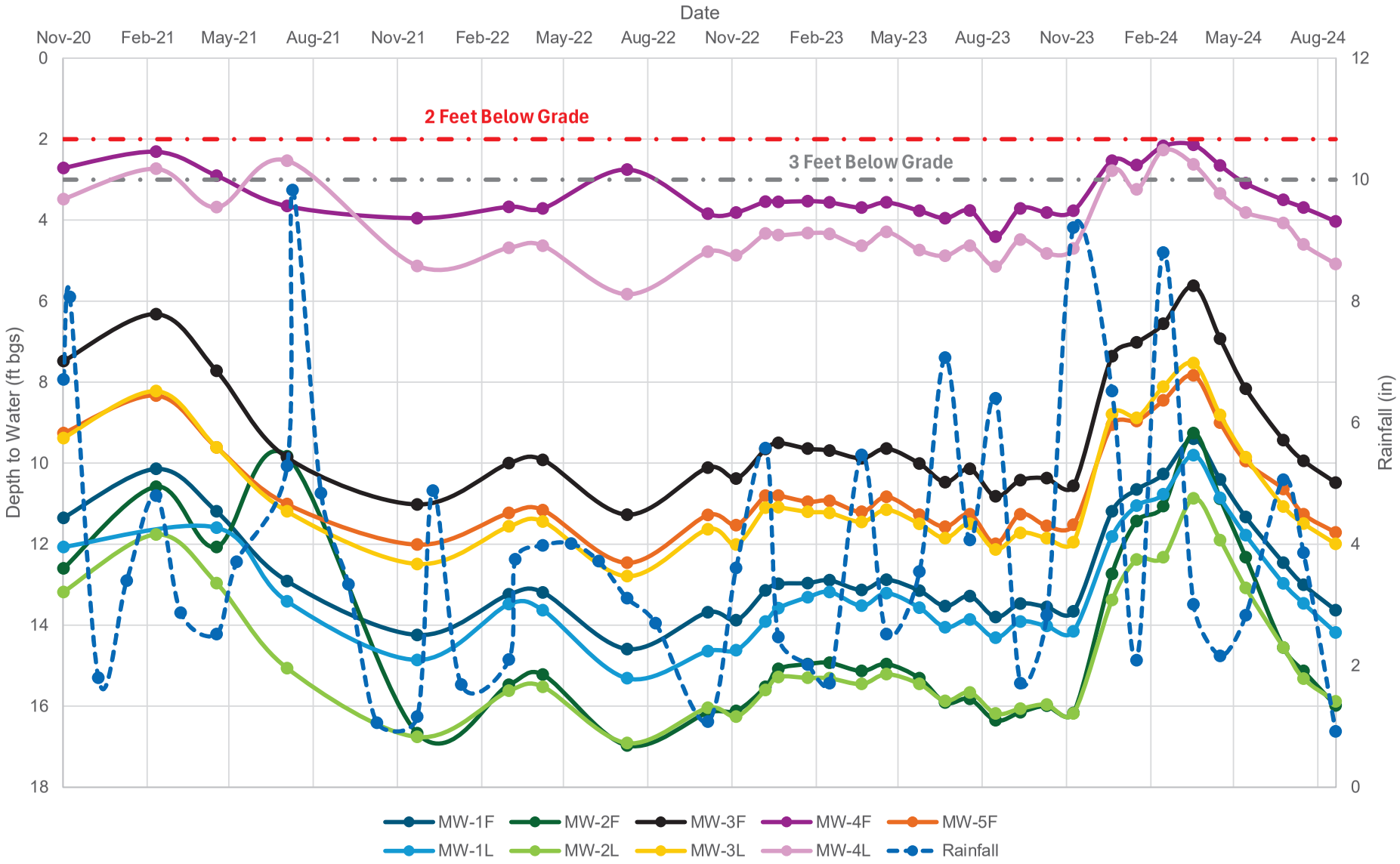


FIGURE 8a
Wet Season Piezometer Water Elevations and Rainfall
Sussex Regional Recycling Facility (SRRF)
Milton, Delaware

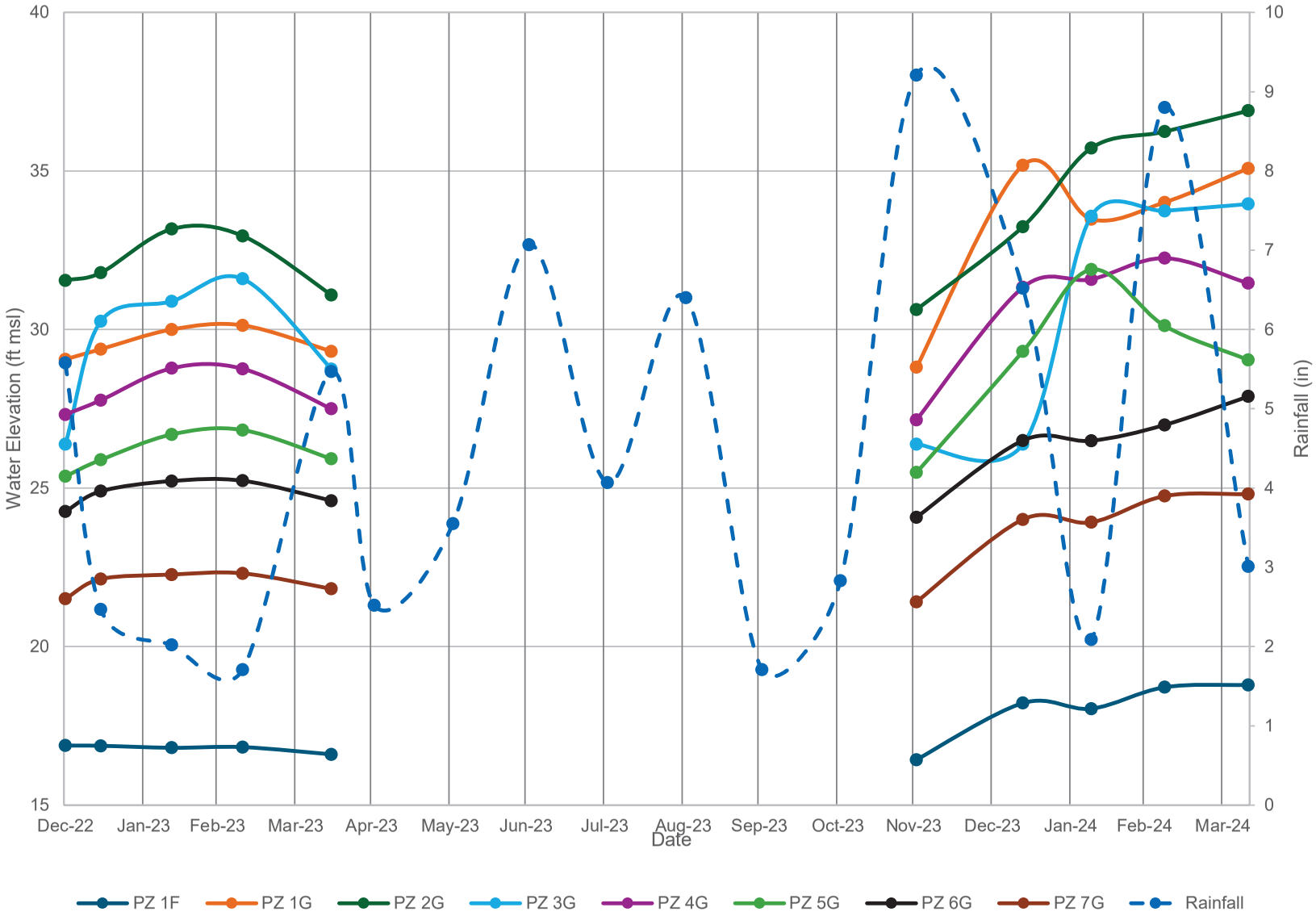


FIGURE 8b
Wet Season Piezometer Depth to Water Below Grade and Rainfall
Sussex Regional Recycling Facility (SRRF)
Milton, Delaware

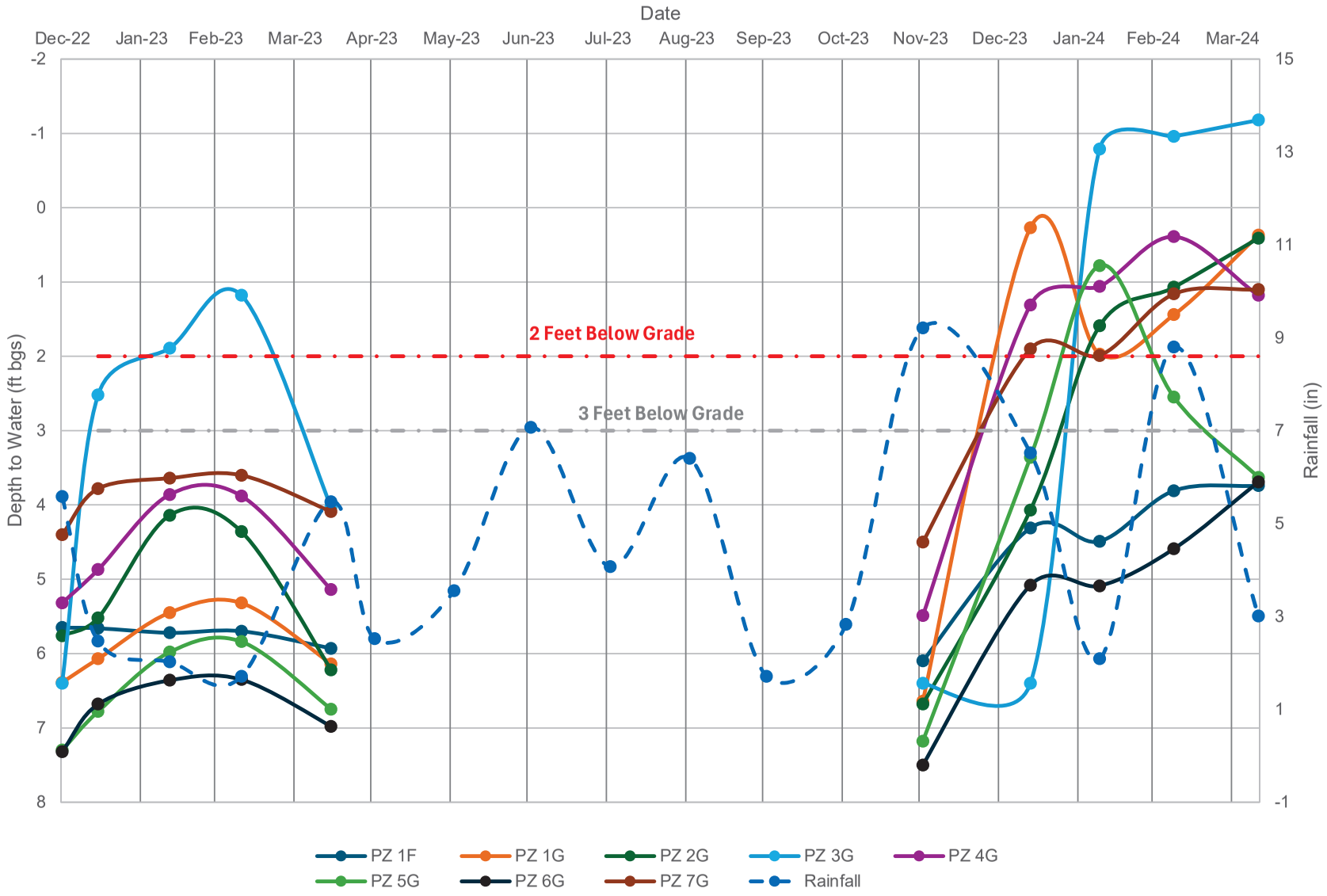
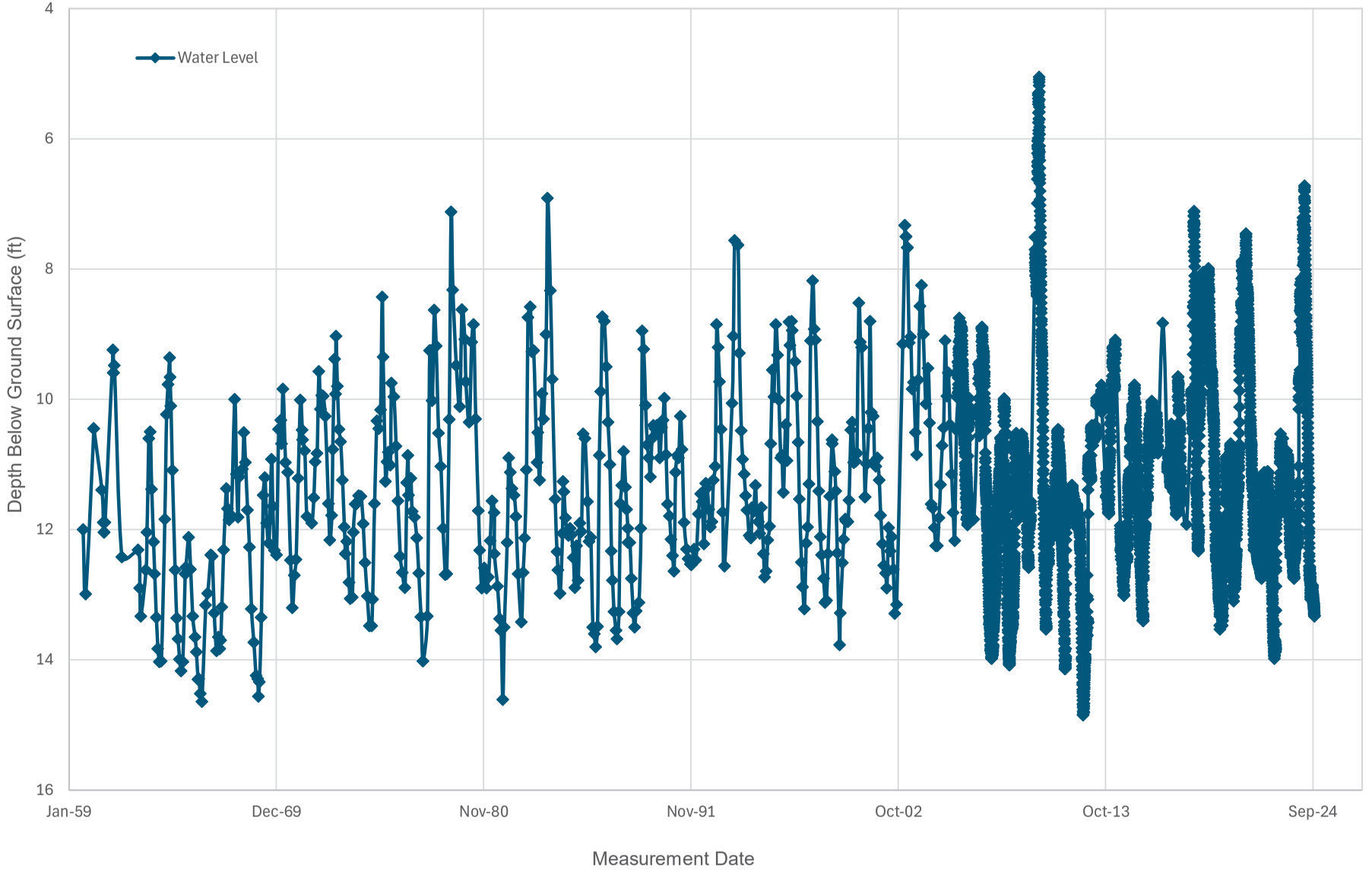


FIGURE 9
Regional Hydrograph - DGS Well NG11-37
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware



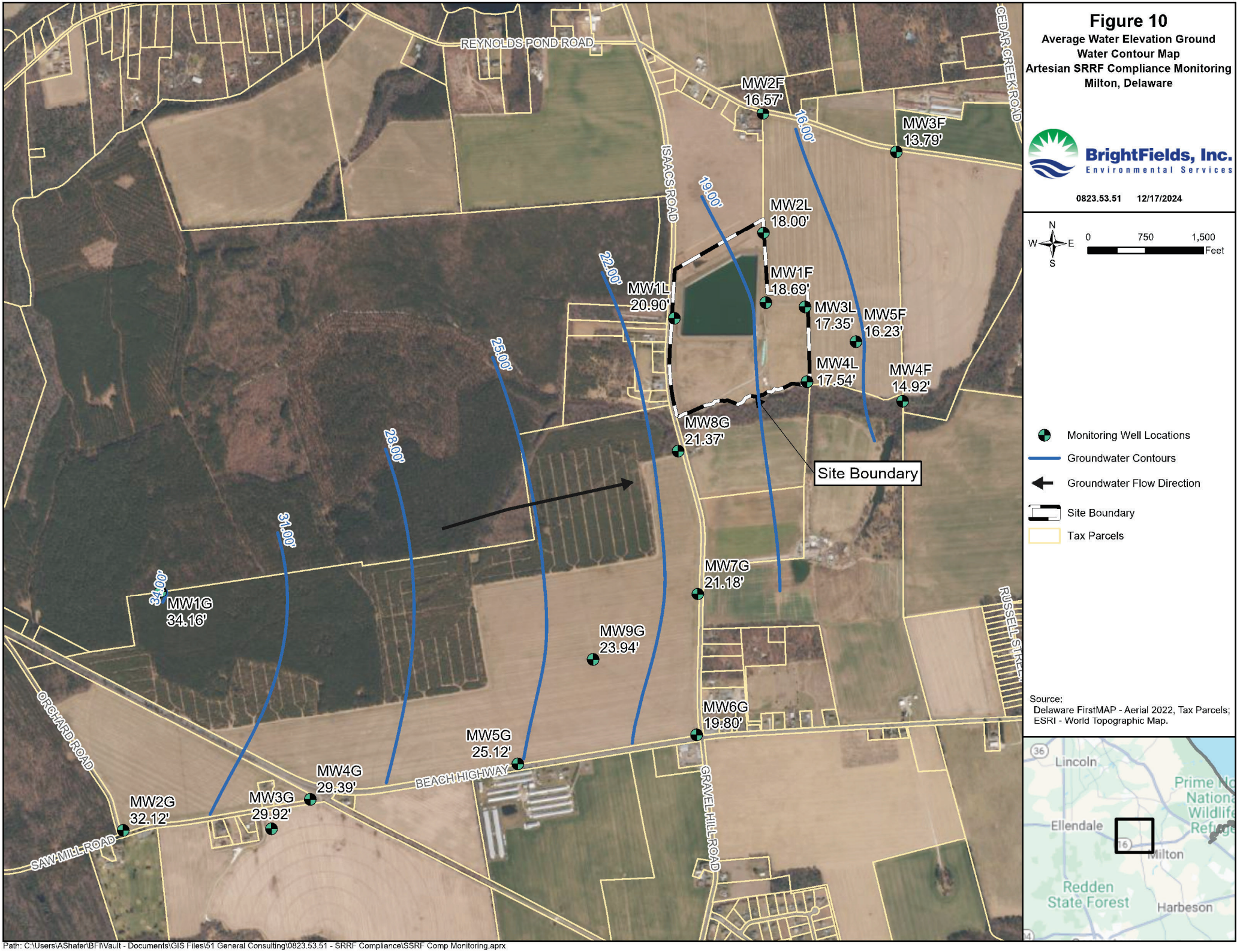


Figure 10

Average Water Elevation Ground Water Contour Map
Artesian SRRF Compliance Monitoring
Milton, Delaware

BrightFields, Inc.
Environmental Services

0823.53.51 12/17/2024

N
W E
S

0 750 1,500
Feet

- Monitoring Well Locations
- Groundwater Contours
- Groundwater Flow Direction
- Site Boundary
- Tax Parcels

Source:
Delaware FirstMAP - Aerial 2022, Tax Parcels;
ESRI - World Topographic Map.

Path: C:\Users\AShafer\BFI\Vault - Documents\GIS Files\51 General Consulting\0823.53.51 - SRRF Compliance\SSRF Comp Monitoring.aprx

Figure 11

Low Water Elevation Ground Water Contour Map
Artesian SRRF Compliance Monitoring
Milton, Delaware

BrightFields, Inc.
Environmental Services

0823.53.51 12/17/2024

N
W E
S

0 750 1,500
Feet

- Monitoring Well Locations
- Groundwater Contours
- Groundwater Flow Direction
- Site Boundary
- Tax Parcels

Source:
Delaware FirstMAP - Aerial 2022, Tax Parcels;
ESRI - World Topographic Map.

Path: C:\Users\AShafer\BFI\Vault - Documents\GIS Files\51 General Consulting\0823.53.51 - SRRF Compliance\SSRF Comp Monitoring.aprx

Figure 12

High Water Elevation Ground Water Contour Map
Artesian SRRF Compliance Monitoring
Milton, Delaware

BrightFields, Inc.
Environmental Services

0823.53.51 12/10/2024

N
W E
S

0 750 1,500
Feet

- Monitoring Well Locations
- Groundwater Contours
- Groundwater Flow Direction
- Site Boundary
- Tax Parcels

Source:
Delaware FirstMAP - Aerial 2022, Tax Parcels;
ESRI - World Topographic Map.

Path: V:\GIS Files\51 General Consulting\0823.53.51 - SRRF Compliance\SSRF Comp Monitoring.aprx

FIGURE 13
Comparison of Influent and Effluent Total Nitrogen
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

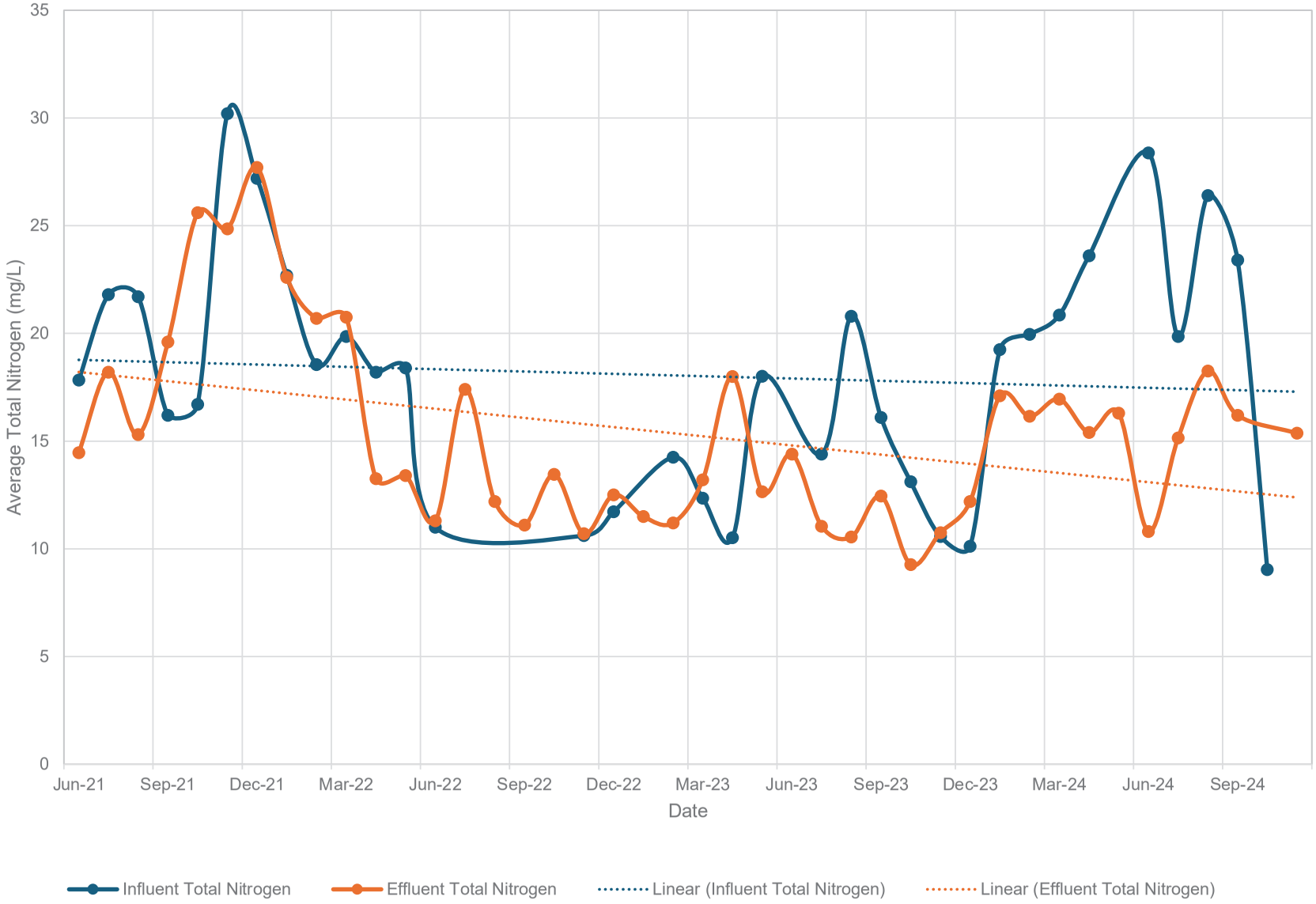


FIGURE 14
Influent Minimum and Maximum pH
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

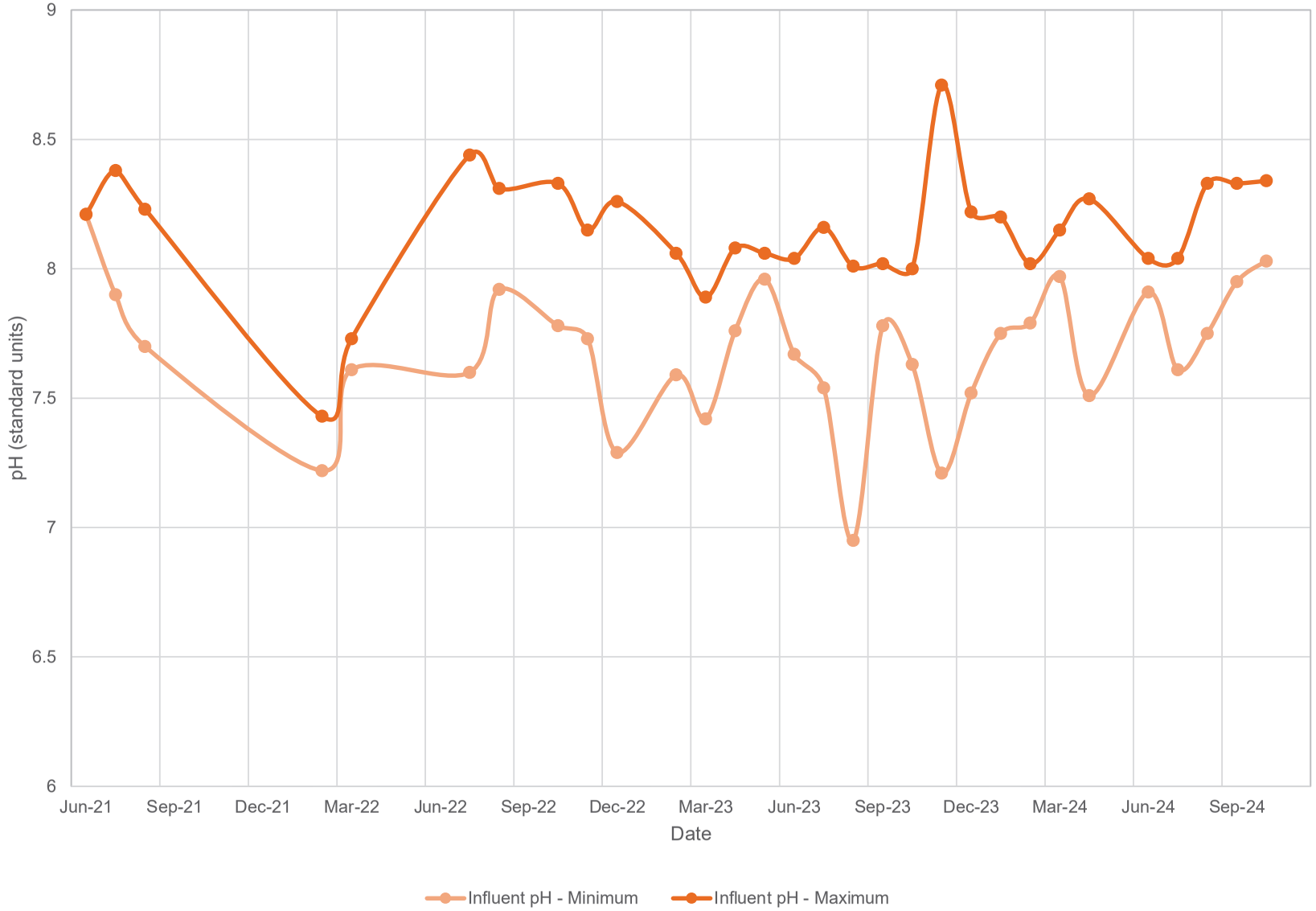


FIGURE 15
Nitrate + Nitrite Concentrations within Effluent
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

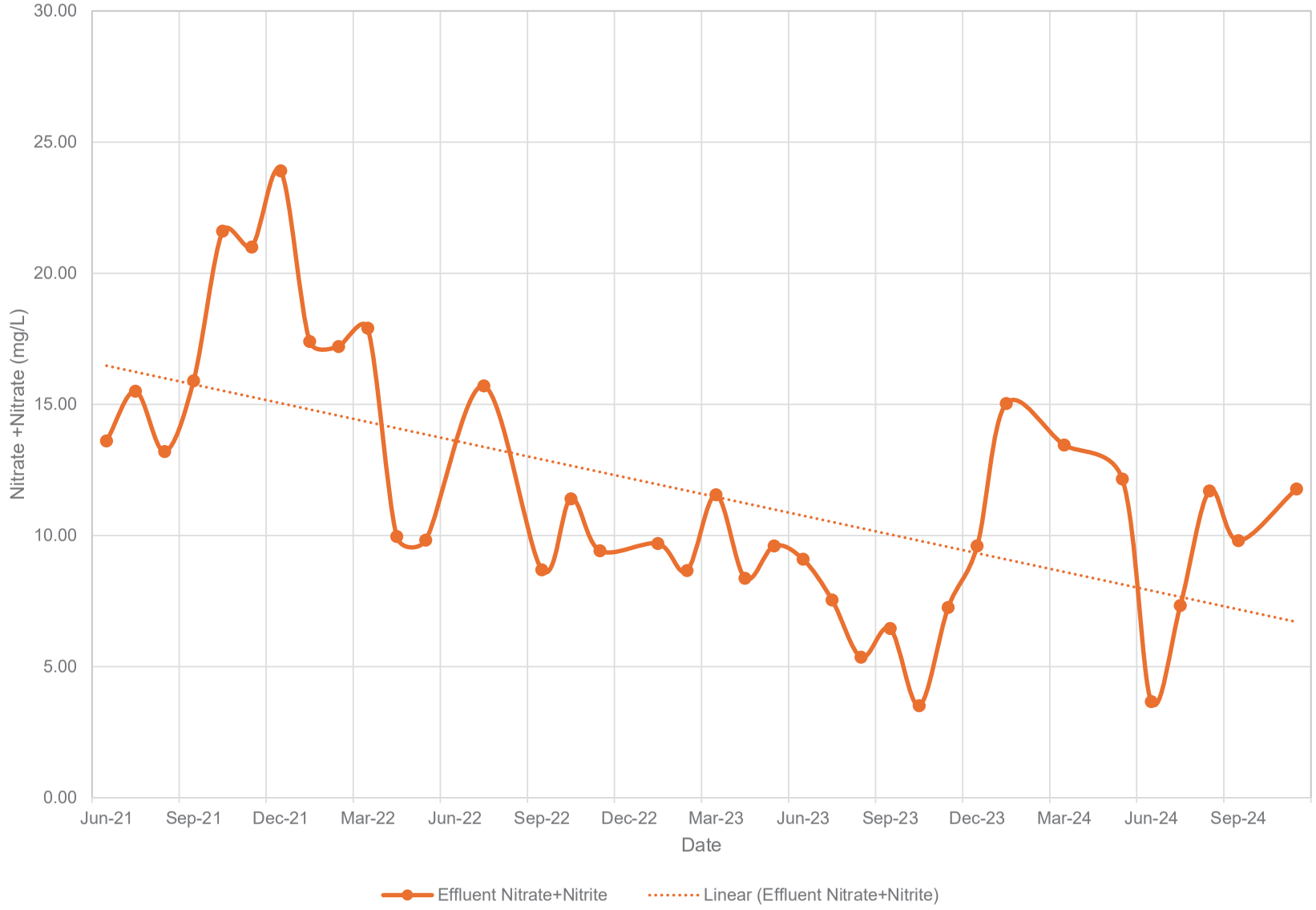


FIGURE 16
Comparison of Influent and Effluent Phosphorus
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

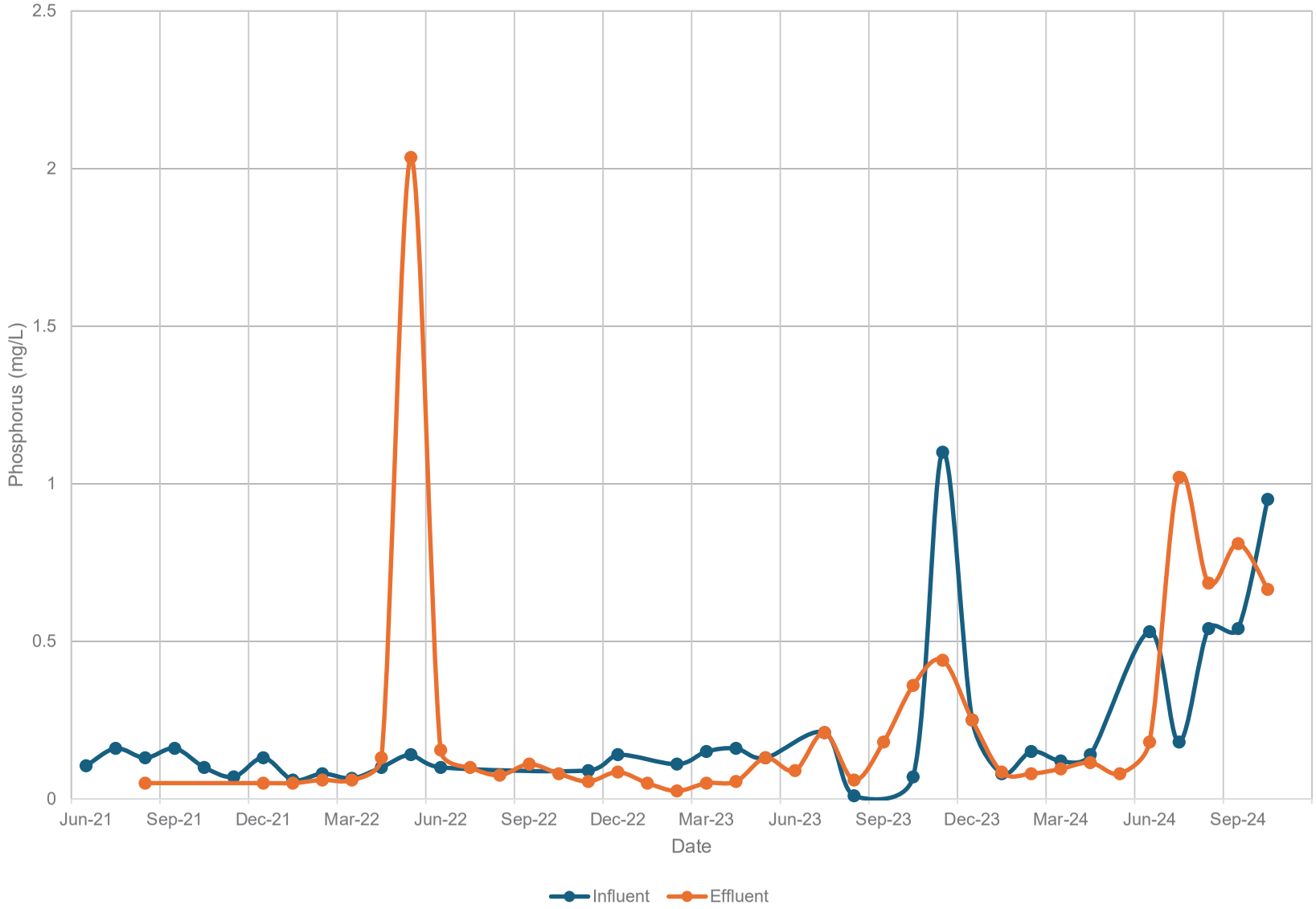


FIGURE 17
Nitrate for Field G Monitoring Wells
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

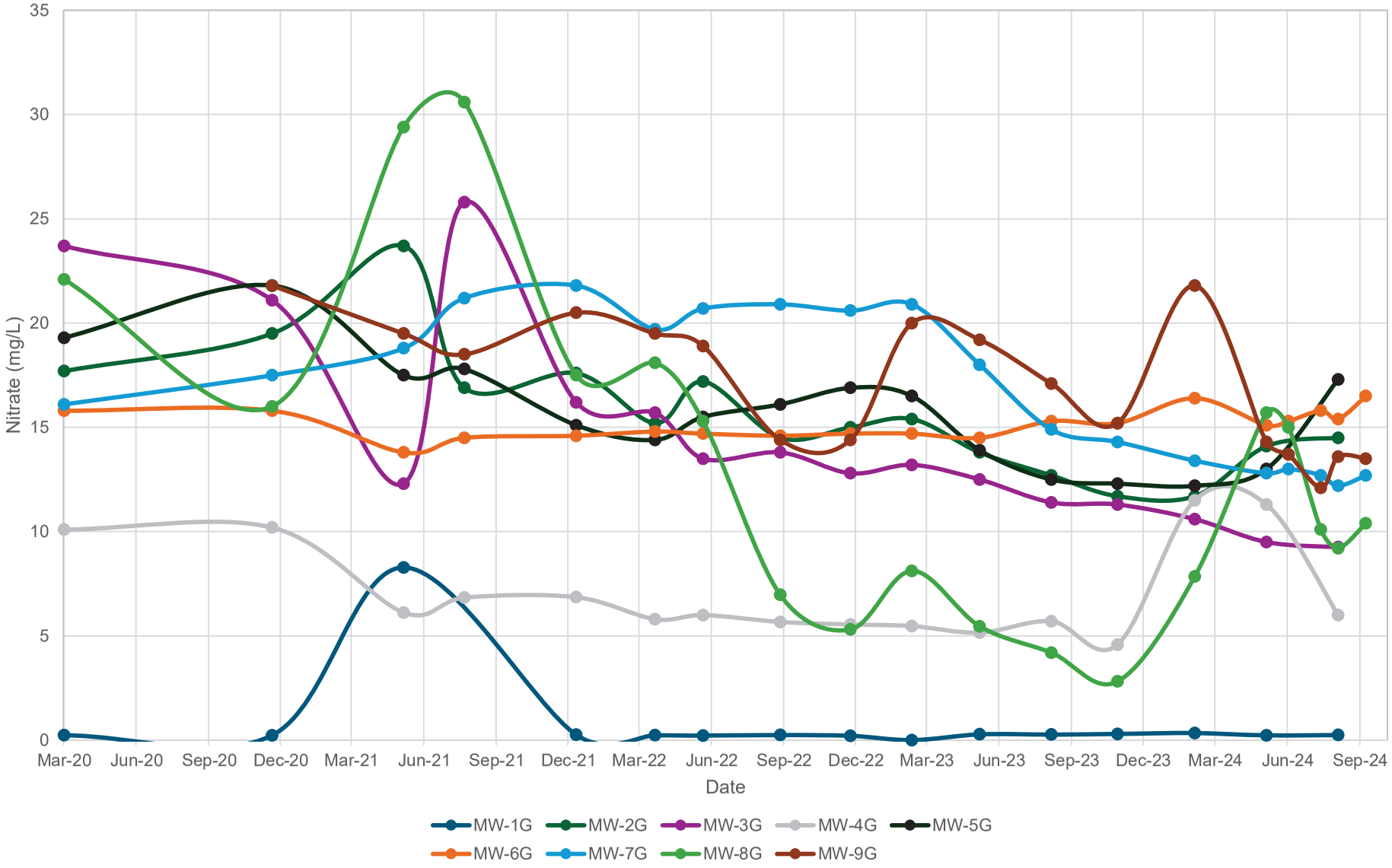


FIGURE 18
Nitrate for Field F and Lagoon Monitoring Wells
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

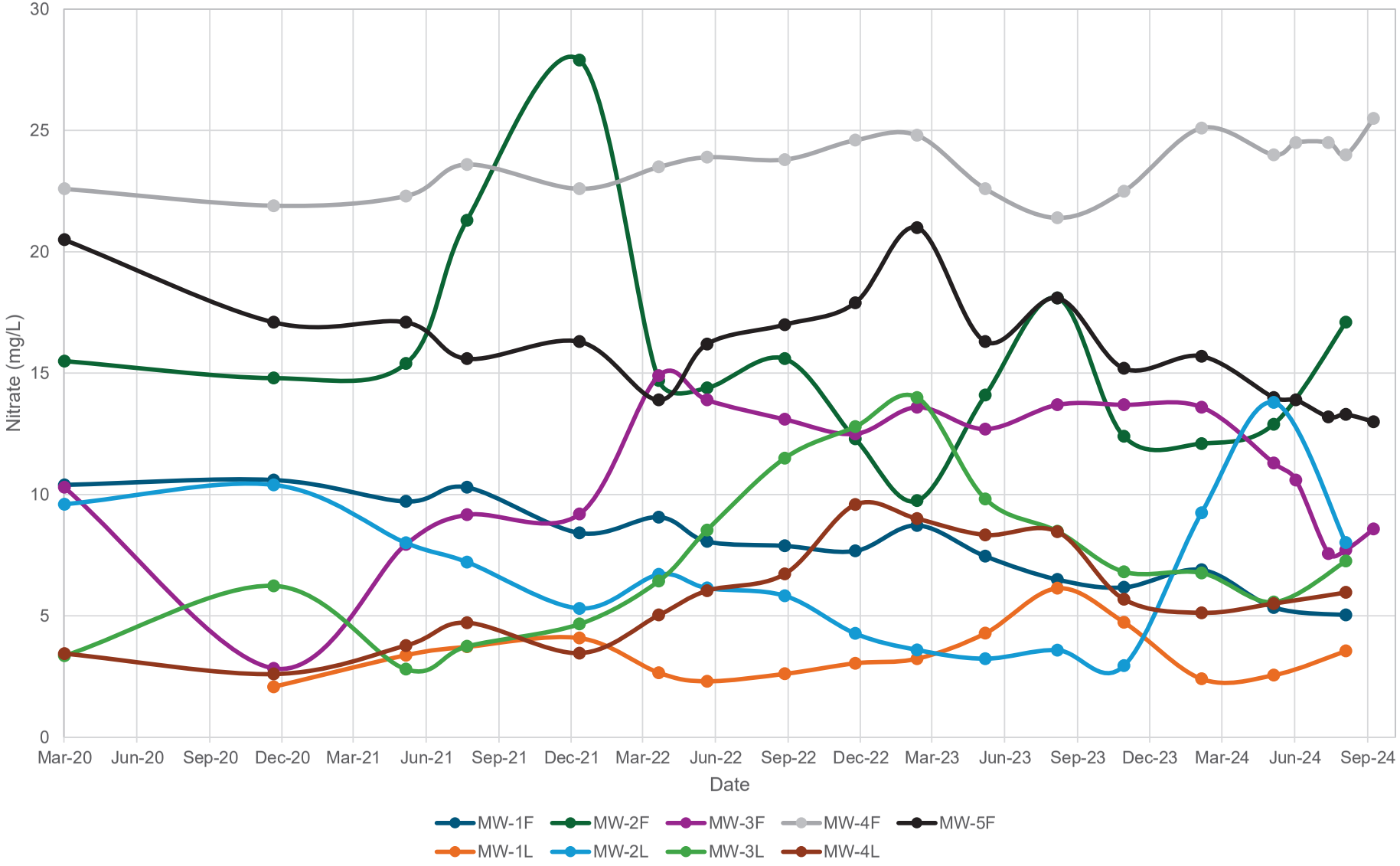


FIGURE 19
Ammonia for Field G Monitoring Wells
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

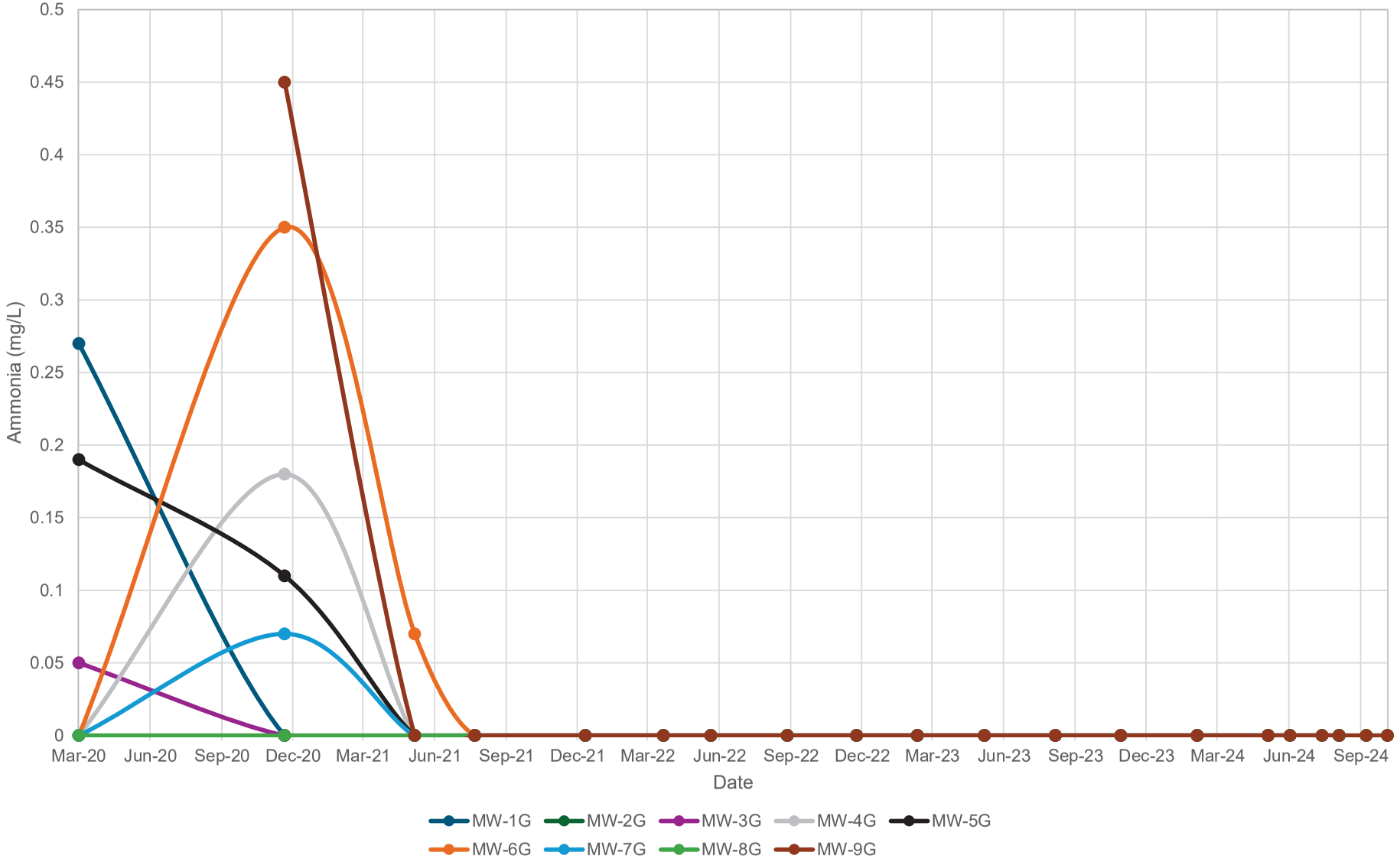


FIGURE 20
Ammonia Field F and Lagoon Monitoring Wells
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

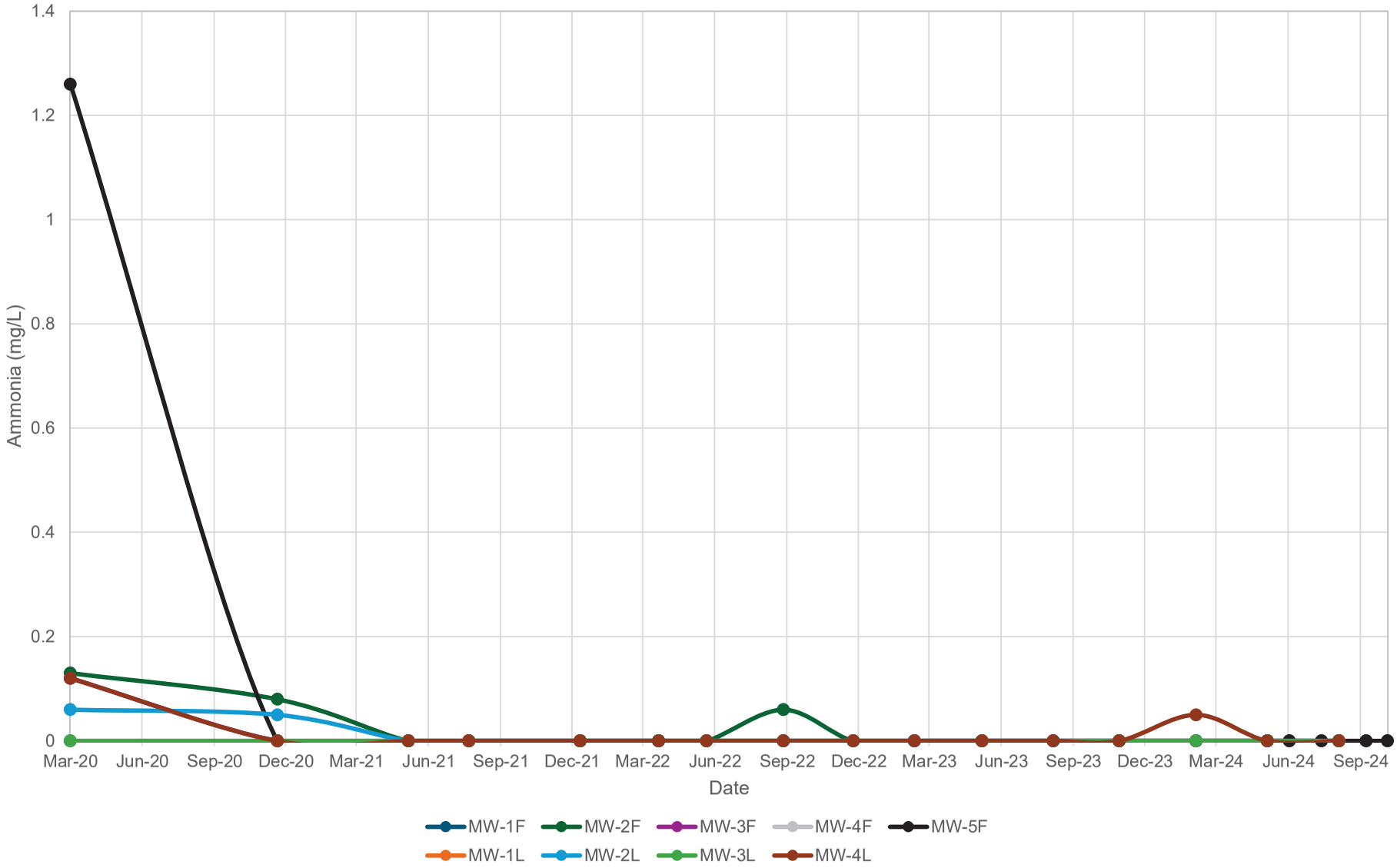


FIGURE 21
pH for Field G Monitoring Wells
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

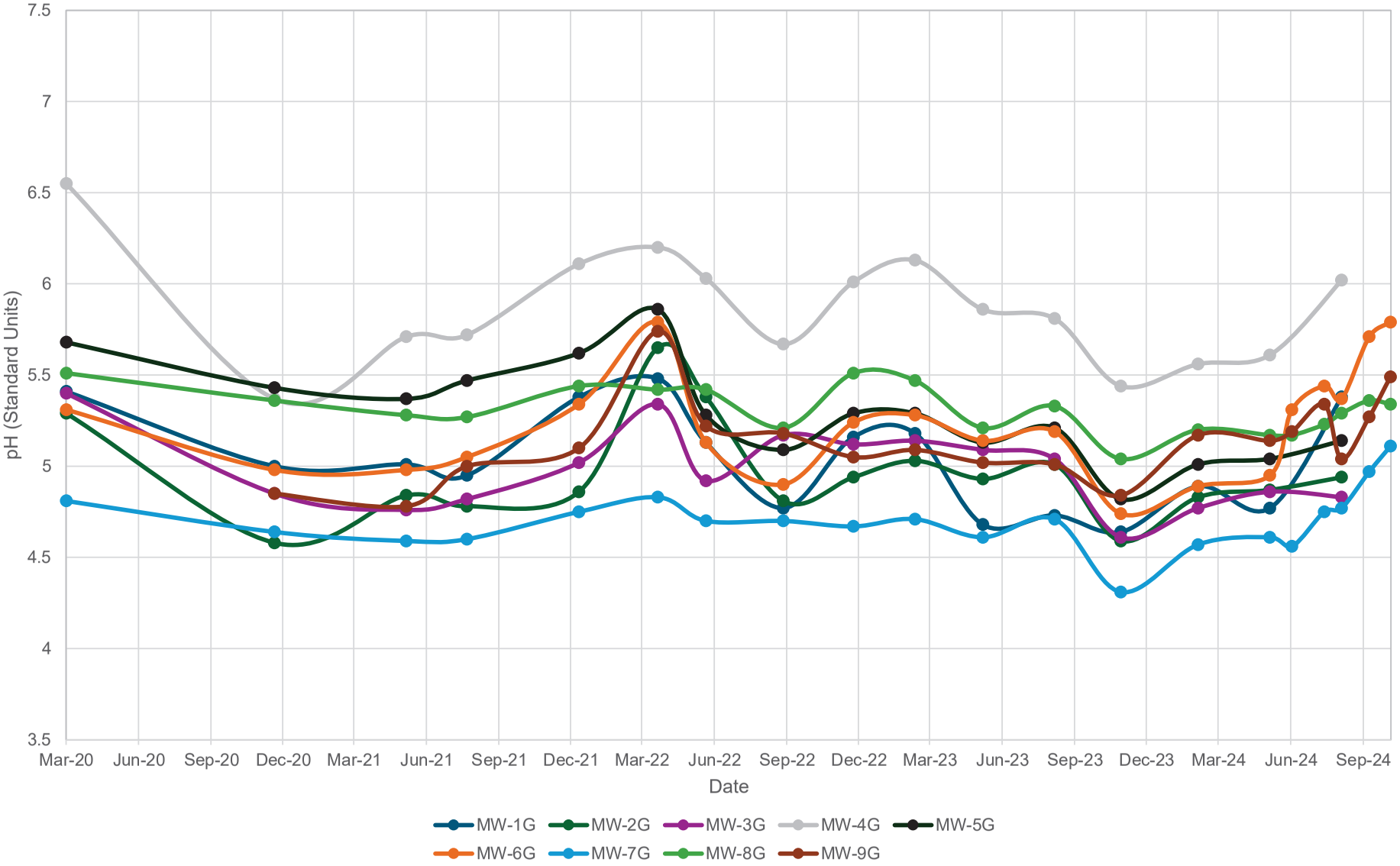


FIGURE 22
pH for Field F and Lagoon Monitoring Wells
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

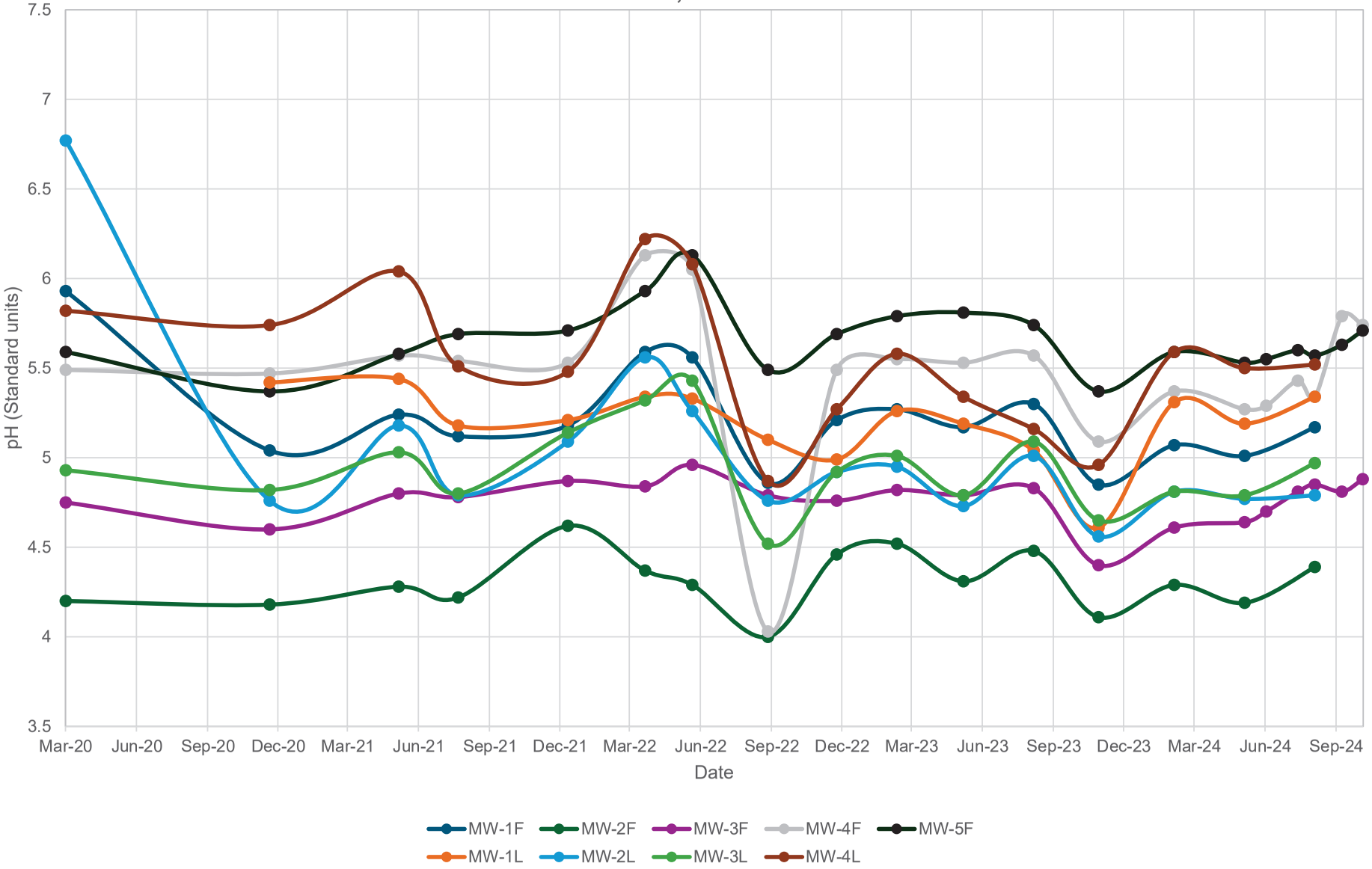


FIGURE 23a
Sodium and Chloride for Field G Monitoring Wells
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

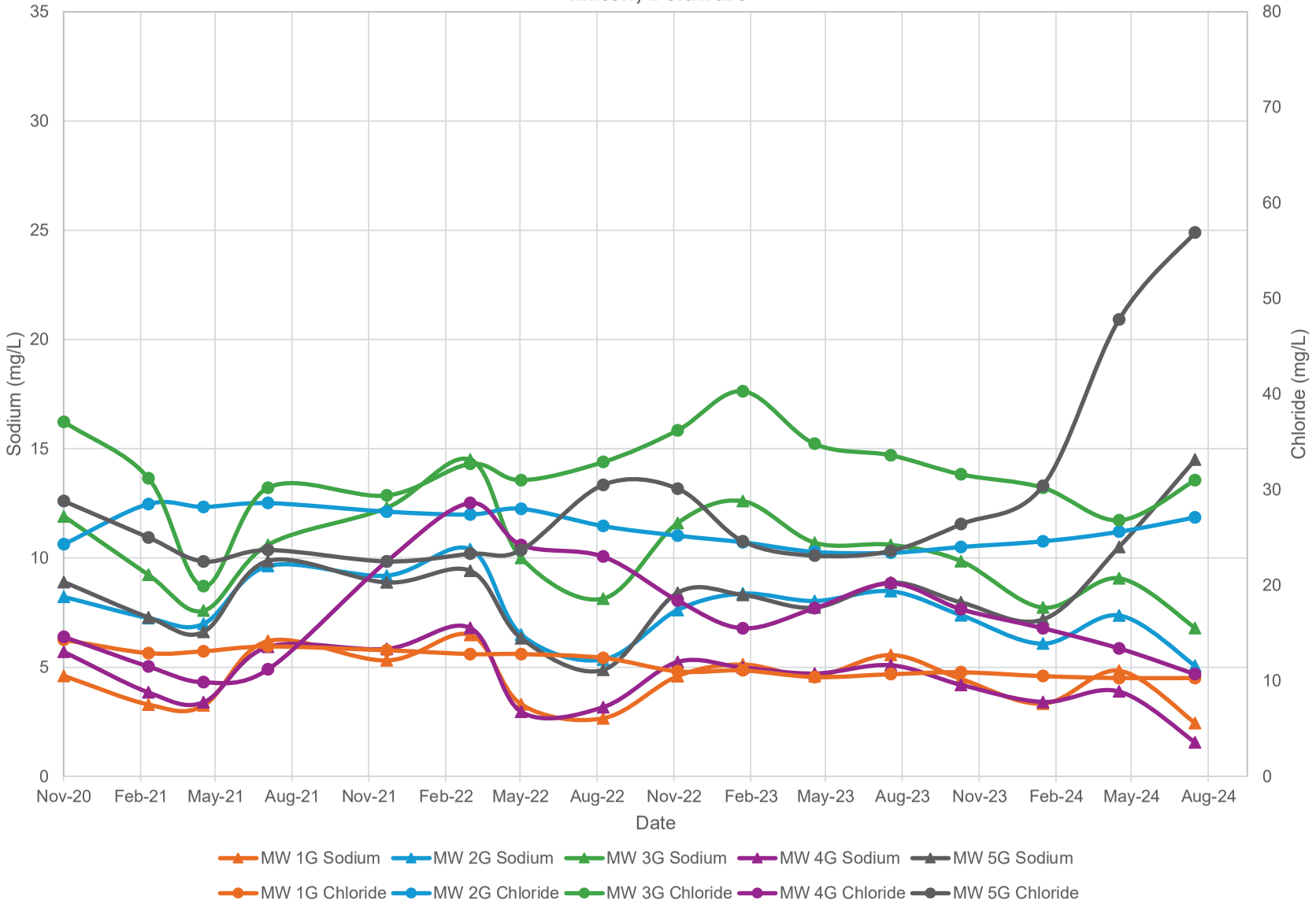


FIGURE 23b
Sodium and Chloride for Field G Monitoring Wells (Continued)
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

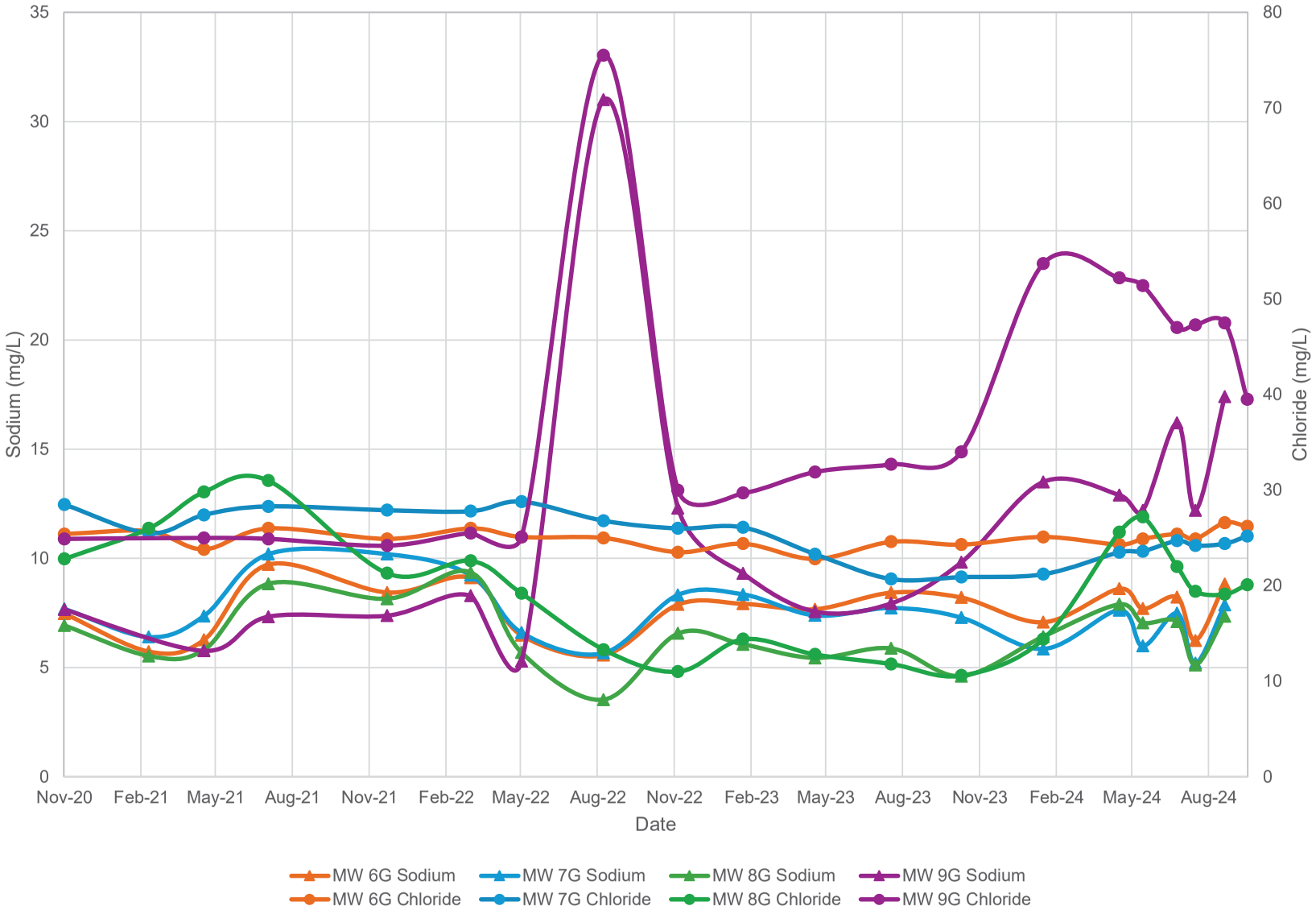


FIGURE 24
Sodium and Chloride for Field F Monitoring Wells
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

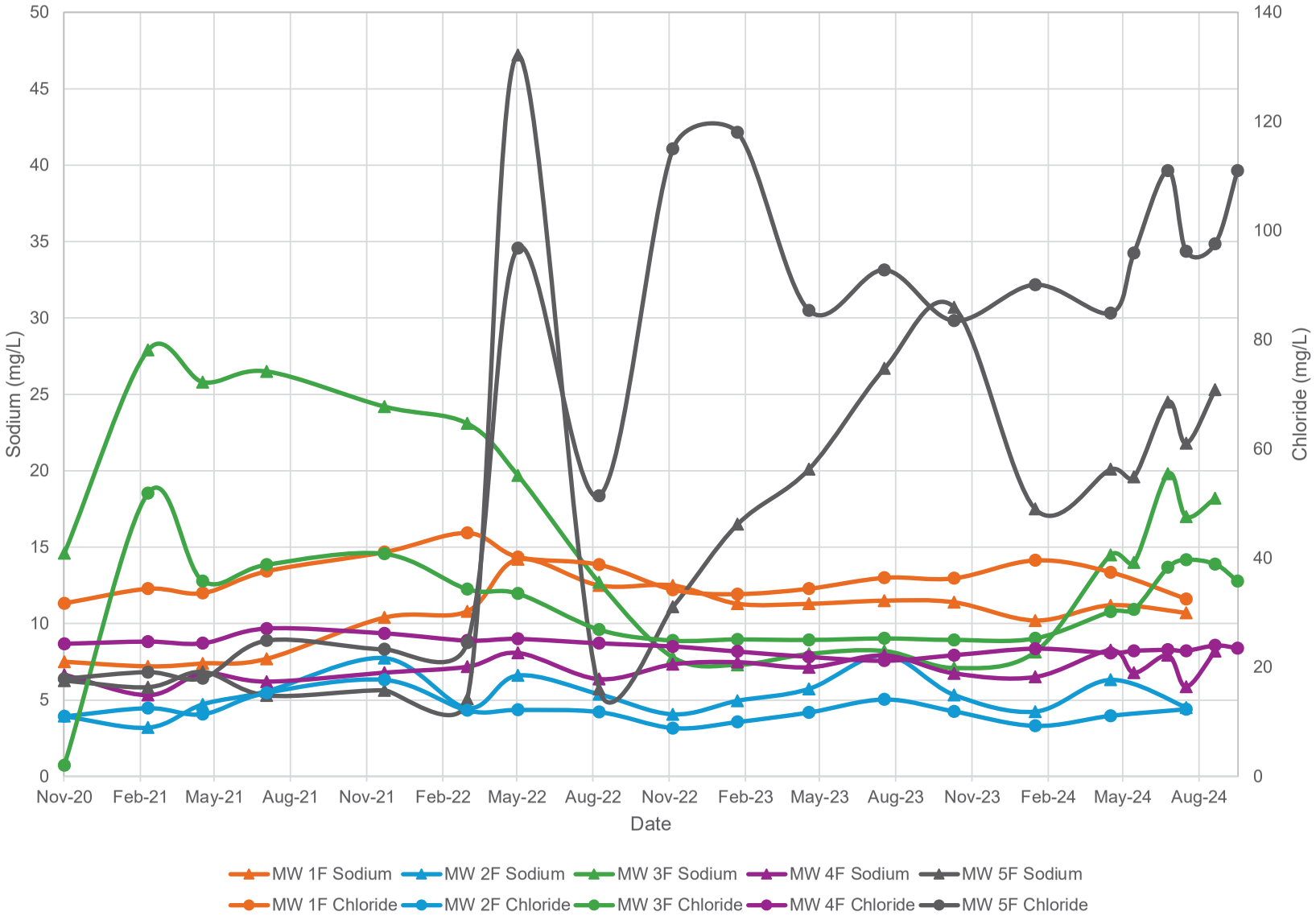


FIGURE 25
Sodium and Chloride for Lagoon Monitoring Wells
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

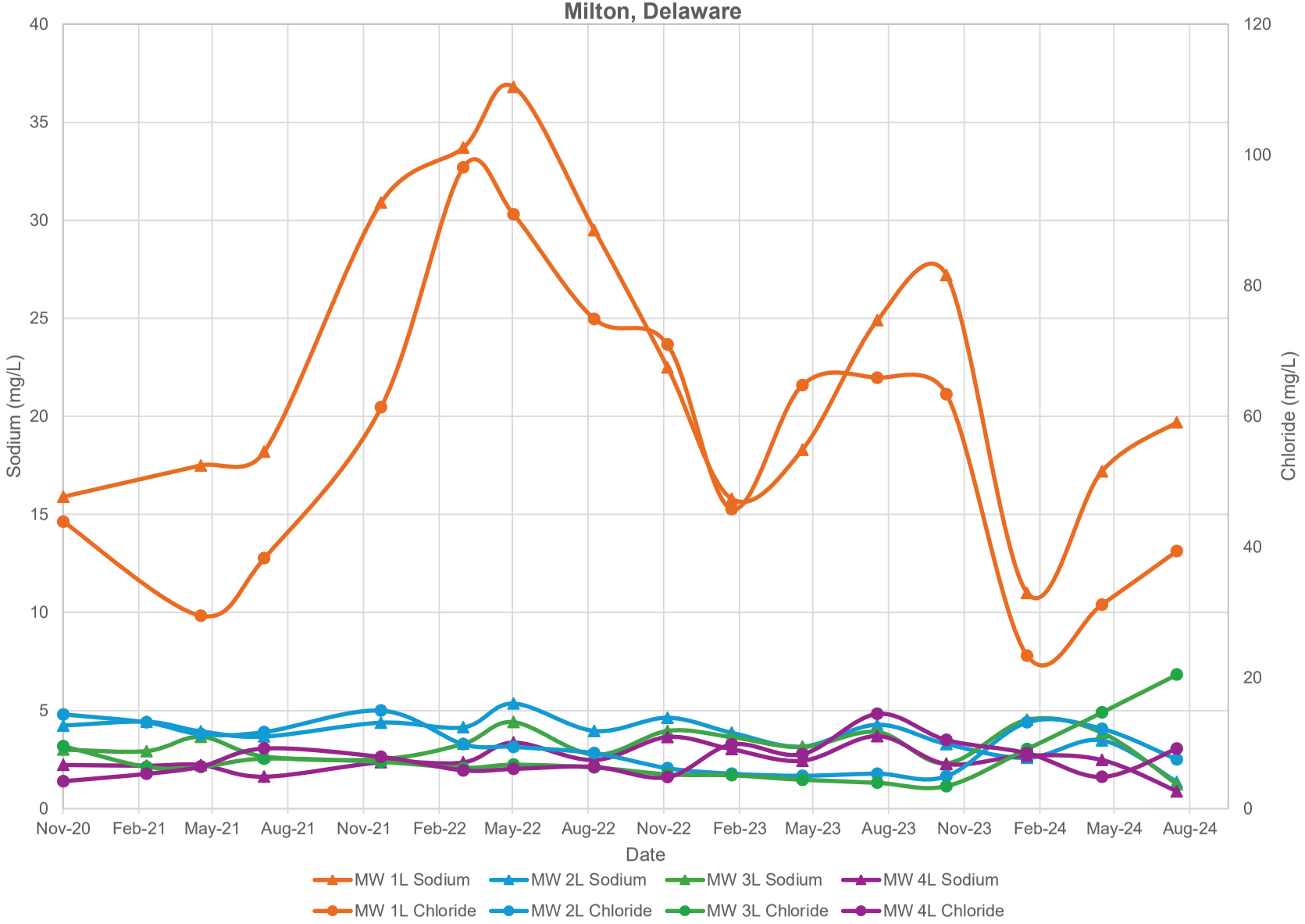


FIGURE 26
Nitrate Concentration for Lysimeters
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

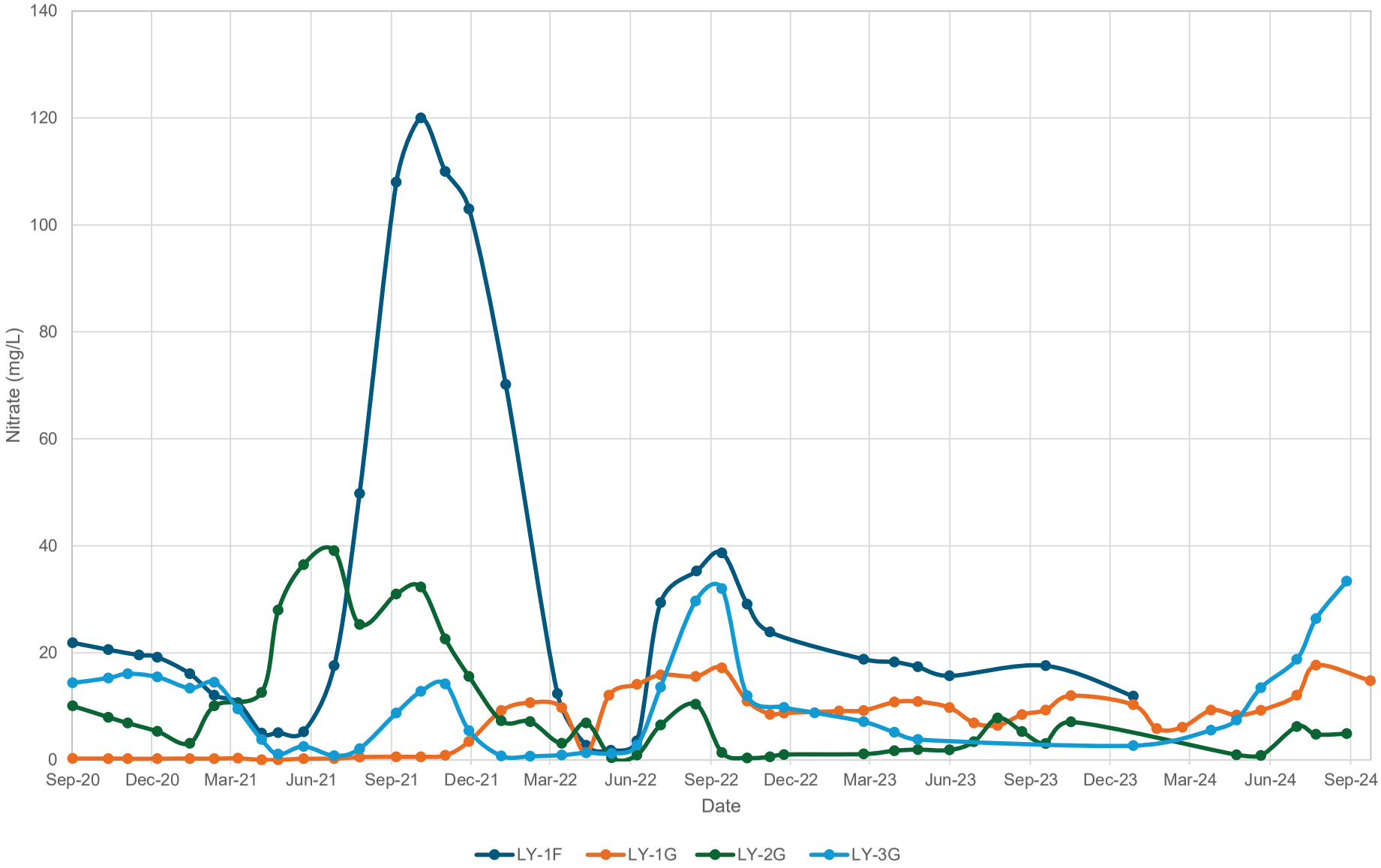


FIGURE 27
Sodium and Chloride Concentration for Lysimeters
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

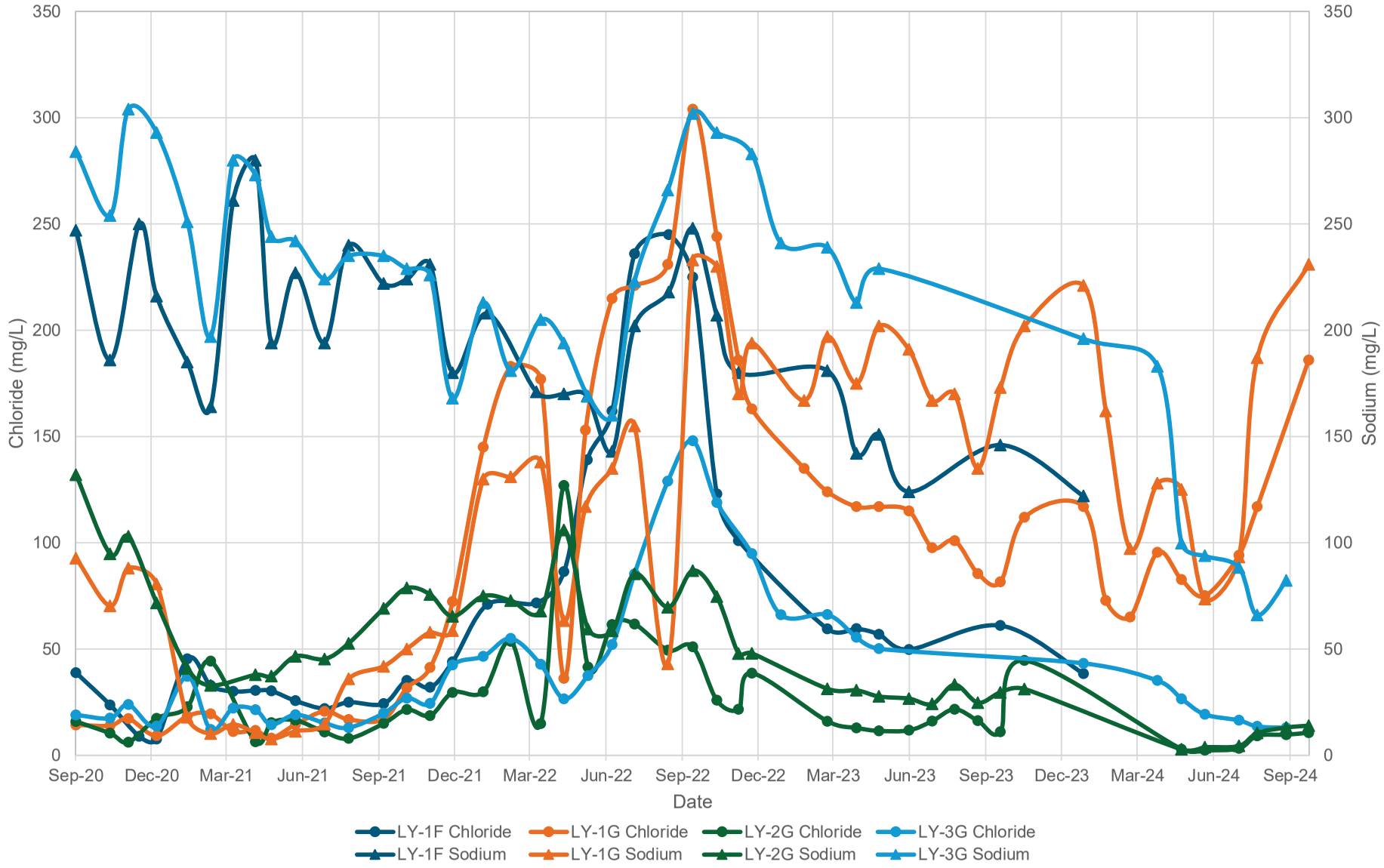


FIGURE 28
Total Dissolved Solids Concentration for Lysimeters
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

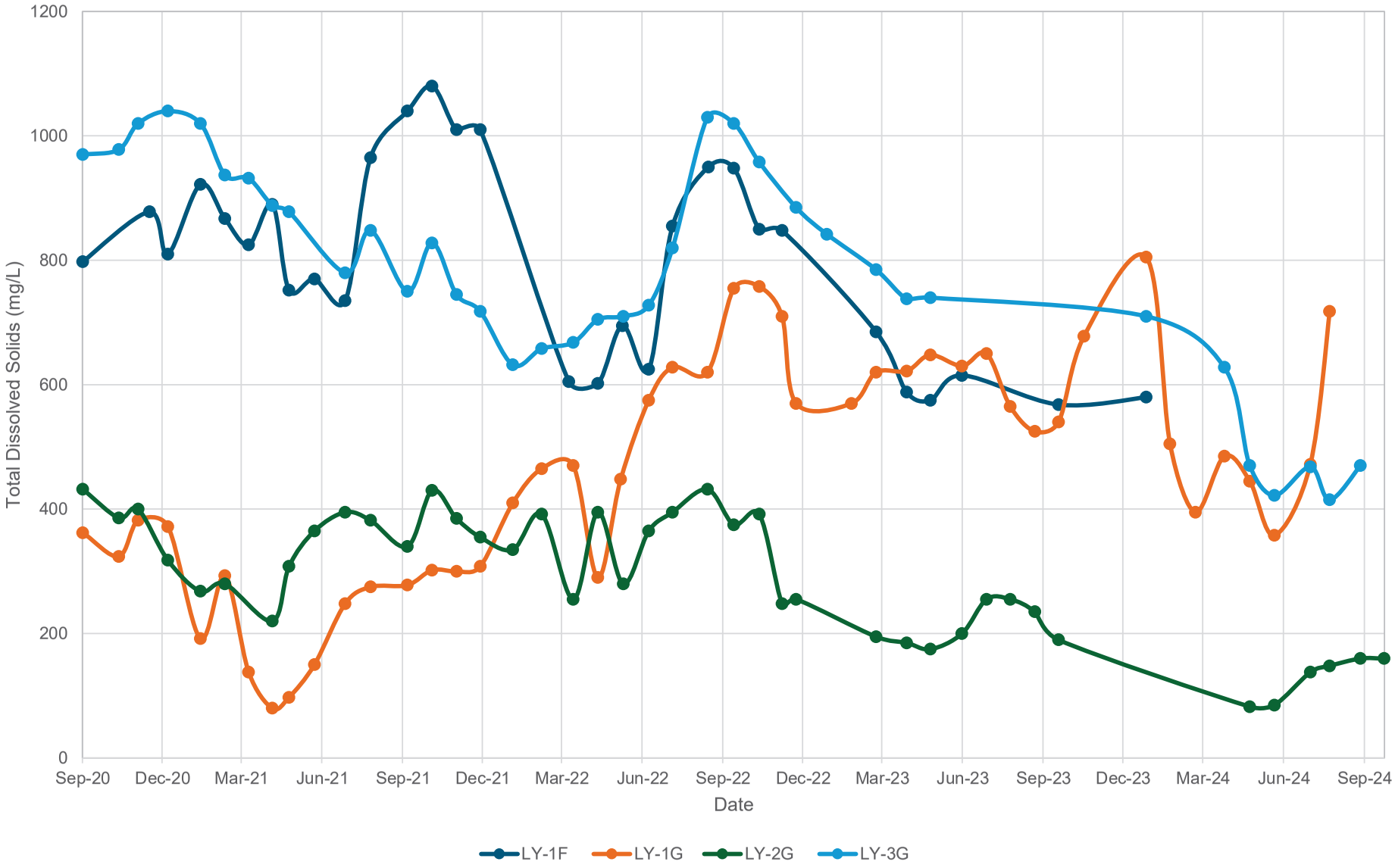


FIGURE 29
Chloride Concentrations for Surface Water
Sussex Regional Recycling Facility (SRRF)
Milton, Delaware

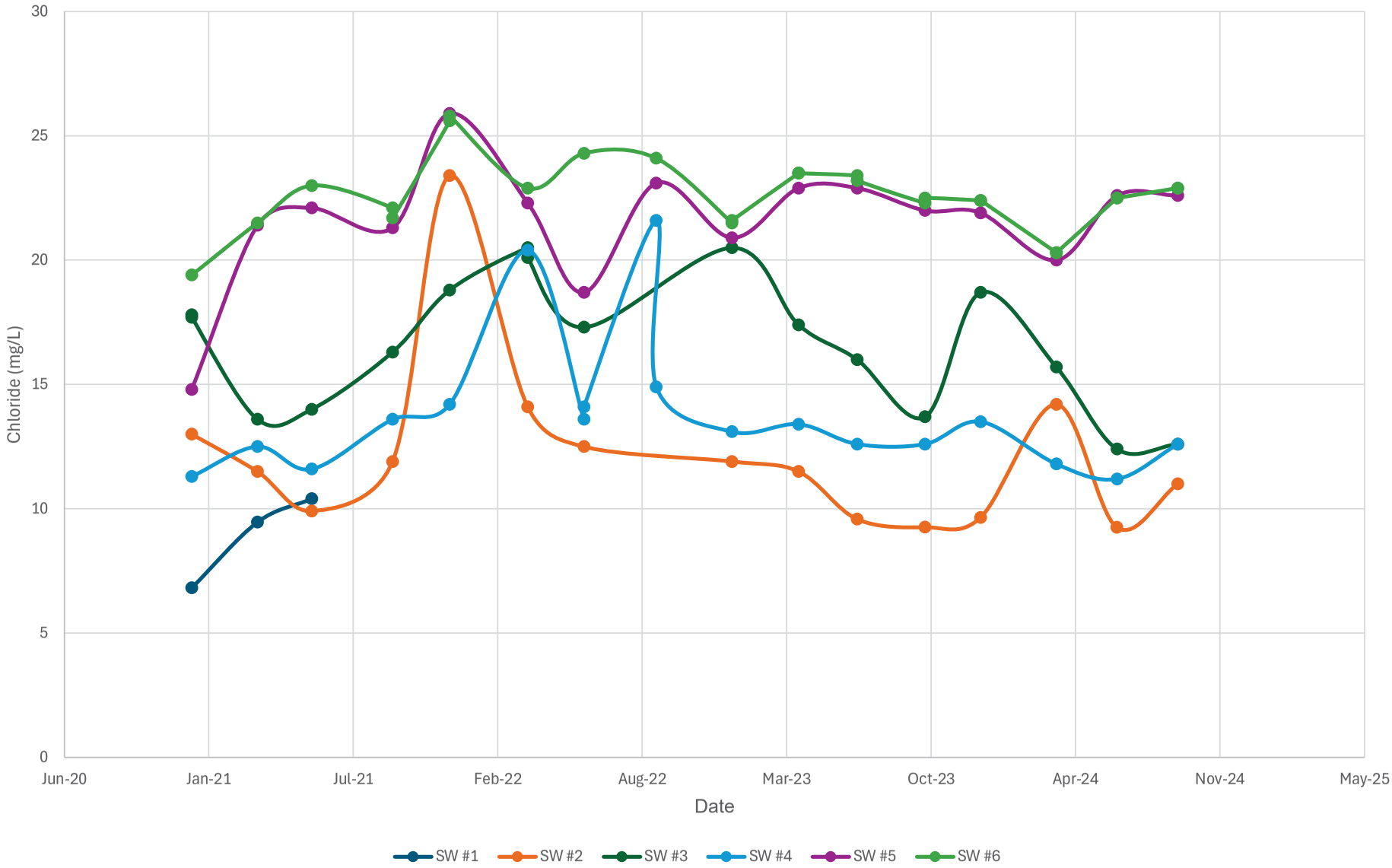


FIGURE 30
Sodium Concentrations for Surface Water
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

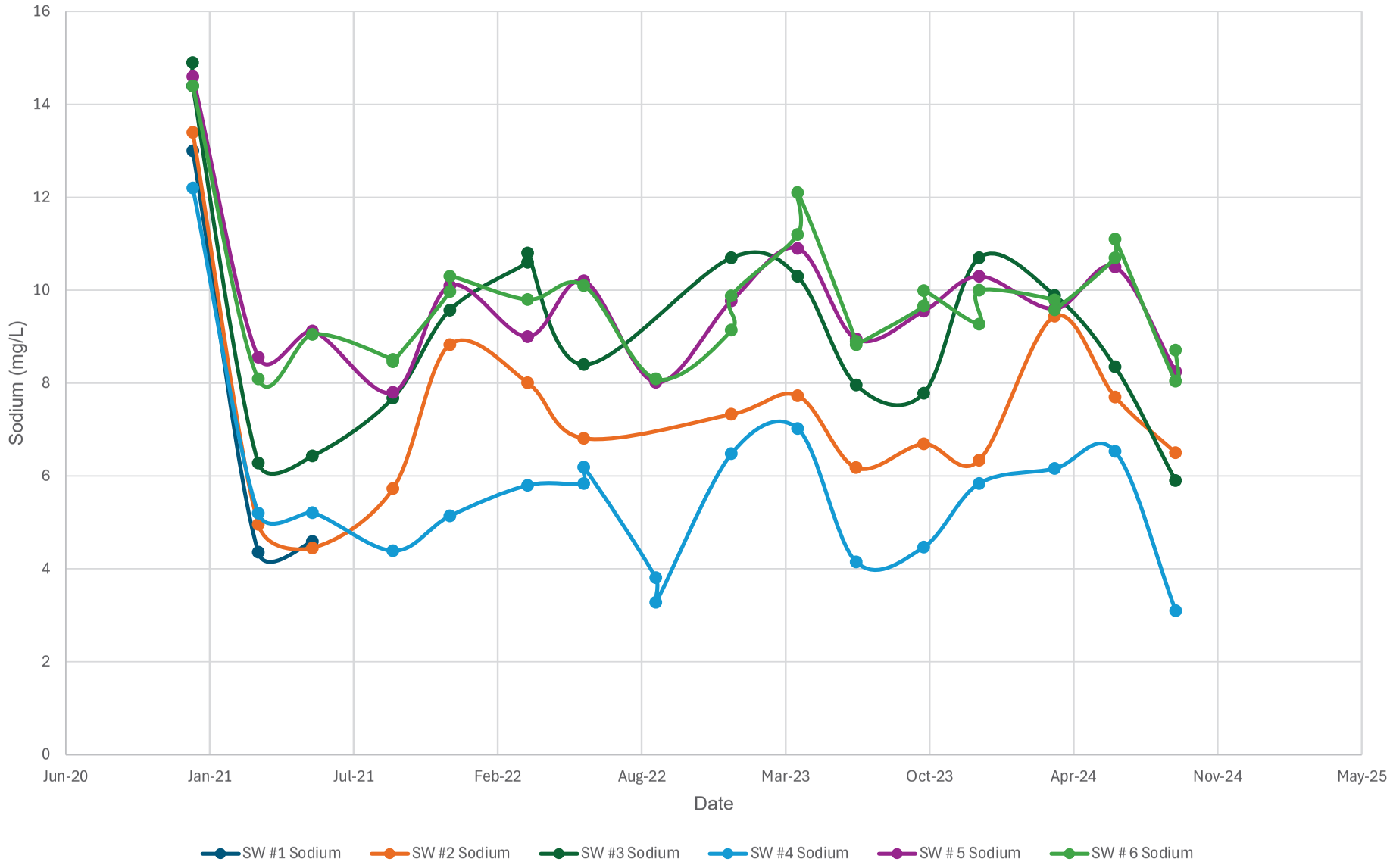
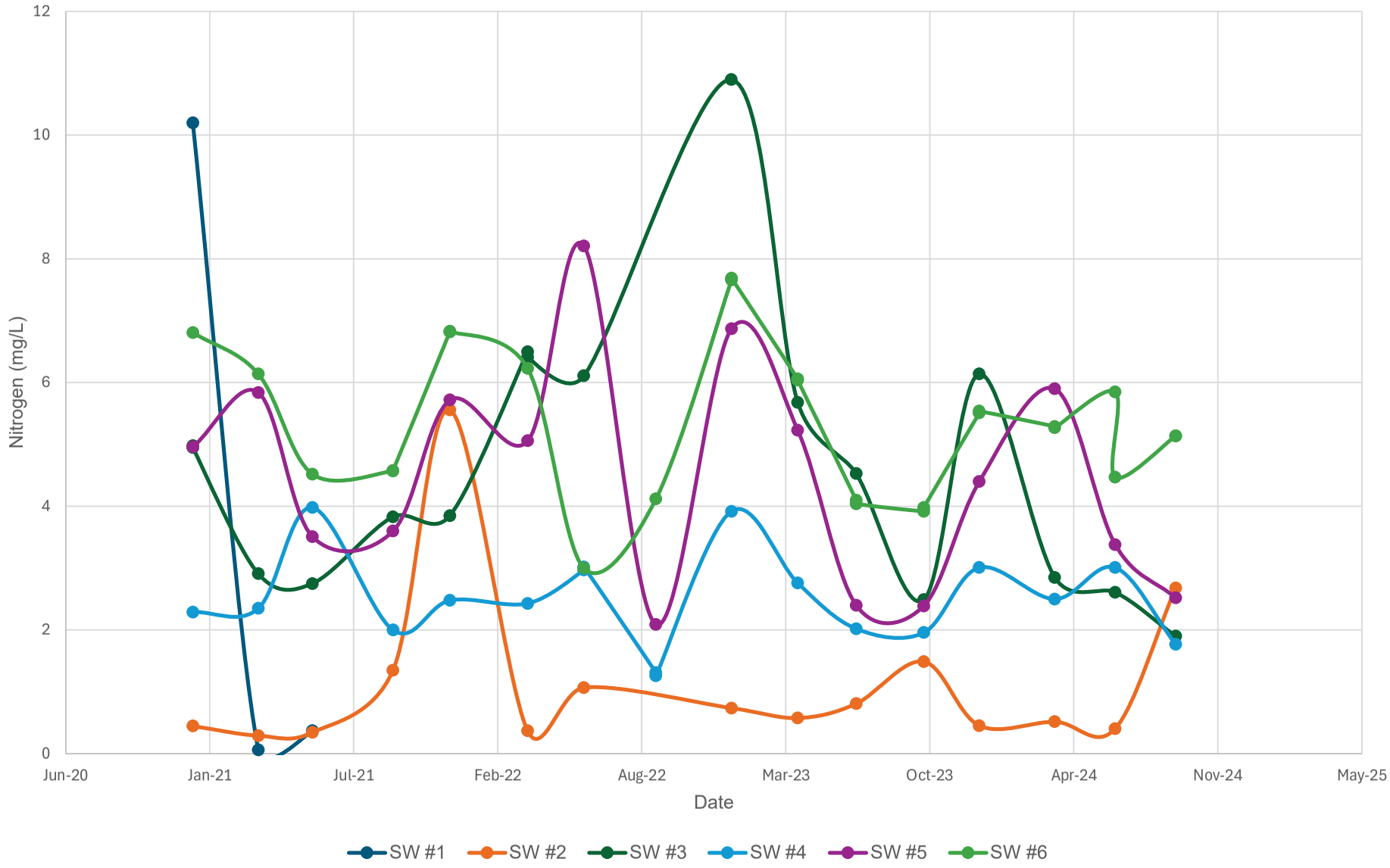


FIGURE 31
Nitrogen Concentrations for Surface Water
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware



BrightFields, Inc.
Environmental Services

TABLES

TABLE 1
Monitoring Well Information
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

WELL ID	MW-1F	MW-2F	MW-3F	MW-4F
WELL COORDINATES (X, Y)	678659.4499, 292178.7406	678622.9013, 294638.5831	680358.5968, 294139.1409	680439.6664, 290892.4545
WELL PERMIT NUMBER	258634	258632	258633	258635
TOC ELEVATION (ft. NAVD88)	33.98	33.93	29.03	20.98
TOP PVC ELEVATION (ft. NAVD88)	33.53	33.46	28.41	20.53
GROUND SURFACE ELEVATION (ft. NAVD88)	31.57	31.53	23.43	18.48
WELL DIAMETER (inches)	2.4	2.4	3.6	2.4
BORING TERMINATION DEPTH (ft. bgs)	30.0	30.0	30.0	30.0
SCREEN INTERVAL (ft. to ft. bgs)	20.0 to 30.0	20.0 to 30.0	20.0 to 30.0	20.0 to 30.0
SCREEN INTERVAL (ft. to ft. NAVD88)	11.6 to 1.6	11.5 to 1.5	3.4 to -6.6	-1.5 to -11.5

Notes:
bgs - Below ground surface.
TOC - Top of outer Casing.
TOP PVC - Top of inner PVC casing.
NAVD88 - North American Vertical Datum of 1988.

TABLE 1
Monitoring Well Information
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

WELL ID	MW-5F	MW-1L	MW-2L	MW-3L
WELL COORDINATES (X, Y)	679832.9407, 291671.8180	677468.7018, 291974.5083	678629.2661, 293086.5162	679169.7517, 292121.8508
WELL PERMIT NUMBER	258636	254881	254882	254883
TOC ELEVATION (ft. NAVD88)	29.55	36.67	35.67	30.69
TOP PVC ELEVATION (ft. NAVD88)	29.05	36.25	35.45	30.41
GROUND SURFACE ELEVATION (ft. NAVD88)	27.06	34.11	33.21	28.50
WELL DIAMETER (inches)	2.4	2.0	2.0	2.0
BORING TERMINATION DEPTH (ft. bgs)	30.0	23.0	23.0	23.0
SCREEN INTERVAL (ft. to ft. bgs)	20.0 to 30.0	8.0 to 23.0	8.0 to 23.0	8.0 to 23.0
SCREEN INTERVAL (ft. to ft. NAVD88)	7.1 to -2.9	26.1 to 11.1	25.2 to 10.2	20.5 to 5.5

Notes:
bgs - Below ground surface.
TOC - Top of outer Casing.
TOP PVC - Top of inner PVC casing.
NAVD88 - North American Vertical Datum of 1988.

TABLE 1
Monitoring Well Information
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

WELL ID	MW-4L	MW-1G	MW-2G	MW-3G
WELL COORDINATES (X, Y)	679195.8016, 291144.7183	670780.2504, 288412.3364	670295.0141, 285307.2183	672224.4433, 285627.8548
WELL PERMIT NUMBER	254884	258620	258628	258630
TOC ELEVATION (ft. NAVD88)	24.95	41.88	44.70	40.82
TOP PVC ELEVATION (ft. NAVD88)	24.70	41.55	44.23	40.37
GROUND SURFACE ELEVATION (ft. NAVD88)	21.83	39.08	42.18	38.48
WELL DIAMETER (inches)	2.0	2.4	2.4	2.4
BORING TERMINATION DEPTH (ft. bgs)	20.0	30.0	30.0	30.0
SCREEN INTERVAL (ft. to ft. bgs)	5.0 to 20.0	20.0 to 30.0	20.0 to 30.0	20.0 to 30.0
SCREEN INTERVAL (ft. to ft. NAVD88)	16.8 to 1.8	19.1 to 9.1	22.2 to 12.2	18.5 to 8.5

Notes:
bgs - Below ground surface.
TOC - Top of outer Casing.
TOP PVC - Top of inner PVC casing.
NAVD88 - North American Vertical Datum of 1988.

TABLE 1
Monitoring Well Information
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

WELL ID	MW-4G	MW-5G	MW-6G	MW-7G
WELL COORDINATES (X, Y)	672729.5286, 285708.6290	675431.3659, 286169.3902	677758.4328, 286545.2104	677774.4105, 288382.5136
WELL PERMIT NUMBER	258631	258625	258626	2586297
TOC ELEVATION (ft. NAVD88)	41.72	38.11	34.70	35.64
TOP PVC ELEVATION (ft. NAVD88)	41.30	37.41	34.09	35.22
GROUND SURFACE ELEVATION (ft. NAVD88)	39.13	35.28	32.14	33.23
WELL DIAMETER (inches)	2.4	2.4	2.4	2.4
BORING TERMINATION DEPTH (ft. bgs)	30.0	30.0	30.0	30.0
SCREEN INTERVAL (ft. to ft. bgs)	20.0 to 30.0	20.0 to 30.0	20.0 to 30.0	20.0 to 30.0
SCREEN INTERVAL (ft. to ft. NAVD88)	19.1 to 9.1	15.3 to 5.3	12.1 to 2.1	13.2 to 3.2

Notes:
bgs - Below ground surface.
TOC - Top of outer Casing.
TOP PVC - Top of inner PVC casing.
NAVD88 - North American Vertical Datum of 1988.

TABLE 1
Monitoring Well Information
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

WELL ID	MW-8G	MW-9G
WELL COORDINATES (X, Y)	677518.5050, 290245.4729	676411.2215, 287530.3154
WELL PERMIT NUMBER	258629	258624
TOC ELEVATION (ft. NAVD88)	30.94	36.15
TOP PVC ELEVATION (ft. NAVD88)	30.27	35.65
GROUND SURFACE ELEVATION (ft. NAVD88)	28.26	33.67
WELL DIAMETER (inches)	2.4	2.4
BORING TERMINATION DEPTH (ft. bgs)	30.0	30.0
SCREEN INTERVAL (ft. to ft. bgs)	20.0 to 30.0	20.0 to 30.0
SCREEN INTERVAL (ft. to ft. NAVD88)	8.3 to -1.7	13.7 to 3.7

Notes:
bgs - Below ground surface.
TOC - Top of outer Casing.
TOP PVC - Top of inner PVC casing.
NAVD88 - North American Vertical Datum of 1988.

TABLE 2
Piezometer Information
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

PIEZOMETER ID	PZ-1F			PZ-1G			PZ-2G			PZ-3G		
WELL COORDINATES	679677.626, 291178.605			673460.684, 286572.977			672877.714, 287331.570			673390.474, 288135.210		
WELL PERMIT NUMBER	265831			265838			265837			265832		
GROUND SURFACE ELEVATION (ft. NAVD88)	22.53			35.45			37.31			32.78		
TOC ELEVATION (ft. NAVD88)	25.53			38.86			41.29			43.00		
TOP PVC ELEVATION (ft. NAVD88)	25.43*			37.92			39.21*			35.58*		
WELL DIAMETER (inches)	2.0			2.0			2.0			2.0		
BORING TERMINATION DEPTH (ft. bgs)	7.1			7.5			8.10			8.2		
SCREEN INTERVAL (ft. to ft. bgs)	3.1	to	7.1	3.5	to	7.5	4.1	to	8.1	4.2	to	8.2
SCREEN INTERVAL (ft. to ft. NAVD88)	19.43	to	15.43	31.95	to	27.95	33.21	to	29.21	28.58	to	24.58

Notes:
bgs - Below ground surface.
TOC - Top of outer 6" Casing.
TOP PVC - Top of inner 2" PVC Casing.

* Elevation calculated based off of boring termination depth and ground surface elevation. All piezometers were constructed using 10-foot length.
NAVD88 - North American Vertical Datum of 1988.

TABLE 2
Piezometer Information
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

PIEZOMETER ID	PZ-4G			PZ-5G			PZ-6G			PZ-7G		
WELL COORDINATES	674065.013, 288414.146			675090.469, 288843.705			675685.644, 290137.073			677328.191, 290052.493		
WELL PERMIT NUMBER	265836			265829			265833			265830		
GROUND SURFACE ELEVATION (ft. NAVD88)	32.64			32.67			31.58			25.91		
TOC ELEVATION (ft. NAVD88)	36.24			35.97			34.63			29.58		
TOP PVC ELEVATION (ft. NAVD88)	36.14*			35.23*			33.21			29.92		
WELL DIAMETER (inches)	2.0			2.0			2.0			2.0		
BORING TERMINATION DEPTH (ft. bgs)	6.5			7.35			8.4			6		
SCREEN INTERVAL (ft. to ft. bgs)	2.5	to	6.5	3.35	to	7.35	4.4	to	8.4	2.0	to	6.0
SCREEN INTERVAL (ft. to ft. NAVD88)	30.14	to	26.14	29.32	to	25.32	27.18	to	23.18	23.9	to	19.9

Notes:
bgs - Below ground surface.
TOC - Top of outer 6" Casing.
TOP PVC - Top of inner 2" PVC Casing.

* Elevation calculated based off of boring termination depth and ground surface elevation. All piezometers were constructed using 10-foot length.
NAVD88 - North American Vertical Datum of 1988.

TABLE 3
Lysimeter Information
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

LYSIMETER ID	LY-1F	LY-1G	LY-2G	LY-3G
COORDINATES	679495.573, 293269.773	674487.879, 288661.914	676307.296, 287554.076	671947.271, 286105.918
PERMIT NUMBER	265827	265835	265834	265828
TOC ELEVATION (ft. NAVD88)	35.73	36.22	36.10	43.25
TOP PVC ELEVATION (ft. NAVD88)	35.23	35.38	35.82	42.82
GROUND SURFACE ELEVATION (ft. NAVD88)	33.13	34.27	33.80	40.65
DIAMETER (inches)	2.0	2.0	2.0	2.0
BORING TERMINATION DEPTH (ft. bgs)	4.2	4.2	5.0	4.2
SCREEN INTERVAL (ft. to ft. bgs)	4.0 to 4.2	4.0 to 4.2	4.8 to 5.0	4.0 to 4.2
SCREEN INTERVAL (ft. to ft. NAVD88)	29.1 to 28.9	30.3 to 30.1	29.0 to 28.8	36.7 to 36.5

Notes:
bgs - Below ground surface.
TOC - Top of outer Casing.
TOP PVC - Top of inner PVC casing.
NAVD88 - North American Vertical Datum of 1988.

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APPENDICES

BrightFields, Inc.
Environmental Services

Appendix A

Soils Report

Lanchester Soil Consultants, inc.

325 East Avondale Road **610.637.4118**
West Grove, PA 19390
www.Soildude.com soildude@comcast.net

December 11, 2024

State of DE
DNREC
89 King's Highway
Dover, DE 19901

Re: Sussex Regional Recharge Facility (SRRF)
Permit # 359288-02

To Whom It May Concern:

This letter is written in accordance with 7 Delaware Code, Chapter 60, Section 6.5.4.3. of the regulations addressing the long-term operation of this facility.

The facility is located at the intersection of Milton Ellendale highway (Route 16) and Isaacs Road (Route 30), north of Milton, DE. Field F is located on the east side of Isaacs Road (Route 30) approximately 4200' north of the intersection with Route 16. Field G is located on the northwestern corner of Route 16 & 30 with a small portion extending to the south side of Route 16 (see figure 1).

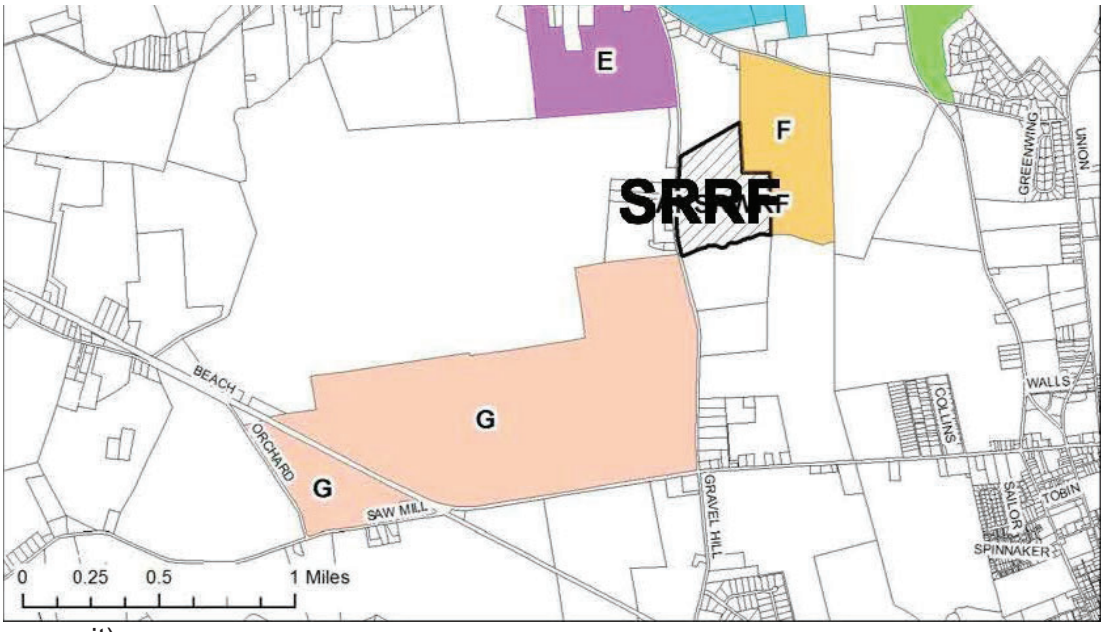


Figure 1 (from permit).

No new soil borings were conducted (section 6.5.4.3.1.1) as no replacement area is provided for this facility at this time.

Figure 2 illustrates the location of the spray fields and monitoring wells located on the site in accordance with section 6.5.4.3.1.2.

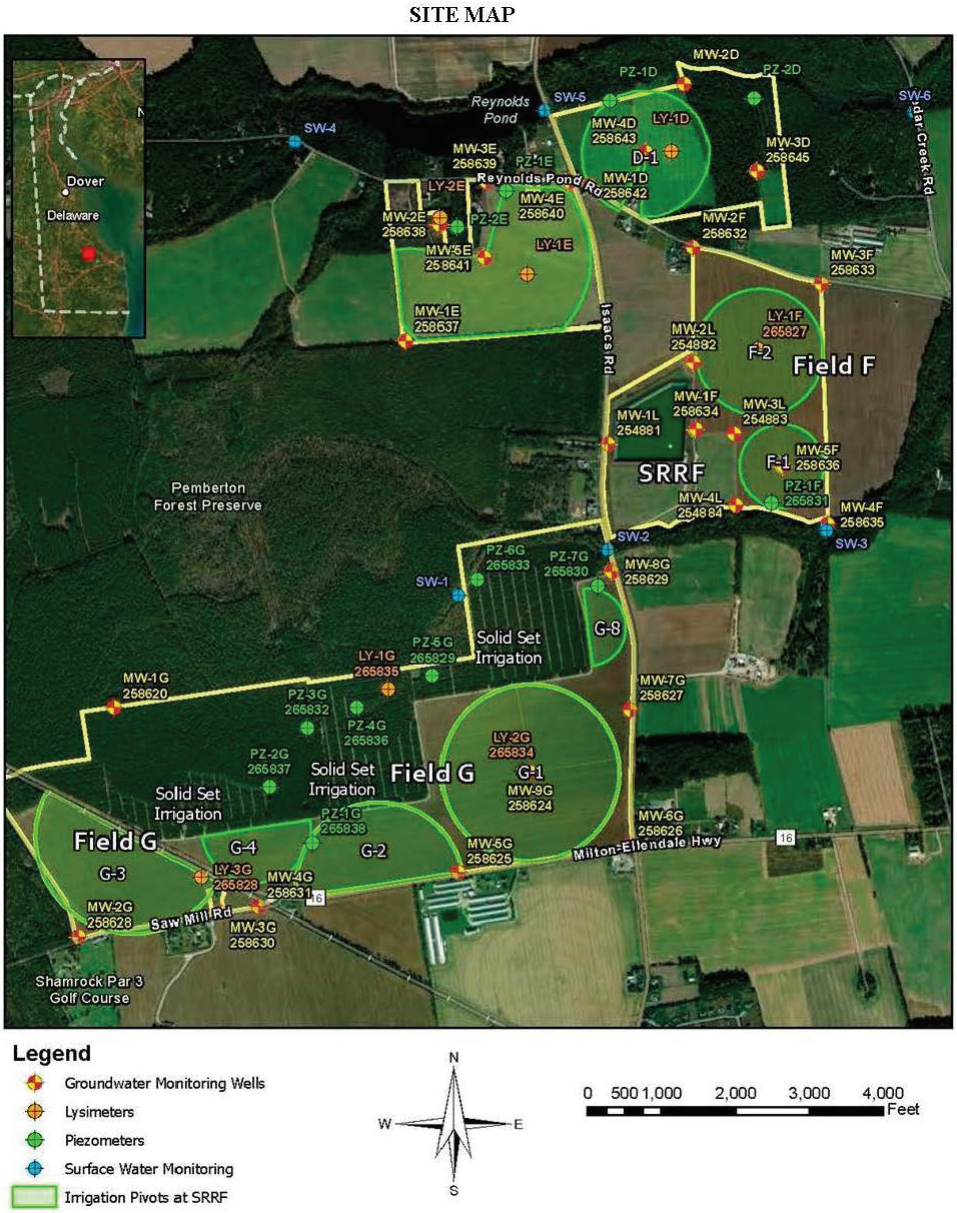


Figure 2 (from permit).

A site visit was conducted on Friday, November 22, 2024, where the site was traversed and inspected to look for any features as noted in section 6.5.4.3.1.1.3. It must be noted that this site visit occurred near the end of a long dry spell, which saw drought conditions in much of the northeastern United States. As such, observations may not reflect all possible meteorological conditions. Three puddles were noted as illustrated in figure 3 (below). These areas are designated puddles 1-3, all of which appear to be normal ruts that are the result of vehicular traffic. Puddle 1 is located within the wooded area but is located on a track that has seen vehicular traffic in the past. Puddles 2 and 3 are located in cartways. Such rutting is to be expected wherever vehicular traffic occurs. It is interesting to note that the low area around MW-8G showed no evidence of any present or past ponding, despite the fact that it is in a low area. At this time, I do not recommend any remedial action for these areas, however, they should be monitored during periods of normal precipitation to see if they become a

concern. If ponding persists or increase, then remediation of these areas by a combination of filling and chisel plowing is recommended to prevent the propagation of mosquitos and other vectors.

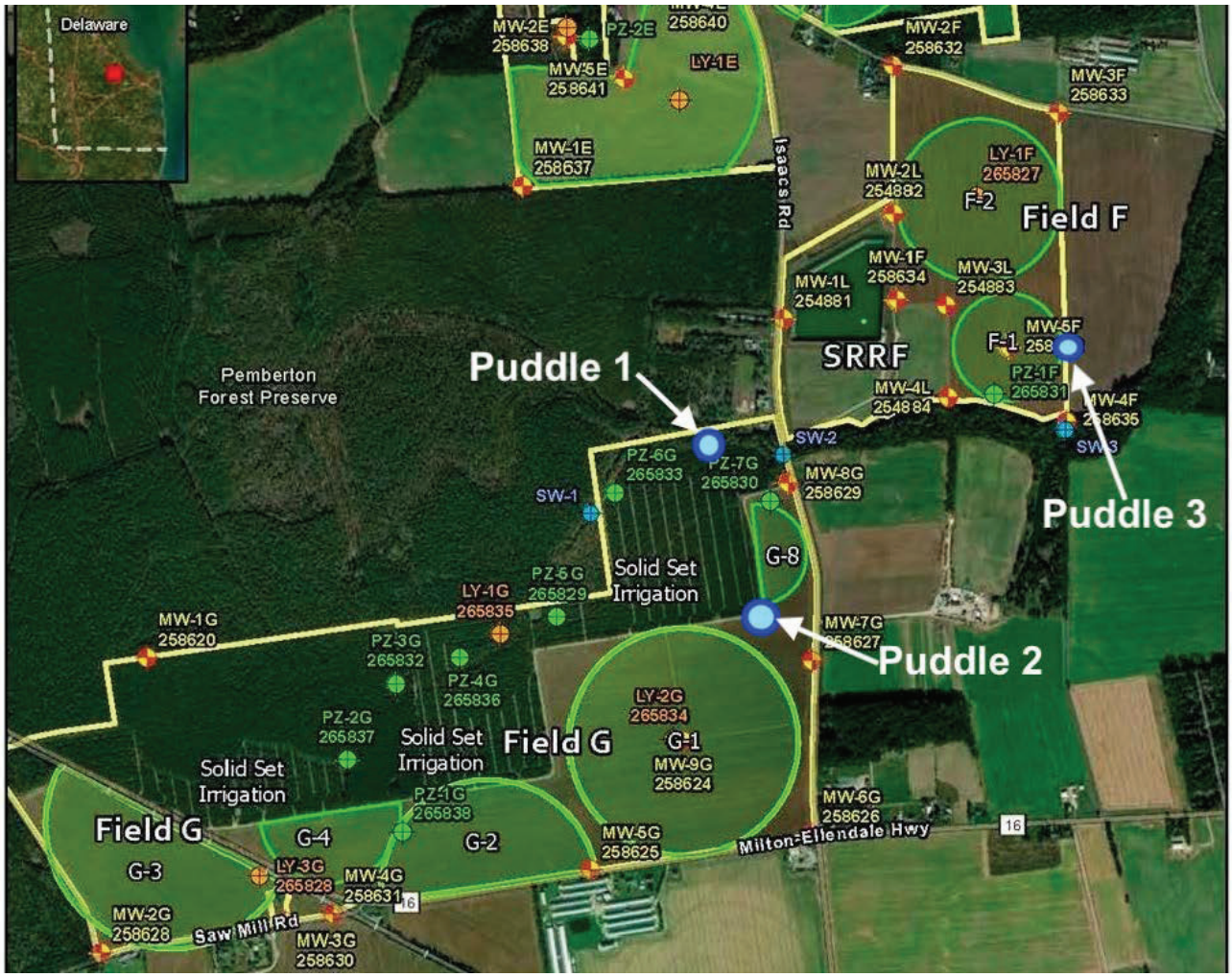


Figure 3 (from permit)

Laboratory analysis of soil sampled from the site from the period 2021 to 2024 was reviewed in accordance with section 6.5.4.3.1.1.7. The reports break out four different areas identified as Field F, Woods FG , Field Woods G and Field G. Soils were sampled at depths of 12 inches and 24 inches and the following discussion tracks that labelling convention. Samples were analyzed for Organic Matter (OM) pH, Phosphate (P2O5), Sodium Adsorption Ration (SAR), Potassium (K), Cadmium (Cd), Nickel (Ni), Lead (Pb), Zinc (Zn), Copper (Cu) and Total Phosphorus as P, though not all parameters were reported for all years. The area is mapped as being underlain by the Manokin Formation (Ramsey 2001), but a search of the literature does not give background levels for the parameters analyzed. As such, the data from 2021 and national averages will be used here as the baseline for comparison. All values reported below are averages of the time periods and the individual fields. Values reported are in mg/L except pH and OM.

Field F

Organic Matter was not reported for 2023, however the trend at both depths initially appeared to hold steady or increase slightly in 2022 but decreased in 2024 from 1.5% at 12 inches to 1.0% and from 1.3% at 24 inches to 0.7%. A similar, though minor increase in pH is noted with the 12-inch depth rising, from 6.29 to 6.54 and the 24-inch depth from 6.36 to 6.63. Sodium Adsorption Ratio is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg). Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced saturated hydraulic conductivity (Ksat) and aeration, and a general degradation of soil structure. SAR was not reported in 2023, but we see a dramatic drop in SAR from the 2021 levels of 22.31 (12 inch) to 0.61 in 2024 and 20.31 (24 inch) to 0.48. This is a good sign and suggests that the application of treated wastewater may be flushing sodium out of the soil profile, which would increase soil health. Potassium (K) levels dropped from 2021 levels of 399.38 in 2024 (12 inch) to

308.13 and 406.15 (24 inch) to 368.68. These levels are relatively high, as normal ranges are reported to be in the 80-120 range. This decrease in K may mirror the decrease in SAR and indicate flushing of excess K from the soil profile. Cadmium ranges remained relatively stable in the range of 0.1-0.13 at both depths, which is within the range reported by the National Institutes of Health. Lead levels showed no distinct pattern remaining in the range of 4.75 – 6.77 at both depths. USGS reports background lead levels averaging 19 mg/kg with a range of 10-700, so this places these soils in the low-to-average range for lead. Copper levels ranged from 6.36 – 6.13 (12 inch) but decreasing from 5.86 – 4.11 (24 inch), which is the low-medium range for agricultural uses but well below the average reported by the US Geological Survey (USGS) (Schacklette & Boerngen, 1984). Nickel levels decreased from 6.26 in 2021 (12 inch) to 0.85 in 2024 and 8.67 in 2021 (24 inch) to 0.61 in 2024. Zinc ranges similarly did not follow any distinct pattern at 12 inches but decreased from 25.38 – 17.37 at 24 inches. Phosphate (P2O5) decreased steadily from 1052.54 – 824.5 (12 inch) but lowered even further in 2023 to 683.25, while decreasing from 882.23 – 465.5 (24 inch). Total Phosphorus decreased from 459 – 360.13 (12 inch) and 385.62 – 190.93 (24 inch). Since phosphorus is not mobile in the soil, these should not be a concern.

Woods FG

No data are reported for 2023 and 2024. Organic Matter appeared to increase slightly in 2022 from 1.25% at 12 inches to 1.78% and from 1.05% at 24 inches to 1.38%. A similar, though minor increase is seen in pH is noted with the 12-inch depth rising from 5.13 to 5.71 and the 24-inch depth from 5.18 to 5.41. SAR showed a dramatic drop from the 2021 levels of 29.5 (12 inch) to 0.52 in 2022 and 32.5 (24 inch) to 0.58. Again, this is actually a good sign and suggests that the application of treated wastewater may be flushing sodium out of the soil profile, which would increase soil health. Potassium (K) levels increased from 2021 levels of 287.5 in 2021(12 inch) to 326.2 and 280.5 (24 inch) to 422.5. These levels are relatively high, as normal ranges are reported to be in the 80-120 range. This increase in K is opposed to the decrease in Field F and may mirror and be aided by the increase in OM. Cadmium levels were not reported for this area, and lead, zinc and copper were only reported in 2021 so no conclusions can be drawn about these. Phosphate (P2O5) decreased from 278.5 – 211.2 (12 inch) and from 250.5 – 234.5 (24 inch). Total Phosphorus decreased from 121.5 – 92.2 (12 inch) and 109.5 – 102.3 (24 inch).

Field Woods G

Organic Matter was not reported for 2023, however the levels decreased in 2024 from 1.6% at 12 inches to 0.9% and from 1.3% at 24 inches to 0.9%. A minor increase is seen in pH with the 12-inch depth rising from 5.51 to 5.71 and the 24-inch depth from 5.22 to 5.29, though the latter of these is insignificant. SAR was not reported in 2023, but we see a dramatic drop in SAR from the 2021 levels of 29.55 (12 inch) to 0.73 in 2024 and 27.18 (24 inch) to 0.18. Again, this is a good sign and suggests that the application of treated wastewater may be flushing sodium out of the soil profile, which would increase soil health. Potassium (K) levels increased from 2021 levels of 255.27 (12 inch) to 323 in 2024 and 327.6 (24 inch) to 478.4. These levels are relatively high, as normal ranges are reported to be in the 80-120 range. This increase in K may be a concern as, although K is a necessary plant nutrient high levels can inhibit plant uptake of other cations. Cadmium was not reported for 2021 and 2022, but the ranges remained relatively stable in the range of 0.1-0.14 at both depths, which is within the range reported by the National Institutes of Health. Lead levels showed no distinct pattern remaining in the range of 5.07 – 6.48 at both depths. USGS reports background lead levels averaging 19 mg/kg with a range of 10-700, so this places these soils in the low to average range for lead. Copper decreased from 4.07 – 2.95 (12 inch) and from 5.8 – 4.35 (24 inch), which is the low-medium range for agricultural uses but well below the average reported by the US Geological Survey (USGS) (Schacklette & Boerngen, 1984). Nickel levels decreased from 6.19 in 2021 (12 inch) to 0.65 in 2024 and 6.99 in 2021 (24 inch) to 1.71 in 2024. Zinc increased from 11.69 – 13.18 at 12 inches and from 12.29 – 16.31 at 24 inches. Phosphate (P2O5) decreased steadily from 270.7 – 194.1 (12 inch) and from 274 – 258.6 (24 inch). Total Phosphorus decreased from 118.1 – 84.7 (12 inch) and 119.6 – 112.8 (24 inch).

Field G

Organic Matter was not reported for 2023, however the levels decreased in 2024 from 1.4% at 12 inches to 1.0% and from 1.2% at 24 inches to 0.8%. A decrease is seen in pH with the 12-inch depth dropping from 6.62 to 6.16 and the 24-inch depth from 6.66 to 6.34. SAR was not reported in 2023, but we see a dramatic drop in SAR from the 2021 levels of 24.86 (12 inch) to 0.56 in 2024 and 22 (24 inch) to 0.55. Again, this is a good sign and suggests that the application of treated wastewater may be flushing sodium out of the soil profile, which

would increase soil health. Potassium (K) levels decreased from 2021 levels of 350 (12 inch) to 311.8 in 2024 but remained steady in the 24-inch depth. These levels are relatively high, as normal ranges are reported to be in the 80-120 range. This level of K may be a concern as, although K is a necessary plant nutrient high levels can inhibit plant uptake of other cations. Cadmium was not reported for 2022, but the ranges remained relatively stable in the range of 0.1-0.12 at both depths, which is within the range reported by the National Institutes of Health. Lead levels decreased from 25.47 – 10 (12 inch) and 16.7 – 9.2 (24 inch). USGS reports background lead levels averaging 19 mg/kg with a range of 10-700, so this places these soils in the low to average range for lead. Copper decreased from 8.32 – 4.67 (12 inch) and from 7.7 – 4.9 (24 inch), which is the low-medium range for agricultural uses but well below the average reported by the US Geological Survey (USGS) (Schacklette & Boerngen, 1984). Nickel levels decreased from 6.36 in 2021 (12 inch) to 1.79 in 2024 and 6.87 in 2021 (24 inch) to 1.47 in 2024. Zinc decreased from 21.08 – 15 at 12 inches and from 17.65 – 15.41 at 24 inches. Phosphate (P2O5) decreased steadily from 687.2 – 301.8 (12 inch) and from 550.6 – 319.5 (24 inch). Total Phosphorus decreased from 300.3 – 131.8 (12 inch) and 240.4 – 139.5 (24 inch).

Summary of Soil Chemistry

Based upon this data, it appears that the four areas are not accumulating metals (cadmium, nickel, zinc, lead and copper) but that pH is slowly rising and organic matter content, in most cases is dropping as are P2O5 and total Phosphorus levels. Organic matter levels are lower than average, but this is not uncommon in sandier soils. Organic matter levels could be adjusted by adding of compost to the fields, though this would be difficult in wooded areas. It is interesting to note that the Woods FG area appeared to be increasing its organic matter content, but insufficient data exists to draw conclusions on this. Soil pH is also slowly rising and, should this continue, it may be necessary to address this at some point in the future by adding an acidifying agent to the soil. Since the soils pH is still in the acidic range, I do not foresee the need for this at any time in the near future and would not consider it unless soil pH starts to approach levels of 7 or more. The decrease in field G should similarly be monitored and, should the levels drop below 5, lime should be added to mitigate this condition. K levels appear to be high but decreasing. If fertilizer is being used on the site, potassium-free fertilizer should be utilized until these levels approach the normal range. P2O5 and P levels should continue to be monitored as well. As they are already high, this should not need to be addressed until they decrease significantly.

Based upon the limited data, it would be difficult to calculate the remaining site life, though it would appear that the site is healthy and has significant lifetime remaining to it. The operator should monitor the ponding areas and address those as needed. Similarly, should any of the other noted parameters move into ranges of concern, they should be addressed as well.

Please call or email me if any questions or if any additional information is needed. Thank you.

Sincerely,

Russell Losco, M.A., P.G., C.P.S.S.
Geologist & Soil Scientist
Class D License 2202

CPSS
Certified Professional Soil Scientist
RUSSELL L LOSCO
22586

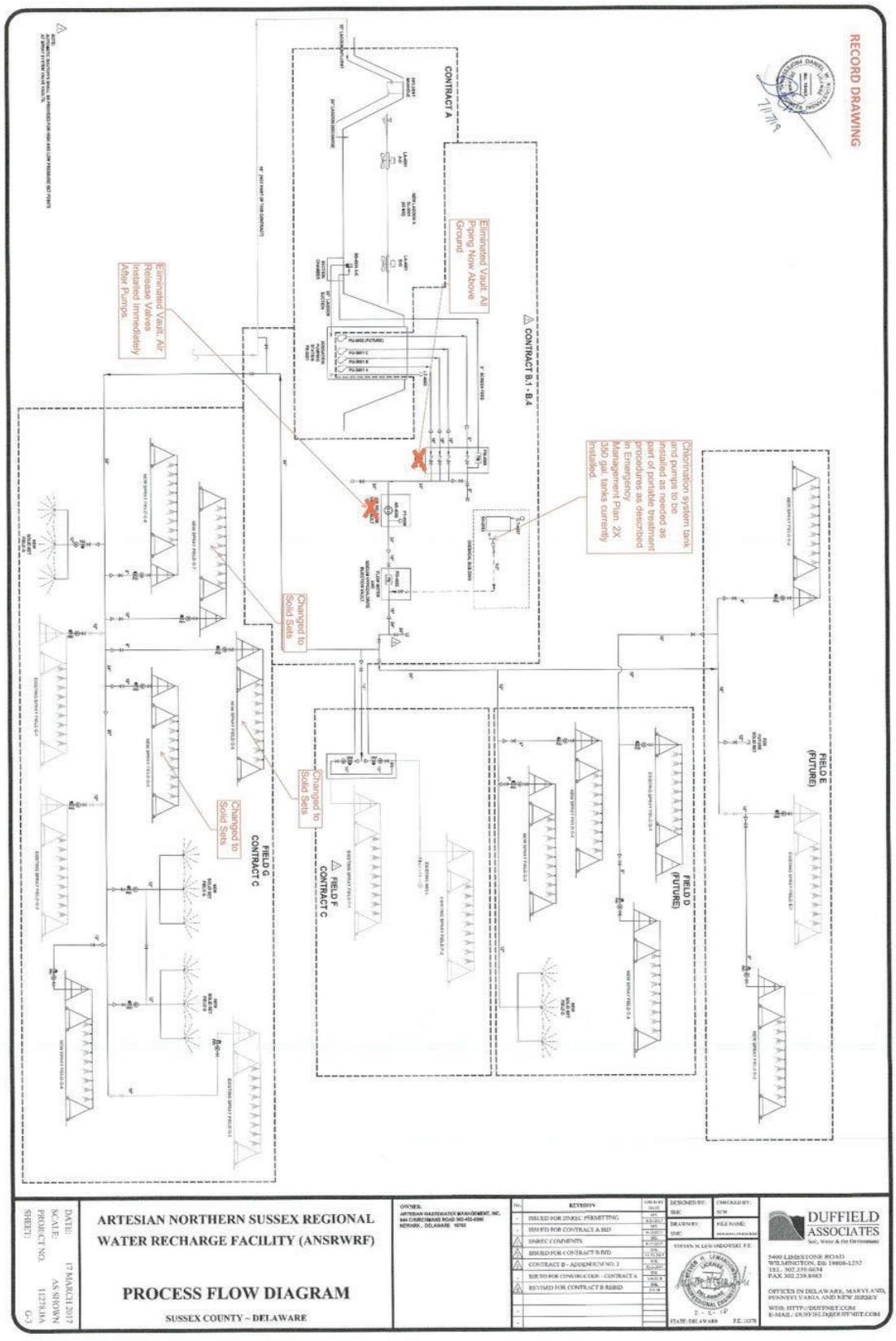
STATE OF DELAWARE
RUSSELL LOSCO
No. S4-0011406
LICENSED PROFESSIONAL GEOLOGIST

BrightFields, Inc.
Environmental Services

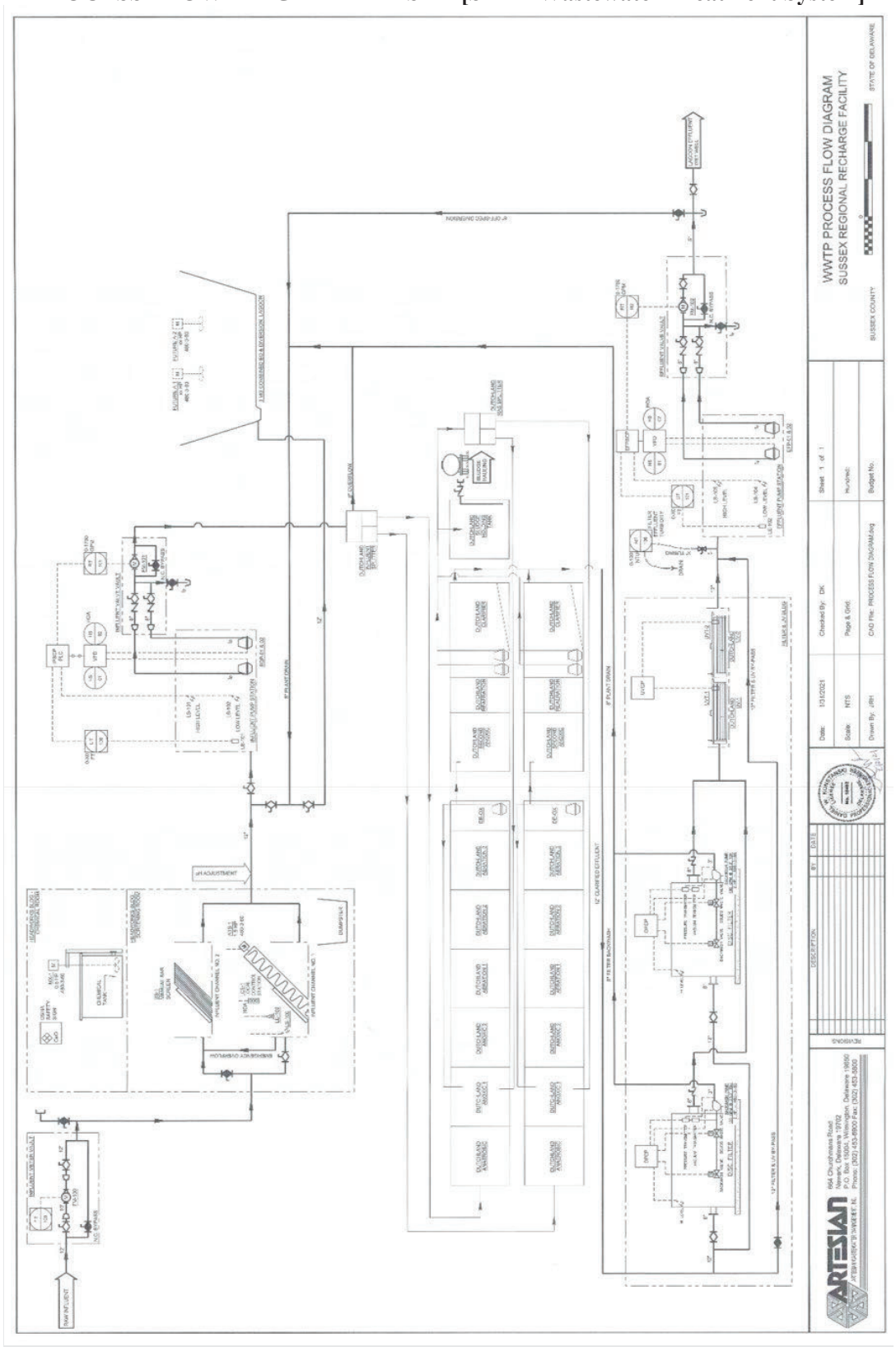
Appendix B

Permit Design Drawings

PROCESS FLOW DIAGRAM PHASE 1 [taken from 2019.07.17 Drawings G-3 and G-4]



PROCESS FLOW DIAGRAM PHASE 2 [SRRF Wastewater Treatment System]



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Appendix C

Water Level Data

BrightFields, Inc.
Environmental Services

Appendix C.1

Monitoring Well Water Levels

APPENDIX C.1
MW-1F Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/24/2020	No	13.31	20.22	11.35
03/05/2021	No	12.10	21.43	10.14
05/10/2021	No	13.15	20.38	11.19
07/26/2021	No	14.87	18.66	12.91
12/15/2021	No	16.20	17.33	14.24
03/25/2022	No	15.20	18.33	13.24
05/25/2022	No	15.15	18.38	13.19
08/31/2022	No	16.55	16.98	14.59
08/31/2022	Yes	16.55	16.98	14.59
10/28/2022	No	15.64	17.89	13.68
11/28/2022	No	15.84	17.69	13.88
12/30/2022	No	15.10	18.43	13.14
01/13/2023	No	14.94	18.59	12.98
02/14/2023	No	14.92	18.61	12.96
03/10/2023	No	14.85	18.68	12.89
04/14/2023	No	15.09	18.44	13.13
05/11/2023	No	14.84	18.69	12.88
06/16/2023	No	15.11	18.42	13.15
07/14/2023	No	15.49	18.04	13.53
08/10/2023	No	15.24	18.29	13.28
09/07/2023	No	15.76	17.77	13.80
10/04/2023	No	15.43	18.10	13.47
11/02/2023	No	15.51	18.02	13.55
12/01/2023	No	15.62	17.91	13.66
01/12/2024	No	13.15	20.38	11.19
02/08/2024	No	12.61	20.92	10.65
03/08/2024	No	12.23	21.30	10.27
04/10/2024	No	11.36	22.17	9.40
05/09/2024	No	12.36	21.17	10.40
06/06/2024	No	13.29	20.24	11.33
07/17/2024	No	14.42	19.11	12.46
08/08/2024	No	14.96	18.57	13.00
09/12/2024	No	15.59	17.94	13.63
10/09/2024	No	16.01	17.52	14.05
Minimum		11.36	16.98	9.40
Maximum		16.55	22.17	14.59
Average		14.60	18.93	12.64

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-1G Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft)
11/19/2020	No	6.44	35.11	3.97
11/19/2020	Yes	6.44	35.11	3.97
03/11/2021	No	4.00	37.55	1.53
05/12/2021	No	6.17	35.38	3.70
07/21/2021	No	8.97	32.58	6.50
12/16/2021	No	10.40	31.15	7.93
03/30/2022	No	8.40	33.15	5.93
05/26/2022	No	8.00	33.55	5.53
08/30/2022	No	11.35	30.20	8.88
08/30/2022	Yes	11.35	30.20	8.88
10/28/2022	No	10.36	31.19	7.89
11/28/2022	No	10.33	31.22	7.86
11/28/2022	Yes	10.33	31.22	7.86
12/30/2022	No	8.05	33.50	5.58
01/13/2023	No	7.60	33.95	5.13
02/14/2023	No	7.15	34.40	4.68
02/14/2023	Yes	7.15	34.40	4.68
03/10/2023	No	7.78	33.77	5.31
04/14/2023	No	8.04	33.51	5.57
05/11/2023	No	7.39	34.16	4.92
05/11/2023	Yes	7.39	34.16	4.92
06/16/2023	No	8.71	32.84	6.24
07/14/2023	No	9.66	31.89	7.19
08/10/2023	No	8.89	32.66	6.42
08/10/2023	Yes	8.89	32.66	6.42
09/07/2023	No	9.78	31.77	7.31
10/04/2023	No	8.39	33.16	5.92
11/02/2023	No	9.12	32.43	6.65
11/02/2023	Yes	9.12	32.43	6.65
12/01/2023	No	9.14	32.41	6.67
01/12/2024	No	3.00	38.55	0.53
02/08/2024	No	3.69	37.86	1.22
02/08/2024	Yes	3.69	37.86	1.22
03/08/2024	No	10.81	30.74	8.34
04/10/2024	No	10.17	31.38	7.70
05/09/2024	No	11.35	30.20	8.88
05/09/2024	Yes	4.60	36.95	2.13
06/06/2024	No	5.86	35.69	3.39
07/17/2024	No	7.46	34.09	4.99
08/08/2024	No	8.40	33.15	5.93
08/08/2024	Yes	8.40	33.15	5.93
09/12/2024	No	10.04	31.51	7.57
10/09/2024	No	10.68	30.87	8.21
Minimum		3.00	30.20	0.53
Maximum		11.35	38.55	8.88
Average		8.35	33.20	5.88

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-1L Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft)
11/24/2020	No	14.21	22.04	12.07
11/24/2020	Yes	14.21	22.04	12.07
05/10/2021	No	13.73	22.52	11.59
05/10/2021	Yes	13.73	22.52	11.59
07/26/2021	No	15.55	20.70	13.41
12/15/2021	No	17.00	19.25	14.86
03/25/2022	No	15.62	20.63	13.48
05/25/2022	No	15.77	20.48	13.63
08/31/2022	No	17.45	18.80	15.31
08/31/2022	Yes	17.45	18.80	15.31
10/28/2022	No	16.78	19.47	14.64
11/28/2022	No	16.76	19.49	14.62
11/28/2022	Yes	16.76	19.49	14.62
12/30/2022	No	16.05	20.20	13.91
01/13/2023	No	15.72	20.53	13.58
02/14/2023	No	15.45	20.80	13.31
02/14/2023	Yes	15.45	20.80	13.31
03/10/2023	No	15.32	20.93	13.18
04/14/2023	No	15.66	20.59	13.52
05/11/2023	No	15.35	20.90	13.21
05/11/2023	Yes	15.35	20.90	13.21
06/16/2023	No	15.71	20.54	13.57
07/14/2023	No	16.19	20.06	14.05
08/10/2023	No	16.00	20.25	13.86
08/10/2023	Yes	16.00	20.25	13.86
09/07/2023	No	16.45	19.80	14.31
10/04/2023	No	16.05	20.20	13.91
11/02/2023	No	16.16	20.09	14.02
11/02/2023	Yes	16.16	20.09	14.02
12/01/2023	No	16.29	19.96	14.15
01/12/2024	No	13.95	22.30	11.81
02/08/2024	No	13.19	23.06	11.05
02/08/2024	Yes	13.19	23.06	11.05
03/08/2024	No	12.91	23.34	10.77
04/10/2024	No	11.94	24.31	9.80
05/09/2024	No	17.45	18.80	15.31
05/09/2024	Yes	13.00	23.25	10.86
06/06/2024	No	13.92	22.33	11.78
07/17/2024	No	15.11	21.14	12.97
08/08/2024	No	15.60	20.65	13.46
08/08/2024	Yes	15.60	20.65	13.46
09/12/2024	No	16.32	19.93	14.18
10/09/2024	No	16.89	19.36	14.75
Minimum		11.94	18.80	9.80
Maximum		17.45	24.31	15.31
Average		15.52	20.73	13.38

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-2F Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft)
11/25/2020	No	14.53	18.93	12.60
03/03/2021	No	12.51	20.95	10.58
05/10/2021	No	14.00	19.46	12.07
07/26/2021	No	11.76	21.70	9.83
12/15/2021	No	18.60	14.86	16.67
03/25/2022	No	17.40	16.06	15.47
03/25/2022	Yes	17.40	16.06	15.47
05/25/2022	No	17.15	16.31	15.22
08/31/2022	No	18.90	14.56	16.97
10/28/2022	No	18.09	15.37	16.16
11/28/2022	No	18.05	15.41	16.12
12/30/2022	No	17.45	16.01	15.52
01/13/2023	No	17.01	16.45	15.08
02/14/2023	No	16.89	16.57	14.96
03/10/2023	No	16.86	16.60	14.93
04/14/2023	No	17.06	16.40	15.13
05/11/2023	No	16.89	16.57	14.96
06/16/2023	No	17.24	16.22	15.31
07/14/2023	No	17.84	15.62	15.91
08/10/2023	No	17.75	15.71	15.82
09/07/2023	No	18.28	15.18	16.35
10/04/2023	No	18.08	15.38	16.15
11/02/2023	No	17.92	15.54	15.99
12/01/2023	No	18.10	15.36	16.17
01/12/2024	No	14.66	18.80	12.73
02/08/2024	No	13.36	20.10	11.43
03/08/2024	No	12.99	20.47	11.06
04/10/2024	No	11.19	22.27	9.26
05/09/2024	No	12.81	20.65	10.88
06/06/2024	No	14.25	19.21	12.32
07/17/2024	No	16.48	16.98	14.55
08/08/2024	No	17.06	16.40	15.13
09/12/2024	No	17.91	15.55	15.98
10/09/2024	No	18.39	15.07	16.46
Minimum		11.19	14.56	9.26
Maximum		18.90	22.27	16.97
Average		16.29	17.17	14.36

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-2G Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/24/2020	No	10.96	33.27	8.91
03/10/2021	No	9.33	34.90	7.28
05/12/2021	No	11.00	33.23	8.95
07/21/2021	No	12.80	31.43	10.75
12/16/2021	No	13.90	30.33	11.85
03/30/2022	No	12.56	31.67	10.51
03/30/2022	Yes	12.56	31.67	10.51
05/26/2022	No	12.35	31.88	10.30
08/30/2022	No	14.55	29.68	12.50
10/28/2022	No	13.84	30.39	11.79
11/28/2022	No	13.83	30.40	11.78
12/30/2022	No	12.55	31.68	10.50
01/13/2023	No	12.36	31.87	10.31
02/14/2023	No	12.17	32.06	10.12
03/10/2023	No	12.01	32.22	9.96
04/14/2023	No	12.61	31.62	10.56
05/11/2023	No	12.11	32.12	10.06
06/16/2023	No	12.74	31.49	10.69
07/14/2023	No	13.25	30.98	11.20
08/10/2023	No	12.83	31.40	10.78
09/07/2023	No	13.62	30.61	11.57
10/04/2023	No	12.74	31.49	10.69
11/02/2023	No	13.16	31.07	11.11
12/01/2023	No	13.25	30.98	11.20
01/12/2024	No	8.82	35.41	6.77
02/08/2024	No	9.16	35.07	7.11
03/08/2024	No	7.79	36.44	5.74
04/10/2024	No	8.06	36.17	6.01
05/09/2024	No	10.00	34.23	7.95
06/06/2024	No	11.09	33.14	9.04
07/17/2024	No	12.04	32.19	9.99
08/08/2024	No	12.68	31.55	10.63
09/12/2024	No	13.78	30.45	11.73
10/09/2024	No	14.38	29.85	12.33
Minimum		7.79	29.68	5.74
Maximum		14.38	36.44	12.50
Average		12.08	32.15	10.03

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-2L Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/24/2020	No	15.42	20.03	13.18
03/05/2021	No	14.00	21.45	11.76
05/10/2021	No	15.20	20.25	12.96
07/26/2021	No	17.30	18.15	15.06
12/15/2021	No	19.00	16.45	16.76
03/25/2022	No	17.86	17.59	15.62
03/25/2022	Yes	17.86	17.59	15.62
05/25/2022	No	17.76	17.69	15.52
08/31/2022	No	19.15	16.30	16.91
10/28/2022	No	18.28	17.17	16.04
11/28/2022	No	18.50	16.95	16.26
12/30/2022	No	17.84	17.61	15.60
01/13/2023	No	17.52	17.93	15.28
02/14/2023	No	17.54	17.91	15.30
03/10/2023	No	17.55	17.90	15.31
04/14/2023	No	17.69	17.76	15.45
05/11/2023	No	17.45	18.00	15.21
06/16/2023	No	17.69	17.76	15.45
07/14/2023	No	18.11	17.34	15.87
08/10/2023	No	17.90	17.55	15.66
09/07/2023	No	18.42	17.03	16.18
10/04/2023	No	18.30	17.15	16.06
11/02/2023	No	18.20	17.25	15.96
12/01/2023	No	18.42	17.03	16.18
01/12/2024	No	15.62	19.83	13.38
02/08/2024	No	14.62	20.83	12.38
03/08/2024	No	14.56	20.89	12.32
04/10/2024	No	13.11	22.34	10.87
05/09/2024	No	14.14	21.31	11.90
06/06/2024	No	15.32	20.13	13.08
07/17/2024	No	16.79	18.66	14.55
08/08/2024	No	17.56	17.89	15.32
09/12/2024	No	18.12	17.33	15.88
10/09/2024	No	18.65	16.80	16.41
Minimum		13.11	16.30	10.87
Maximum		19.15	22.34	16.91
Average		17.08	18.37	14.84

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-3F Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/25/2020	No	12.46	15.95	7.48
03/03/2021	No	11.30	17.11	6.32
03/03/2021	Yes	11.30	17.11	6.32
05/10/2021	No	12.70	15.71	7.72
07/26/2021	No	14.84	13.57	9.86
07/26/2021	Yes	14.84	13.57	9.86
12/15/2021	No	16.00	12.41	11.02
03/25/2022	No	14.98	13.43	10.00
05/25/2022	No	14.90	13.51	9.92
08/31/2022	No	16.25	12.16	11.27
10/28/2022	No	15.09	13.32	10.11
11/28/2022	No	15.36	13.05	10.38
12/30/2022	No	14.63	13.78	9.65
01/13/2023	No	14.48	13.93	9.50
02/14/2023	No	14.62	13.79	9.64
03/10/2023	No	14.67	13.74	9.69
04/14/2023	No	14.86	13.55	9.88
05/11/2023	No	14.62	13.79	9.64
06/16/2023	No	14.99	13.42	10.01
07/14/2023	No	15.45	12.96	10.47
08/10/2023	No	15.12	13.29	10.14
09/07/2023	No	15.80	12.61	10.82
10/04/2023	No	15.40	13.01	10.42
11/02/2023	No	15.35	13.06	10.37
12/01/2023	No	15.54	12.87	10.56
01/12/2024	No	12.34	16.07	7.36
02/08/2024	No	12.00	16.41	7.02
03/08/2024	No	11.54	16.87	6.56
04/10/2024	No	10.60	17.81	5.62
05/09/2024	No	11.91	16.50	6.93
06/06/2024	No	13.14	15.27	8.16
06/06/2024	Yes	13.14	15.27	8.16
07/17/2024	No	14.41	14.00	9.43
07/17/2024	Yes	14.41	14.00	9.43
08/08/2024	No	14.92	13.49	9.94
09/12/2024	No	16.25	12.16	11.27
09/12/2024	Yes	15.46	12.95	10.48
10/09/2024	No	15.91	12.50	10.93
Minimum		10.60	12.16	5.62
Maximum		16.25	17.81	11.27
Average		14.32	14.09	9.34

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-3G Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/24/2020	No	9.74	30.63	7.85
03/10/2021	No	7.70	32.67	5.81
05/12/2021	No	9.50	30.87	7.61
07/21/2021	No	11.12	29.25	9.23
12/16/2021	No	12.80	27.57	10.91
12/16/2021	Yes	12.80	27.57	10.91
03/30/2022	No	11.25	29.12	9.36
05/26/2022	No	10.75	29.62	8.86
08/30/2022	No	12.70	27.67	10.81
10/28/2022	No	12.00	28.37	10.11
11/28/2022	No	12.06	28.31	10.17
12/30/2022	No	10.93	29.44	9.04
01/13/2023	No	10.79	29.58	8.90
02/14/2023	No	10.52	29.85	8.63
03/10/2023	No	10.32	30.05	8.43
04/14/2023	No	10.92	29.45	9.03
05/11/2023	No	10.45	29.92	8.56
06/16/2023	No	11.01	29.36	9.12
07/14/2023	No	11.44	28.93	9.55
08/10/2023	No	10.94	29.43	9.05
09/07/2023	No	11.66	28.71	9.77
10/04/2023	No	10.63	29.74	8.74
11/02/2023	No	11.14	29.23	9.25
12/01/2023	No	11.33	29.04	9.44
01/12/2024	No	6.18	34.19	4.29
02/08/2024	No	7.06	33.31	5.17
03/08/2024	No	5.22	35.15	3.33
04/10/2024	No	5.65	34.72	3.76
05/09/2024	No	7.75	32.62	5.86
06/06/2024	No	8.81	31.56	6.92
07/17/2024	No	9.60	30.77	7.71
08/08/2024	No	10.46	29.91	8.57
09/12/2024	No	11.55	28.82	9.66
10/09/2024	No	12.28	28.09	10.39
Minimum		5.22	27.57	3.33
Maximum		12.80	35.15	10.91
Average		10.19	30.18	8.30

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-3L Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/24/2020	No	11.29	19.12	9.38
03/03/2021	No	10.13	20.28	8.22
05/10/2021	No	11.52	18.89	9.61
07/26/2021	No	13.10	17.31	11.19
07/26/2021	Yes	13.10	17.31	11.19
12/15/2021	No	14.40	16.01	12.49
03/25/2022	No	13.47	16.94	11.56
05/25/2022	No	13.35	17.06	11.44
08/31/2022	No	14.70	15.71	12.79
10/28/2022	No	13.54	16.87	11.63
11/28/2022	No	13.92	16.49	12.01
12/30/2022	No	13.01	17.40	11.10
01/13/2023	No	13.00	17.41	11.09
02/14/2023	No	13.11	17.30	11.20
03/10/2023	No	13.14	17.27	11.23
04/14/2023	No	13.36	17.05	11.45
05/11/2023	No	13.06	17.35	11.15
06/16/2023	No	13.41	17.00	11.50
07/14/2023	No	13.76	16.65	11.85
08/10/2023	No	13.41	17.00	11.50
09/07/2023	No	14.04	16.37	12.13
10/04/2023	No	13.63	16.78	11.72
11/02/2023	No	13.76	16.65	11.85
12/01/2023	No	13.86	16.55	11.95
01/12/2024	No	10.70	19.71	8.79
02/08/2024	No	10.79	19.62	8.88
03/08/2024	No	10.02	20.39	8.11
04/10/2024	No	9.44	20.97	7.53
05/09/2024	No	10.72	19.69	8.81
06/06/2024	No	11.76	18.65	9.85
07/17/2024	No	12.98	17.43	11.07
08/08/2024	No	13.40	17.01	11.49
09/12/2024	No	13.90	16.51	11.99
10/09/2024	No	14.26	16.15	12.35
Minimum		9.44	15.71	7.53
Maximum		14.70	20.97	12.79
Average		12.79	17.62	10.88

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-4F Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/24/2020	No	4.76	15.77	2.71
11/24/2020	Yes	4.76	15.77	2.71
03/03/2021	No	4.36	16.17	2.31
05/10/2021	No	4.95	15.58	2.90
05/10/2021	Yes	4.95	15.58	2.90
07/26/2021	No	5.70	14.83	3.65
12/15/2021	No	6.00	14.53	3.95
12/15/2021	Yes	6.00	14.53	3.95
03/25/2022	No	5.72	14.81	3.67
05/25/2022	No	5.76	14.77	3.71
05/25/2022	Yes	5.76	14.77	3.71
08/31/2022	No	4.80	15.73	2.75
10/28/2022	No	5.89	14.64	3.84
11/28/2022	No	5.86	14.67	3.81
12/30/2022	No	5.59	14.94	3.54
01/13/2023	No	5.60	14.93	3.55
02/14/2023	No	5.58	14.95	3.53
03/10/2023	No	5.61	14.92	3.56
04/14/2023	No	5.74	14.79	3.69
05/11/2023	No	5.61	14.92	3.56
06/16/2023	No	5.82	14.71	3.77
07/14/2023	No	6.00	14.53	3.95
08/10/2023	No	5.81	14.72	3.76
09/07/2023	No	6.46	14.07	4.41
10/04/2023	No	5.76	14.77	3.71
11/02/2023	No	5.86	14.67	3.81
12/01/2023	No	5.82	14.71	3.77
01/12/2024	No	4.58	15.95	2.53
02/08/2024	No	4.69	15.84	2.64
03/08/2024	No	4.22	16.31	2.17
04/10/2024	No	4.19	16.34	2.14
05/09/2024	No	4.70	15.83	2.65
06/06/2024	No	5.14	15.39	3.09
07/17/2024	No	5.55	14.98	3.50
08/08/2024	No	5.74	14.79	3.69
09/12/2024	No	6.46	14.07	4.41
10/09/2024	No	6.32	14.21	4.27
Minimum		4.19	14.07	2.14
Maximum		6.46	16.34	4.41
Average		5.47	15.06	3.42

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-4G Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/24/2020	No	11.26	30.04	9.09
11/24/2020	Yes	11.26	30.04	9.09
03/10/2021	No	9.17	32.13	7.00
05/12/2021	No	11.00	30.30	8.83
07/21/2021	No	12.70	28.60	10.53
12/16/2021	No	13.90	27.40	11.73
03/30/2022	No	12.83	28.47	10.66
05/26/2022	No	12.30	29.00	10.13
05/26/2022	Yes	12.30	29.00	10.13
08/30/2022	No	14.20	27.10	12.03
10/28/2022	No	13.51	27.79	11.34
11/28/2022	No	13.64	27.66	11.47
12/30/2022	No	12.52	28.78	10.35
01/13/2023	No	12.31	28.99	10.14
02/14/2023	No	12.02	29.28	9.85
03/10/2023	No	11.87	29.43	9.70
04/14/2023	No	12.44	28.86	10.27
05/11/2023	No	11.91	29.39	9.74
06/16/2023	No	12.56	28.74	10.39
07/14/2023	No	12.99	28.31	10.82
08/10/2023	No	12.32	28.98	10.15
09/07/2023	No	13.11	28.19	10.94
10/04/2023	No	12.04	29.26	9.87
11/02/2023	No	12.56	28.74	10.39
12/01/2023	No	12.80	28.50	10.63
01/12/2024	No	7.81	33.49	5.64
02/08/2024	No	8.47	32.83	6.30
03/08/2024	No	6.80	34.50	4.63
04/10/2024	No	6.99	34.31	4.82
05/09/2024	No	9.16	32.14	6.99
06/06/2024	No	10.24	31.06	8.07
07/17/2024	No	10.92	30.38	8.75
08/08/2024	No	11.88	29.42	9.71
09/12/2024	No	12.98	28.32	10.81
10/09/2024	No	13.70	27.60	11.53
Minimum		6.80	27.10	4.63
Maximum		14.20	34.50	12.03
Average		11.66	29.64	9.49

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-4L Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/24/2020	No	6.35	18.35	3.48
03/03/2021	No	5.60	19.10	2.73
03/03/2021	Yes	5.60	19.10	2.73
05/10/2021	No	6.55	18.15	3.68
07/26/2021	No	5.40	19.30	2.53
12/15/2021	No	8.00	16.70	5.13
12/15/2021	Yes	8.00	16.70	5.13
03/25/2022	No	7.55	17.15	4.68
05/25/2022	No	7.50	17.20	4.63
05/25/2022	Yes	7.50	17.20	4.63
08/31/2022	No	8.70	16.00	5.83
10/28/2022	No	7.65	17.05	4.78
11/28/2022	No	7.74	16.96	4.87
12/30/2022	No	7.20	17.50	4.33
01/13/2023	No	7.24	17.46	4.37
02/14/2023	No	7.19	17.51	4.32
03/10/2023	No	7.21	17.49	4.34
04/14/2023	No	7.50	17.20	4.63
05/11/2023	No	7.16	17.54	4.29
06/16/2023	No	7.61	17.09	4.74
07/14/2023	No	7.75	16.95	4.88
08/10/2023	No	7.50	17.20	4.63
09/07/2023	No	8.01	16.69	5.14
10/04/2023	No	7.35	17.35	4.48
11/02/2023	No	7.69	17.01	4.82
12/01/2023	No	7.57	17.13	4.70
01/12/2024	No	5.65	19.05	2.78
02/08/2024	No	6.11	18.59	3.24
03/08/2024	No	5.14	19.56	2.27
04/10/2024	No	5.49	19.21	2.62
05/09/2024	No	6.21	18.49	3.34
06/06/2024	No	6.68	18.02	3.81
07/17/2024	No	6.94	17.76	4.07
08/08/2024	No	7.47	17.23	4.60
09/12/2024	No	7.95	16.75	5.08
10/09/2024	No	8.70	16.00	5.83
Minimum		5.14	16.00	2.27
Maximum		8.70	19.56	5.83
Average		7.10	17.60	4.23

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-5F Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/24/2020	No	11.25	17.80	9.26
03/03/2021	No	10.32	18.73	8.33
05/10/2021	No	11.60	17.45	9.61
07/26/2021	No	13.00	16.05	11.01
12/15/2021	No	14.00	15.05	12.01
03/25/2022	No	13.22	15.83	11.23
05/25/2022	No	13.15	15.90	11.16
08/31/2022	No	14.45	14.60	12.46
10/28/2022	No	13.27	15.78	11.28
11/28/2022	No	13.52	15.53	11.53
12/30/2022	No	12.79	16.26	10.80
01/13/2023	No	12.79	16.26	10.80
02/14/2023	No	12.94	16.11	10.95
03/10/2023	No	12.92	16.13	10.93
04/14/2023	No	13.19	15.86	11.20
05/11/2023	No	12.82	16.23	10.83
06/16/2023	No	13.26	15.79	11.27
07/14/2023	No	13.56	15.49	11.57
08/10/2023	No	13.25	15.80	11.26
09/07/2023	No	13.98	15.07	11.99
10/04/2023	No	13.25	15.80	11.26
11/02/2023	No	13.54	15.51	11.55
12/01/2023	No	13.51	15.54	11.52
01/12/2024	No	11.04	18.01	9.05
02/08/2024	No	10.95	18.10	8.96
03/08/2024	No	10.44	18.61	8.45
04/10/2024	No	9.82	19.23	7.83
05/09/2024	No	10.99	18.06	9.00
06/06/2024	No	11.94	17.11	9.95
07/17/2024	No	12.63	16.42	10.64
08/08/2024	No	13.25	15.80	11.26
09/12/2024	No	13.70	15.35	11.71
10/09/2024	No	14.14	14.91	12.15
Minimum		9.82	14.60	7.83
Maximum		14.45	19.23	12.46
Average		12.58	16.37	10.69

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-5G Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/24/2020	No	11.56	25.85	9.43
03/11/2021	No	9.00	28.41	6.87
05/12/2021	No	10.50	26.91	8.37
07/21/2021	No	12.70	24.71	10.57
07/21/2021	Yes	12.70	24.71	10.57
12/16/2021	No	14.70	22.71	12.57
03/30/2022	No	13.55	23.86	11.42
05/26/2022	No	13.10	24.31	10.97
08/30/2022	No	14.95	22.46	12.82
10/28/2022	No	14.40	23.01	12.27
11/28/2022	No	14.37	23.04	12.24
12/30/2022	No	13.44	23.97	11.31
01/13/2023	No	13.15	24.26	11.02
02/14/2023	No	12.76	24.65	10.63
03/10/2023	No	12.53	24.88	10.40
04/14/2023	No	12.93	24.48	10.80
05/11/2023	No	12.29	25.12	10.16
06/16/2023	No	12.40	25.01	10.27
07/14/2023	No	12.91	24.50	10.78
08/10/2023	No	12.53	24.88	10.40
09/07/2023	No	13.22	24.19	11.09
10/04/2023	No	12.36	25.05	10.23
11/02/2023	No	12.88	24.53	10.75
12/01/2023	No	13.24	24.17	11.11
01/12/2024	No	9.50	27.91	7.37
02/08/2024	No	9.09	28.32	6.96
03/08/2024	No	8.44	28.97	6.31
04/10/2024	No	7.41	30.00	5.28
05/09/2024	No	8.94	28.47	6.81
06/06/2024	No	9.97	27.44	7.84
07/17/2024	No	11.00	26.41	8.87
08/08/2024	No	11.90	25.51	9.77
09/12/2024	No	13.14	24.27	11.01
10/09/2024	No	13.93	23.48	11.80
Minimum		7.41	22.46	5.28
Maximum		14.95	30.00	12.82
Average		12.08	25.33	9.95

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-6G Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/24/2020	No	12.91	21.18	10.96
03/11/2021	No	10.44	23.65	8.49
05/12/2021	No	11.65	22.44	9.70
07/21/2021	No	14.00	20.09	12.05
12/16/2021	No	15.90	18.19	13.95
03/30/2022	No	15.16	18.93	13.21
05/26/2022	No	14.95	19.14	13.00
08/30/2022	No	16.30	17.79	14.35
10/28/2022	No	16.07	18.02	14.12
11/28/2022	No	16.02	18.07	14.07
12/30/2022	No	15.39	18.70	13.44
01/13/2023	No	15.07	19.02	13.12
02/14/2023	No	14.79	19.30	12.84
03/10/2023	No	14.61	19.48	12.66
04/14/2023	No	14.73	19.36	12.78
05/11/2023	No	14.29	19.80	12.34
06/16/2023	No	14.32	19.77	12.37
07/14/2023	No	14.76	19.33	12.81
08/10/2023	No	14.46	19.63	12.51
09/07/2023	No	15.01	19.08	13.06
10/04/2023	No	14.68	19.41	12.73
11/02/2023	No	14.81	19.28	12.86
12/01/2023	No	15.03	19.06	13.08
01/12/2024	No	12.01	22.08	10.06
02/08/2024	No	11.28	22.81	9.33
03/08/2024	No	11.17	22.92	9.22
04/10/2024	No	9.46	24.63	7.51
05/09/2024	No	10.60	23.49	8.65
06/06/2024	No	11.69	22.40	9.74
07/17/2024	No	12.99	21.10	11.04
08/08/2024	No	13.64	20.45	11.69
09/12/2024	No	14.70	19.39	12.75
10/09/2024	No	15.38	18.71	13.43
Minimum		9.46	17.79	7.51
Maximum		16.30	24.63	14.35
Average		13.89	20.20	11.94

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-7G Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/24/2020	No	13.06	22.16	11.07
03/11/2021	No	11.10	24.12	9.11
05/12/2021	No	12.52	22.70	10.53
07/21/2021	No	14.78	20.44	12.79
12/16/2021	No	15.00	20.22	13.01
03/30/2022	No	15.20	20.02	13.21
05/26/2022	No	14.87	20.35	12.88
08/30/2022	No	16.85	18.37	14.86
10/28/2022	No	15.89	19.33	13.90
11/28/2022	No	15.92	19.30	13.93
12/30/2022	No	15.10	20.12	13.11
01/13/2023	No	14.81	20.41	12.82
02/14/2023	No	14.52	20.70	12.53
03/10/2023	No	14.36	20.86	12.37
04/14/2023	No	14.74	20.48	12.75
05/11/2023	No	14.04	21.18	12.05
06/16/2023	No	14.62	20.60	12.63
07/14/2023	No	15.18	20.04	13.19
08/10/2023	No	14.66	20.56	12.67
09/07/2023	No	15.28	19.94	13.29
10/04/2023	No	14.54	20.68	12.55
11/02/2023	No	14.84	20.38	12.85
12/01/2023	No	15.12	20.10	13.13
01/12/2024	No	12.00	23.22	10.01
02/08/2024	No	11.61	23.61	9.62
03/08/2024	No	11.19	24.03	9.20
04/10/2024	No	10.04	25.18	8.05
05/09/2024	No	11.46	23.76	9.47
06/06/2024	No	12.54	22.68	10.55
07/17/2024	No	13.69	21.53	11.70
08/08/2024	No	14.30	20.92	12.31
09/12/2024	No	15.18	20.04	13.19
10/09/2024	No	15.71	19.51	13.72
Minimum		10.04	18.37	8.05
Maximum		16.85	25.18	14.86
Average		14.08	21.14	12.09

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-8G Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/23/2020	No	8.31	21.96	6.30
11/23/2020	Yes	8.31	21.96	6.30
03/11/2021	No	7.40	22.87	5.39
03/11/2021	Yes	7.40	22.87	5.39
05/12/2021	No	8.28	21.99	6.27
07/21/2021	No	9.43	20.84	7.42
12/16/2021	No	10.60	19.67	8.59
03/30/2022	No	9.72	20.55	7.71
05/26/2022	No	9.51	20.76	7.50
08/30/2022	No	11.42	18.85	9.41
10/28/2022	No	10.41	19.86	8.40
11/28/2022	No	10.34	19.93	8.33
12/30/2022	No	9.49	20.78	7.48
01/13/2023	No	9.32	20.95	7.31
02/14/2023	No	9.09	21.18	7.08
03/10/2023	No	8.99	21.28	6.98
04/14/2023	No	9.44	20.83	7.43
05/11/2023	No	8.90	21.37	6.89
06/16/2023	No	9.46	20.81	7.45
07/14/2023	No	9.91	20.36	7.90
08/10/2023	No	9.54	20.73	7.53
09/07/2023	No	10.08	20.19	8.07
10/04/2023	No	9.32	20.95	7.31
11/02/2023	No	9.62	20.65	7.61
12/01/2023	No	9.76	20.51	7.75
01/12/2024	No	7.49	22.78	5.48
02/08/2024	No	7.61	22.66	5.60
03/08/2024	No	6.86	23.41	4.85
04/10/2024	No	6.84	23.43	4.83
05/09/2024	No	7.71	22.56	5.70
06/06/2024	No	8.24	22.03	6.23
07/17/2024	No	8.89	21.38	6.88
08/08/2024	No	9.30	20.97	7.29
09/12/2024	No	10.09	20.18	8.08
10/09/2024	No	10.44	19.83	8.43
Minimum		6.84	18.85	4.83
Maximum		11.42	23.43	9.41
Average		9.15	21.12	7.14

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

APPENDIX C.1
MW-9G Water Levels
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Depth - Top of Casing, Field (ft)	Water Level (ft msl)	DTW (ft bgs)
11/19/2020	No	11.16	24.49	9.18
05/12/2021	No	10.90	24.75	8.92
05/12/2021	Yes	10.90	24.75	8.92
07/21/2021	No	12.40	23.25	10.42
12/16/2021	No	14.20	21.45	12.22
03/30/2022	No	13.22	22.43	11.24
05/26/2022	No	12.66	22.99	10.68
08/30/2022	No	14.50	21.15	12.52
10/28/2022	No	14.02	21.63	12.04
11/28/2022	No	13.82	21.83	11.84
12/30/2022	No	12.98	22.67	11.00
01/13/2023	No	12.71	22.94	10.73
02/14/2023	No	12.30	23.35	10.32
03/10/2023	No	12.06	23.59	10.08
04/14/2023	No	12.49	23.16	10.51
05/11/2023	No	11.70	23.95	9.72
06/16/2023	No	11.91	23.74	9.93
07/14/2023	No	12.34	23.31	10.36
08/10/2023	No	12.25	23.40	10.27
09/07/2023	No	12.89	22.76	10.91
10/04/2023	No	11.95	23.70	9.97
11/02/2023	No	12.49	23.16	10.51
12/01/2023	No	12.88	22.77	10.90
01/12/2024	No	9.44	26.21	7.46
02/08/2024	No	8.61	27.04	6.63
03/08/2024	No	8.19	27.46	6.21
04/10/2024	No	7.26	28.39	5.28
05/09/2024	No	8.79	26.86	6.81
06/06/2024	No	9.79	25.86	7.81
07/17/2024	No	10.67	24.98	8.69
08/08/2024	No	11.83	23.82	9.85
09/12/2024	No	12.88	22.77	10.90
10/09/2024	No	13.58	22.07	11.60
Minimum		7.26	21.15	5.28
Maximum		14.50	28.39	12.52
Average		11.84	23.81	9.86

Notes:
Duplicates not included within minimum, maximum and average statistics.
bgs - Below Ground Surface.
msl - Mean Sea Level.

BrightFields, Inc.
Environmental Services

Appendix C.2

Piezometer Water Levels

APPENDIX C.2
Wet Season Water Levels for Field F and G Piezometers
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

DATE	RAINFALL (IN)	PZ-1F			PZ-1G			PZ-2G			PZ-3G		
		TOC (ft)	Elevation (ft msl)	DTW (ft)	TOC (ft)	Elevation (ft msl)	DTW (ft)	TOC (ft)	Elevation (ft msl)	DTW (ft)	TOC (ft)	Elevation (ft msl)	DTW (ft)
12/30/2022	5.58	8.55	16.88	5.65	8.86	29.06	6.39	7.66	31.55	5.76	8.20	26.38	6.40
1/13/2023	2.47	8.56	16.87	5.66	8.54	29.38	6.07	7.42	31.79	5.52	4.32	30.26	2.52
2/10/2023	2.02	8.62	16.81	5.72	7.92	30.00	5.45	6.04	33.17	4.14	3.69	30.89	1.89
3/10/2023	1.71	8.60	16.83	5.70	7.79	30.13	5.32	6.26	32.95	4.36	2.98	31.60	1.18
4/14/2023	5.47	8.83	16.60	5.93	8.61	29.31	6.14	8.12	31.09	6.22	5.83	28.75	4.03
5/1/2023	2.52	--	--	--	--	--	--	--	--	--	--	--	--
6/1/2023	3.55	--	--	--	--	--	--	--	--	--	--	--	--
7/1/2023	7.07	--	--	--	--	--	--	--	--	--	--	--	--
8/1/2023	4.07	--	--	--	--	--	--	--	--	--	--	--	--
9/1/2023	6.40	--	--	--	--	--	--	--	--	--	--	--	--
10/1/2023	1.71	--	--	--	--	--	--	--	--	--	--	--	--
11/1/2023	2.83	--	--	--	--	--	--	--	--	--	--	--	--
12/1/2023	9.21	9.00	16.43	6.10	9.11	28.81	6.64	8.58	30.63	6.68	8.20	26.38	6.40
1/12/2024	6.52	7.21	18.22	4.31	2.74	35.18	0.27	5.97	33.24	4.07	8.20	26.38	6.40
2/8/2024	2.09	7.39	18.04	4.49	4.44	33.48	1.97	3.49	35.72	1.59	1.01	33.57	-0.79
3/8/2024	8.80	6.71	18.72	3.81	3.91	34.01	1.44	2.97	36.24	1.07	0.84	33.74	-0.96
4/10/2024	3.01	6.64	18.79	3.74	2.84	35.08	0.37	2.31	36.90	0.41	0.62	33.96	-1.18

msl - Mean sea level
TOC - Depth to water from top of inner casing.
DTW - Depth to water from ground elevation.

APPENDIX C.2
Wet Season Water Levels for Field F and G Piezometers
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

DATE	RAINFALL (IN)	PZ-4G			PZ-5G			PZ-6G			PZ-7G		
		TOC (ft)	Elevation (ft msl)	DTW (ft)	TOC (ft)	Elevation (ft msl)	DTW (ft)	TOC (ft)	Elevation (ft msl)	DTW (ft)	TOC (ft)	Elevation (ft msl)	DTW (ft)
12/30/2022	5.58	8.82	27.32	5.32	9.86	25.37	7.30	8.95	24.26	7.32	8.41	21.51	4.40
1/13/2023	2.47	8.37	27.77	4.87	9.34	25.89	6.78	8.31	24.90	6.68	7.79	22.13	3.78
2/10/2023	2.02	7.36	28.78	3.86	8.54	26.69	5.98	7.99	25.22	6.36	7.65	22.27	3.64
3/10/2023	1.71	7.38	28.76	3.88	8.40	26.83	5.84	7.98	25.23	6.35	7.61	22.31	3.60
4/14/2023	5.47	8.64	27.50	5.14	9.31	25.92	6.75	8.61	24.60	6.98	8.10	21.82	4.09
5/1/2023	2.52	--	--	--	--	--	--	--	--	--	--	--	--
6/1/2023	3.55	--	--	--	--	--	--	--	--	--	--	--	--
7/1/2023	7.07	--	--	--	--	--	--	--	--	--	--	--	--
8/1/2023	4.07	--	--	--	--	--	--	--	--	--	--	--	--
9/1/2023	6.40	--	--	--	--	--	--	--	--	--	--	--	--
10/1/2023	1.71	--	--	--	--	--	--	--	--	--	--	--	--
11/1/2023	2.83	--	--	--	--	--	--	--	--	--	--	--	--
12/1/2023	9.21	8.99	27.15	5.49	9.74	25.49	7.18	9.13	24.08	7.50	8.51	21.41	4.50
1/12/2024	6.52	4.81	31.33	1.31	5.92	29.31	3.36	6.71	26.50	5.08	5.91	24.01	1.90
2/8/2024	2.09	4.56	31.58	1.06	3.34	31.89	0.78	6.72	26.49	5.09	6.00	23.92	1.99
3/8/2024	8.80	3.89	32.25	0.39	5.11	30.12	2.55	6.22	26.99	4.59	5.17	24.75	1.16
4/10/2024	3.01	4.68	31.46	1.18	6.19	29.04	3.63	5.32	27.89	3.69	5.11	24.81	1.10

msl - Mean sea level
TOC - Depth to water from top of inner casing.
DTW - Depth to water from ground elevation.

BrightFields, Inc.
Environmental Services

Appendix D

Influent and Effluent Water Quality Data

APPENDIX D

Influent Monthly Water Quality Data

Sussex Regional Recharge Facility (SRRF)

Milton, Delaware

Date	Total Monthly Influent (gallons)	Peak Daily Influent (gallons)	Average Daily Influent (gallons)	Monthly Rainfall (inches)	pH (SU)			Total Suspended Solids (mg/L)			BOD5 (mg/L)			Total Nitrogen (mg/L)			Ammonia as Nitrogen (mg/L)		
					Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
Jun-21	8,313,482	1,216,350	923,720	3.71	8.21	8.21	8.21	3.6	3.55	7.5	3	3.2	3.4	11.2	17.83	21.7	0.05	0.09	0.13
Jul-21	31,761,132	1,348,756	1,024,758	5.29	7.9	8.16	8.38	5.2	7.2	9.2	3	3	3	3.36	21.8	35.1	0.12	0.12	0.12
Aug-21	32,288,493	1,437,022	1,041,564	9.83	7.7	8.03	8.23	4	7.5	9.6	3	3.2	4.1	9.2	21.7	38.6	0.05	0.26	1.64
Sep-21	30,433,520	1,570,600	1,008,112	4.84	NA	8.14	NA	NA	14	NA	NA	8.8	NA	NA	16.2	NA	NA	0.1	NA
Oct-21	30,113,819	1,553,475	971,607	3.34	NA	7.84	NA	NA	6	NA	NA	9.5	NA	NA	16.7	NA	NA	0.07	NA
Nov-21	23,446,295	1,370,489	781,543	1.06	NA	7.86	NA	NA	9.5	NA	NA	7.6	NA	NA	30.2	NA	NA	3.4	NA
Dec-21	3,093,345	1,771,516	997,979	1.16	NA	7.91	NA	NA	2	NA	NA	4	NA	NA	27.2	NA	NA	0.17	NA
Jan-22	32,782,957	1,821,883	1,056,547	4.88	NA	7.21	NA	NA	5.6	NA	7.8	7.8	7.8	NA	22.7	NA	NA	1.27	NA
Feb-22	31,712,857	1,652,589	1,132,602	1.69	7.22	NA	7.43	5.2	6	6.8	4.6	7.1	9.5	13.2	18.55	23.9	0.12	0.12	0.12
Mar-22	36,354,556	2,287,886	1,172,728	2.10	7.61	NA	7.73	NA	5.8	NA	NA	3.7	NA	NA	19.85	NA	NA	0.12	NA
Apr-22	34,752,956	1,899,040	1,158,432	3.75	NA	7.59	NA	NA	10.8	NA	NA	4.7	NA	NA	18.2	NA	NA	0.12	NA
May-22	31,498,567	1,643,104	1,016,083	3.98	NA	7.56	NA	NA	12	NA	NA	20.1	NA	NA	18.4	NA	NA	0.14	NA
Jun-22	37,486,774	1,812,697	1,249,559	4.01	NA	7.69	NA	NA	5.6	NA	NA	13.0	NA	NA	11.0	NA	NA	0.11	NA
Jul-22	34,165,190	1,550,773	1,138,840	3.72	7.6	NA	8.44	4.4	NA	6.4	4.9	NA	5.2	8.06	NA	23.6	0.09	NA	0.09
Aug-22	37,983,343	1,654,279	1,225,569	3.11	7.92	NA	8.31	5.2	7	8.8	4	6.25	8.5	10.3	NA	20	0.09	NA	0.09
Sep-22	34,393,511	1,809,337	1,146,450	2.70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oct-22	35,594,861	1,662,944	1,186,495	1.08	7.78	NA	8.33	5	NA	7.2	ND	NA	5.2	9.77	NA	17.9	0.16	NA	0.16
Nov-22	32,977,836	1,646,084	1,099,261	3.61	7.73	NA	8.15	3.2	6.4	9.6	3	3.85	4.7	8.41	10.61	12.8	0.1	0.1	0.1
Dec-22	35,995,772	1,857,951	1,161,154	5.58	7.29	NA	8.26	2	5.8	9.6	8.4	8.55	8.7	7.94	11.72	15.5	NA	0.23	NA

Notes:

ND: Not detected.

NA: Not analyzed.

APPENDIX D

Influent Monthly Water Quality Data

Sussex Regional Recharge Facility (SRRF)

Milton, Delaware

Date	Total Monthly Influent (gallons)	Peak Daily Influent (gallons)	Average Daily Influent (gallons)	Monthly Rainfall (inches)	pH (SU)			Total Suspended Solids (mg/L)			BOD5 (mg/L)			Total Nitrogen (mg/L)			Ammonia as Nitrogen (mg/L)		
					Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
Jan-23	NA	NA	NA	2.47	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feb-23	34,192,737	1,694,722	1,221,169	2.02	7.59	NA	8.06	4.0	NA	NA	3.0	13.0	23.0	11.8	14.3	16.7	NA	0.1	NA
Mar-23	39,490,696	1,673,664	1,273,893	1.71	7.42	7.66	7.89	4	4.4	4.8	3	3	3	10.2	12.35	14.5	0.09	0.09	0.09
Apr-23	34,427,129	1,642,816	1,147,571	5.47	7.76	7.92	8.08	3.2	3.8	4.4	3	3	3	4.42	10.51	16.6	0.15	0.5	0.15
May-23	30,668,359	1,488,192	989,302	2.52	7.96	NA	8.06	2	5.2	8.4	3	3.45	3.9	9.31	18.01	26.7	0.05	0.05	0.05
Jun-23	32,259,245	1,559,955	1,075,308	3.55	7.67	NA	8.04	2.5	NA	5.5	2	NA	4	14.9	NA	20.9	0.11	NA	0.11
Jul-23	30,710,016	1,512,256	990,646	7.07	7.54	NA	8.16	2.4	4.6	6.8	3.0	3.0	3.0	8.6	14.4	20.2	0.09	0.09	0.09
Aug-23	36,499,000	1,725,000	1,177,387	4.07	6.95	8.01	8.01	2.8	4	4	3.5	4.7	4.7	12.2	20.8	20.8	0.18	0.18	0.18
Sep-23	35,302,000	1,753,000	1,090,379	6.40	7.78	NA	8.02	2	2.6	3.2	ND	NA	ND	15.4	16.1	16.7	0.08	0.08	0.08
Oct-23	32,173,398	1,453,868	1,037,852	1.71	7.63	NA	8	ND	ND	ND	ND	ND	ND	4.72	13.11	21.5	ND	ND	ND
Nov-23	31,350,720	1,509,952	1,045,024	2.83	7.21	NA	8.71	ND	NA	ND	3.9	4.2	4.5	8.63	10.57	12.5	0.09	0.09	0.09
Dec-23	33,392,042	1,541,867	1,077,163	9.21	7.52	NA	8.22	2	3.2	4.4	3	4.35	5.7	4.43	10.12	15.8	0.1	0.1	0.1
Jan-24	31,976,480	1,505,171	1,031,499	6.52	7.75	NA	8.2	2	2	2	3	3.25	3.5	13.5	19.25	25	NA	0.13	NA
Feb-24	31,941,696	1,422,848	1,101,438	2.09	7.79	NA	8.02	2.4	2.8	3.2	3.1	4.25	5.4	14.4	19.95	25.5	NA	0.07	NA
Mar-24	34,005,184	1,606,656	1,096,941	8.80	7.97	8.06	8.15	2	3	4	3	3.3	3.6	18.3	20.85	23.4	NA	0.12	NA
Apr-24	32,976,983	1,505,577	1,099,233	3.01	7.51	NA	8.27	2	3.4	4.8	4.6	4.8	5	20.7	23.6	25.6	NA	0.13	NA
May-24	34,065,961	1,534,336	1,098,901	2.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jun-24	36,211,799	1,719,936	1,207,060	2.83	7.91	NA	8.04	2	2.6	3.2	3	4.1	5.2	22.6	28.38	34.7	0.08	0.125	0.17
Jul-24	38,890,496	1,678,646	1,254,532	5.06	7.61	7.83	8.04	2	2	2	4	5.05	6.1	17.1	19.86	23.1	0.14	0.14	0.14
Aug-24	35,553,846	1,620,649	1,146,898	3.86	7.75	NA	8.33	2	3.2	4.4	3	4.15	5.3	23.1	26.4	29.7	NA	0.11	NA
Sep-24	32,878,794	1,605,507	1,095,959	0.92	7.95	NA	8.33	2	3.4	4.8	3	3	3	15.3	23.4	31.5	NA	0.13	NA
Oct-24	32,981,589	1,452,800	1,063,922	0.01	8.03	NA	8.34	2	3.33	4.8	3	3.1	3.2	8.38	9.03	21.2	0.12	0.14	0.16
Nov-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

ND: Not detected.

NA: Not analyzed.

APPENDIX D

Influent Monthly Water Quality Data

Sussex Regional Recharge Facility (SRRF)

Milton, Delaware

Date	Nitrate + Nitrite as Nitrogen (mg/L)			Total Phosphorus (mg/L)			Chloride (mg/L)			Turbidity (NTU)			Total Residual Chlorine (mg/L)			Potassium (mg/L)			Sodium (mg/L)		
	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
Jun-21	9.98	16.86	20.5	0.08	0.11	0.13	217	217	217	0	NA	0.05	1.07	NA	2.25	54.4	54.4	54.4	119	119	119
Jul-21	2.35	20.8	34.1	0.16	0.16	0.16	NA	NA	NA	0.1	1.35	2.3	1	1.61	2.36	NA	NA	NA	NA	NA	NA
Aug-21	8.64	20.5	37.5	0.08	0.13	0.21	NA	NA	NA	0.6	1.05	2	1.05	2.05	3.36	NA	NA	NA	NA	NA	NA
Sep-21	NA	15.1	NA	NA	0.16	NA	NA	181	NA	0.7	1.08	2.8	1.13	2.31	3.39	NA	48.1	NA	NA	106	NA
Oct-21	NA	15.3	NA	NA	0.1	NA	NA	NA	NA	0.4	0.64	1.6	1.3	2.17	3.45	NA	NA	NA	NA	NA	NA
Nov-21	NA	24.8	NA	NA	0.07	NA	NA	228	NA	0.2	0.36	1	1.3	2.3	3	NA	57.7	NA	NA	116	NA
Dec-21	NA	25	NA	NA	0.13	NA	NA	NA	NA	0.2	0.23	0.3	1.24	2.06	3.4	NA	NA	NA	NA	NA	NA
Jan-22	NA	20.3	NA	NA	0.06	NA	NA	217	NA	0.3	0.3	0.3	1.43	2.22	3.82	NA	52	NA	NA	106	NA
Feb-22	12	17.4	22.8	0.08	0.08	0.08	NA	NA	NA	0.3	0.48	1.6	1.52	2.08	3.11	NA	NA	NA	NA	NA	NA
Mar-22	NA	18.8	NA	NA	0.065	NA	NA	230	NA	NA	1.32	NA	NA	1.92	NA	NA	53.6	NA	NA	117	NA
Apr-22	NA	16.8	NA	NA	0.1	NA	NA	NA	NA	0.9	2.43	8.2	1.1	2.55	3.86	NA	NA	NA	NA	NA	NA
May-22	NA	16.6	NA	NA	0.14	NA	NA	NA	NA	0.8	1.64	3.9	0.31	2.67	3.91	NA	NA	NA	NA	NA	NA
Jun-22	NA	9.69	NA	NA	0.1	NA	NA	NA	NA	0.1	1.06	4.4	1.31	2.86	3.86	NA	NA	NA	NA	NA	NA
Jul-22	6.86	NA	22.2	0.17	NA	0.17	131	NA	131	0.1	NA	1.8	1.3	NA	3.88	51.3	NA	51.3	120	NA	120
Aug-22	8.71	NA	18.8	0.3	NA	0.3	133	NA	133	0.1	NA	2.2	1.5	NA	3.56	56.4	NA	56.4	102	NA	102
Sep-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oct-22	8.39	NA	16.9	0.12	NA	0.12	NA	NA	NA	0.1	NA	3.63	1.89	NA	3.85	NA	NA	NA	NA	NA	NA
Nov-22	7.34	9.48	11.6	0.09	0.09	0.09	127	127	127	0.1	1.35	2.6	1.9	3.1	4.3	53.7	53.7	53.7	131	131	131
Dec-22	6.57	8.335	10.1	NA	0.14	NA	NA	NA	NA	0.1	1.7	3.3	2.1	2.85	3.6	NA	NA	NA	NA	NA	NA

Notes:

ND: Not detected.

NA: Not analyzed.

APPENDIX D

Influent Monthly Water Quality Data

Sussex Regional Recharge Facility (SRRF)

Milton, Delaware

Date	Nitrate + Nitrite as Nitrogen (mg/L)			Total Phosphorus (mg/L)			Chloride (mg/L)			Turbidity (NTU)			Total Residual Chlorine (mg/L)			Potassium (mg/L)			Sodium (mg/L)		
	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
Jan-23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feb-23	9.3	12.43	15.6	NA	0.1	NA	NA	NA	NA	0.1	1.4	2.7	1.02	1.89	2.76	NA	NA	NA	NA	NA	NA
Mar-23	8.94	11.12	13.3	0.15	0.15	0.15	NA	NA	NA	0.3	1.5	2.7	1.2	2.43	3.65	NA	NA	NA	NA	NA	NA
Apr-23	3.46	9.33	15.2	0.16	0.16	0.16	NA	NA	NA	0.5	1.6	2.7	1.3	1.97	NA	NA	NA	NA	NA	NA	NA
May-23	7.96	16.38	24.8	0.13	0.13	0.13	NA	NA	NA	0.4	2.35	4.3	1.74	2.58	3.42	NA	NA	NA	NA	NA	NA
Jun-23	13.1	NA	19.4	0.24	NA	0.24	146	NA	146	0.7	NA	2.4	1.4	NA	3.64	67.1	NA	67.1	162	NA	162
Jul-23	7.40	13.25	19.10	0.21	0.21	0.21	152	152	152	0.50	1.50	2.50	1.86	2.74	3.62	60.8	30.8	60.8	160	160	160
Aug-23	11.2	19.5	19.5	0.1	0.01	0.01	1.2	3.94	3.94	0.7	2.5	2.5	1.2	3.94	3.94	NA	NA	NA	NA	NA	NA
Sep-23	14.1	14.6	15.1	ND	NA	ND	NA	NA	NA	0.4	1.5	2.6	1.2	2.51	3.81	NA	NA	NA	NA	NA	NA
Oct-23	1.68	10.94	20.2	0.07	0.07	0.07	153	153	153	0.1	1.85	3.6	2.1	2.81	3.52	73.5	73.5	73.5	150	150	150
Nov-23	6.91	9.005	11.1	1.1	1.1	1.1	NA	NA	NA	0.9	NA	4.2	1.11	NA	3.73	NA	NA	NA	NA	NA	NA
Dec-23	3.48	8.84	14	0.25	0.25	0.25	NA	NA	NA	1	NA	3.6	1.63	NA	3.9	NA	NA	NA	NA	NA	NA
Jan-24	12.2	17.7	23.2	NA	0.08	NA	NA	143	NA	0.04	1.47	2.9	1.34	2.6	3.86	NA	62.3	NA	NA	120	NA
Feb-24	13.2	18.8	24.4	NA	0.15	NA	NA	NA	NA	0.4	NA	3.3	1.26	NA	3.38	NA	NA	NA	NA	NA	NA
Mar-24	17.1	19.9	22.7	NA	0.12	NA	NA	NA	NA	1	NA	4.3	1.14	NA	3.58	NA	NA	NA	NA	NA	NA
Apr-24	19.3	22.34	24.4	NA	0.14	NA	NA	NA	NA	0.6	NA	3.2	1.94	NA	3.64	NA	NA	NA	NA	NA	NA
May-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jun-24	21.5	27.10	33.00	0.29	0.53	NA	NA	134	NA	0.5	NA	2.9	1.2	NA	3.59	NA	63.8	NA	NA	129	NA
Jul-24	15.8	18.72	21.30	0.18	0.18	0.18	NA	NA	NA	1	NA	3.3	1	NA	3.1	NA	NA	NA	NA	NA	NA
Aug-24	21.9	25.55	29.20	NA	0.54	NA	NA	NA	NA	1.1	NA	3.2	1.62	NA	3.38	NA	NA	NA	NA	NA	NA
Sep-24	14	22.1	30.20	NA	0.54	NA	NA	151	NA	1	NA	2.4	1.19	NA	2.2	NA	71.7	NA	NA	149	NA
Oct-24	7.27	11.4	19.7	0.94	0.95	0.96	NA	NA	NA	1	NA	3.4	1.7	NA	2.82	NA	NA	NA	NA	NA	NA
Nov-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

ND: Not detected.

NA: Not analyzed.

APPENDIX D
Emfuunt Monthfy Watur Quafity Data
Sussux Rugionaf Ruchargu Facifity (SRRF)
Mifton, Dufawaru

Date	Total Monthly Effluent (gallons)	Maximum Daily (gallons)	Average Daily (gallons/day)	Ammonia as Nitrogen (mg/L)			Cadmium (mg/L)			Copper (mg/L)			Fecal Coliform (# col / 100mL)			Lead (mg/L)			Nickel (mg/L)			Nirate + Nitrite as Nitrogen (mg/L)		
				Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
Jun-21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jul-21	28,792,000	4,819,000	1,919,467	NA	0.05	NA	NA	0.0005	NA	NA	0.0089	NA	NA	81	NA	NA	0.001	NA	NA	0	NA	NA	13.60	NA
Aug-21	28,792,000	4,819,000	1,919,467	NA	0.14	NA	NA	NA	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA	NA	NA	NA	15.5	NA
Sep-21	25,286,000	4,701,000	1,264,300	NA	0.1	NA	NA	NA	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	13.20	NA
Oct-21	20,905,000	3,420,000	2,090,500	NA	0.13	NA	NA	NA	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	15.90	NA
Nov-21	12,930,000	4,279,000	3,232,500	NA	2.65	NA	NA	NA	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	21.60	NA
Dec-21	31,789,000	5,274,000	2,889,909	NA	1.36	NA	NA	NA	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	21.00	NA
Jan-22	13,972,000	4,729,000	3,493,000	NA	3.65	NA	NA	0.0005	NA	NA	0.0034	NA	NA	10	NA	NA	0.0045	NA	NA	NA	NA	NA	23.90	NA
Feb-22	16,552,000	4,273,000	2,364,571	NA	4.24	NA	NA	NA	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	17.40	NA
Mar-22	19,810,545	4,483,545	1,981,055	NA	1.16	NA	NA	NA	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	17.20	NA
Apr-22	51,495,000	7,420,100	3,029,118	NA	0.14	NA	NA	NA	NA	NA	NA	NA	NA	40	NA	NA	NA	NA	NA	NA	NA	NA	17.90	NA
May-22	35,132,930	5,235,000	1,133,320	NA	0.13	NA	NA	NA	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	9.96	NA
Jun-22	65,716,900	5,181,500	2,190,563	NA	0.28	NA	NA	NA	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	6.93	9.82	12.7
Jul-22	13,524,100	4,327,800	436,261	0.7	NA	0.7	NA	NA	NA	NA	NA	NA	10	30	50	NA	NA	NA	NA	NA	NA	9.57	NA	9.57
Aug-22	42,401,000	6,268,000	1,367,774	0.05	0.05	0.05	NA	NA	NA	NA	NA	NA	2	4	6	NA	NA	NA	NA	NA	NA	15.4	15.7	16
Sep-22	33,631,600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oct-22	24,216,140	3,626,900	781,166	NA	0.17	NA	NA	NA	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA	8.69	NA
Nov-22	29,269,000	5,034,000	975,633	0.14	0.14	0.14	NA	NA	NA	NA	NA	NA	<2	2	2	NA	NA	NA	NA	NA	NA	10.8	11.4	12
Dec-22	33,135,700	5,119,700	1,068,894	NA	0.18	NA	NA	NA	NA	NA	NA	NA	2	3	4	NA	NA	NA	NA	NA	NA	9.32	9.42	9.52

Notes:
ND: Not detected.
NA: Not analyzed.

APPENDIX D
Emfuunt Monthfy Watur Quafity Data
Sussux Rugionaf Ruchargu Facifity (SRRF)
Mifton, Dufawaru

Date	Total Monthly Effluent (gallons)	Maximum Daily (gallons)	Average Daily (gallons/day)	Ammonia as Nitrogen (mg/L)			Cadmium (mg/L)			Copper (mg/L)			Fecal Coliform (# col / 100mL)			Lead (mg/L)			Nickel (mg/L)			Nirate + Nitrite as Nitrogen (mg/L)		
				Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
Jan-23	46,401,900	6,091,300	1,496,835	NA	0.52	NA	NA	NA	NA	NA	NA	NA	2	3	4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feb-23	41,988,780	6,545,200	1,499,599	NA	0.11	NA	NA	NA	NA	NA	NA	NA	2	5	8	NA	NA	NA	NA	NA	NA	9.37	9.69	10
Mar-23	29,455,900	5,487,100	950,190	NA	0.17	NA	NA	NA	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	8.59	8.66	8.73
Apr-23	19,431,550	4,224,300	647,718	NA	0.22	NA	NA	NA	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	11.4	11.55	11.7
May-23	39,306,100	6,829,900	1,322,487	NA	0.52	NA	NA	NA	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	8.11	8.37	8.63
Jun-23	40,823,900	4,266,000	1,360,797	NA	0.14	NA	NA	NA	NA	NA	NA	NA	2	4	6	NA	NA	NA	NA	NA	NA	8.11	9.6	11.1
Jul-23	32,459,870	4,336,600	1,047,093	1.16	1.16	1.16	NA	NA	NA	NA	NA	NA	2	89	176	NA	NA	NA	NA	NA	NA	8.56	9.09	9.61
Aug-23	47,242,300	5,428,800	1,523,945	NA	0.3	NA	NA	NA	NA	NA	NA	NA	2	2	2	NA	NA	NA	NA	NA	NA	7.26	7.54	7.81
Sep-23	33,883,000	4,485,700	1,129,433	NA	0.64	NA	NA	NA	NA	NA	NA	NA	2	2	2	NA	NA	NA	NA	NA	NA	5.16	5.36	5.55
Oct-23	32,397,900	3,891,500	1,045,094	NA	0.07	NA	NA	NA	NA	NA	NA	NA	2	2	2	NA	NA	NA	NA	NA	NA	3.65	6.45	9.24
Nov-23	19,579,200	2,984,600	652,640	NA	0.06	NA	NA	NA	NA	NA	NA	NA	2	18.8	62	NA	NA	NA	NA	NA	NA	2.85	3.51	4.17
Dec-23	31,836,500	4,224,200	1,026,984	NA	2.06	NA	NA	NA	NA	NA	NA	NA	2	2	2	NA	NA	NA	NA	NA	NA	6.48	7.25	8.01
Jan-24	17,259,800	3,605,600	556,768	NA	0.1	NA	NA	NA	NA	NA	NA	NA	2	4	6	NA	NA	NA	NA	NA	NA	9.26	9.6	9.94
Feb-24	29,633,600	3,996,100	1,021,848	NA	0.22	NA	NA	0	NA	NA	0.01	NA	2	3	4	NA	0.001	NA	NA	0	NA	NA	15.03	NA
Mar-24	26,277,200	3,307,200	847,652	NA	0.26	NA	NA	NA	NA	NA	NA	NA	2	2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Apr-24	25,550,600	4,533,700	841,687	0.73	0.88	1.02	NA	NA	NA	NA	NA	NA	2	2	2	NA	NA	NA	NA	NA	NA	12.6	13.45	14.3
May-24	48,057,800	7,417,200	1,647,932	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jun-24	58,547,000	6,408,000	1,951,567	0.24	0.275	0.31	NA	NA	NA	NA	NA	NA	2	NA	4	NA	NA	NA	NA	NA	NA	11.2	12.15	13.1
Jul-24	38,467,100	4,808,700	1,240,874	NA	1.27	NA	NA	NA	NA	NA	NA	NA	2	16	42	NA	NA	NA	NA	NA	NA	3.56	3.66	3.76
Aug-24	46,872,100	5,505,200	1,512,003	NA	0.19	NA	NA	NA	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	6.3	7.325	8.35
Sep-24	29,178,700	2,804,600	972,623	NA	0.16	NA	NA	NA	NA	NA	NA	NA	2	7	12	NA	NA	NA	NA	NA	NA	11.2	11.7	12.2
Oct-24	24,293,900	2,936,200	783,674	NA	0.1	NA	NA	NA	NA	NA	NA	NA	2	4	6	NA	NA	NA	NA	NA	NA	8.9	9.8	10.7
Nov-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
ND: Not detected.
NA: Not analyzed.

APPENDIX D
Emfuunt Monthfy Watur Quafity Data
Sussux Rugionaf Ruchargu Facifity (SRRF)
Mifton, Dufawaru

Date	Organic Nitrogen (mg/L)			Sodium (mg/L)			Total Nitrogen (mg/L)			Total Phosphorus (mg/L)			Total Residual Chlorine (mg/L)			Zinc (mg/L)			BOD5 (mg/L)			pH (SU)			TSS (mg/L)			Turbidity (NTU)		
	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
Jun-21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jul-21	NA	0.776	NA	NA	133	NA	NA	14.5	NA	NA	NA	NA	NA	0.01	NA	NA	0.0192	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aug-21	NA	3.17	NA	NA	141	NA	NA	18.2	NA	NA	0.05	NA	NA	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sep-21	NA	1.2	NA	NA	106	NA	NA	15.3	NA	NA	NA	NA	NA	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oct-21	NA	2.54	NA	NA	NA	NA	NA	19.6	NA	NA	NA	NA	NA	0.18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nov-21	NA	2.39	NA	NA	NA	NA	NA	25.6	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dec-21	NA	2.5	NA	NA	NA	NA	NA	24.9	NA	NA	0.05	NA	NA	2.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jan-22	NA	0.19	NA	NA	NA	NA	NA	27.7	NA	NA	0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feb-22	NA	NA	NA	NA	154	NA	NA	22.6	NA	NA	0.06	NA	NA	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mar-22	NA	2.39	NA	NA	137	NA	NA	20.7	NA	NA	0.06	NA	NA	0.39	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Apr-22	NA	2.01	NA	NA	200	NA	NA	20.8	NA	NA	0.13	NA	NA	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
May-22	NA	2.86	NA	NA	169	NA	NA	13.3	NA	NA	2.04	NA	NA	0.09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jun-22	NA	2.64	NA	NA	178	NA	NA	13.4	NA	NA	0.16	NA	0.05	0.2	0.35	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jul-22	1.71	NA	1.71	NA	NA	NA	11.3	11.3	11.3	0.10	0.10	0.10	NA	0.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aug-22	2.06	2.06	2.06	128	128	128	17.3	17.4	17.5	0.05	0.075	0.1	0.07	NA	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sep-22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oct-22	NA	2.11	NA	NA	129	NA	NA	11.1	NA	NA	0.08	NA	1.89	NA	3.85	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nov-22	1.22	1.22	1.22	133	133	133	12.1	13.5	14.8	0.05	0.055	0.06	1.9	3.1	4.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dec-22	NA	0.716	NA	NA	171	NA	10.2	10.7	11.2	0.05	0.085	0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
ND: Not detected.
NA: Not analyzed.

APPENDIX D
Emfuunt Monthfy Watur Quafity Data
Sussux Rugionaf Ruchargu Facifity (SRRF)
Mifton, Dufawaru

Date	Organic Nitrogen (mg/L)			Sodium (mg/L)			Total Nitrogen (mg/L)			Total Phosphorus (mg/L)			Total Residual Chlorine (mg/L)			Zinc (mg/L)			BOD5 (mg/L)			pH (SU)			TSS (mg/L)			Turbidity (NTU)		
	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
Jan-23	NA	NA	NA	NA	NA	NA	NA	12.5	NA	NA	0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feb-23	NA	1.31	NA	NA	133	NA	11.4	11.5	11.6	NA	0.025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mar-23	NA	3	NA	NA	118	NA	10.5	11.2	11.9	0.05	0.05	0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Apr-23	NA	1.18	NA	NA	131	NA	12.8	13.2	13.6	0.05	0.055	0.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
May-23	NA	2.22	NA	NA	133	NA	NA	10.8	NA	NA	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jun-23	NA	3.04	NA	NA	146	NA	11.1	12.7	14.2	NA	0.09	NA	0.05	0.06	0.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jul-23	1.07	1.07	1.07	149	149	149	NA	11.5	NA	NA	0.06	NA	0.05	0.15	0.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aug-23	NA	2.94	NA	NA	129	NA	10.4	11.1	11.7	0.05	0.06	0.07	0.05	0.1	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sep-23	NA	4.8	NA	NA	86.5	NA	10.5	10.6	10.6	0.18	0.18	0.18	NA	0.17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oct-23	NA	4.6	NA	NA	142	NA	11	12.5	13.9	0.13	0.36	0.59	0.17	0.21	0.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nov-23	NA	6.81	NA	NA	159	NA	8.81	9.27	9.72	0.29	0.44	0.59	NA	0.08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dec-23	NA	2.56	NA	NA	NA	NA	10.4	10.8	11.1	0.1	0.14	0.18	0.09	0.3	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jan-24	NA	2.5	NA	NA	176	NA	11.9	12.2	12.5	0.07	0.085	0.1	0.06	0.06	0.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feb-24	NA	2.16	NA	NA	148	NA	16.2	17.1	18	NA	0.08	NA	NA	0.12	NA	NA	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mar-24	NA	1.54	NA	NA	120	NA	15.9	16.2	16.4	NA	0.095	NA	NA	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Apr-24	2.22	2.66	3.09	120	130	139	16.4	17	17.5	0.07	0.115	0.16	0.03	NA	0.08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
May-24	NA	NA	NA	NA	NA	NA	NA	15.4	NA	NA	0.08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jun-24	3.61	3.875	4.14	NA	NA	NA	15.6	16.3	17	0.1	0.18	0.26	1.2	NA	3.59	NA	NA	NA	3	4.1	5.2	7.91	NA	8.04	2	2.6	3.2	0.5	NA	2.9
Jul-24	NA	6.39	NA	NA	NA	NA	10.2	10.8	11.4	0.97	1.02	1.07	1	NA	3.1	NA	NA	NA	4	5.05	6.1	7.61	7.83	8.04	2	2	2	1	NA	3.3
Aug-24	NA	6.62	NA	NA	NA	NA	13.1	15.2	17.2	0.66	0.685	0.71	1.62	NA	3.38	NA	NA	NA	3	4.15	5.3	7.75	NA	8.33	2	3.2	4.4	1.1	NA	3.2
Sep-24	NA	6.48	NA	NA	NA	NA	17.9	18.3	18.6	0.59	0.81	1.03	1.19	NA	2.2	NA	NA	NA	3	3	3	7.95	NA	8.33	2	3.4	4.8	1	NA	2.4
Oct-24	NA	6.69	NA	NA	NA	NA	14.9	16.2	17.5	0.4	0.665	0.93	1.7	NA	2.82	NA	NA	NA	3	3.1	3.2	8.03	NA	8.34	2	3.33	4.8	1	NA	3.4
Nov-24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
ND: Not detected.
NA: Not analyzed.

BrightFields, Inc.
Environmental Services

Appendix E

Water Level Data

BrightFields, Inc.
Environmental Services

Appendix E.1

Monitoring Well Water Quality Data

APPENDIX E.1
MW-1F Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/24/2020	No	ND	NA	NA	NA	31.7	NA	NA	9.33	ND	NA	NA	NA	NA	NA	NA
03/05/2021	No	ND	NA	NA	NA	34.4	NA	NA	9.78	ND	NA	NA	NA	NA	NA	NA
05/10/2021	No	ND	NA	NA	NA	33.6	NA	NA	9.01	ND	NA	NA	NA	NA	NA	NA
07/26/2021	No	ND	NA	NA	NA	37.6	NA	NA	8.19	ND	NA	NA	NA	NA	NA	NA
12/15/2021	No	ND	NA	NA	NA	41.1	NA	NA	8.31	ND	NA	NA	NA	NA	NA	NA
03/25/2022	No	ND	NA	NA	NA	44.6	NA	NA	8.82	ND	NA	NA	NA	NA	NA	NA
05/25/2022	No	ND	NA	NA	NA	40.2	NA	NA	8.4	ND	NA	NA	NA	NA	NA	NA
08/31/2022	No	ND	NA	NA	NA	38.8	NA	NA	7.64	ND	NA	NA	NA	NA	NA	NA
08/31/2022	Yes	ND	NA	NA	NA	38.8	NA	NA	7.64	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	34.2	NA	NA	4.27	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	33.4	NA	NA	6.81	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	34.4	NA	NA	7.44	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	36.4	NA	NA	5.9	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	36.3	NA	NA	6.14	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	39.6	NA	NA	5.86	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00188	ND	13.5	37.4	0.00122	ND	6.54	ND	57.4	0.00438	0.00152	5.76	0.0522	ND
08/08/2024	No	ND	NA	NA	NA	32.5	NA	NA	4.31	ND	NA	NA	NA	NA	NA	NA
Minimum		-	0.00188	-	13.5	31.7	0.00122	-	4.27	-	57.4	0.00438	0.00152	5.76	0.0522	-
Maximum		-	0.00188	-	13.5	44.6	0.00122	-	9.78	-	57.4	0.00438	0.00152	5.76	0.0522	-
Average		-	0.00188	-	13.5	36.64	0.00122	-	7.30	-	57.4	0.00438	0.00152	5.76	0.0522	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-1F Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/24/2020	No	10.6	10.6	ND	5.04	NA	7.5	242	NA	16.8	185	0.17	10.8	0.05	NA
03/05/2021	No	10.4	10.4	ND	5.93	NA	7.2	276	NA	15.2	192	0.09	10.5	0.06	NA
05/10/2021	No	9.72	9.72	ND	5.24	NA	7.39	317	NA	14.4	200	0.1	9.82	ND	NA
07/26/2021	No	10.3	10.3	ND	5.12	NA	7.69	187.1	NA	16.3	225	0.1	10.4	ND	NA
12/15/2021	No	8.42	8.42	ND	5.18	NA	10.4	169	NA	17	212	0.46	8.88	ND	NA
03/25/2022	No	9.07	9.07	ND	5.59	NA	10.8	156.3	NA	15.2	180	0.16	9.23	ND	NA
05/25/2022	No	8.07	8.07	ND	5.56	NA	14.2	138.3	NA	14.9	240	0.25	8.32	ND	NA
08/31/2022	No	7.89	7.89	ND	4.86	NA	12.5	590	NA	17.1	230	ND	7.89	ND	NA
08/31/2022	Yes	7.87	7.87	ND	4.86	NA	13.5	590	NA	17.1	235	ND	7.87	ND	NA
11/28/2022	No	7.68	7.68	ND	5.21	NA	12.5	216	NA	17.1	148	ND	7.68	ND	NA
02/14/2023	No	8.73	8.73	ND	5.27	NA	11.3	208	NA	16	175	ND	8.73	ND	NA
05/11/2023	No	7.46	7.46	ND	5.17	NA	11.3	209	NA	14.8	172	0.09	7.56	ND	NA
08/10/2023	No	6.5	6.5	ND	5.3	NA	11.5	208	NA	15.7	178	0.074	6.58	ND	NA
11/02/2023	No	6.18	6.18	ND	4.85	NA	11.4	214	NA	17.1	175	0.055	6.24	ND	NA
02/08/2024	No	6.9	6.9	ND	5.07	NA	10.2	223	NA	16.1	172	0.083	6.98	ND	NA
05/09/2024	No	5.35	5.35	ND	5.01	0.00161	11.2	207	25.7	14.4	192	ND	5.35	ND	ND
08/08/2024	No	5.04	5.04	ND	5.17	NA	10.7	196	NA	15.4	152	0.143	5.19	ND	NA
Minimum		5.04	5.04	-	4.85	0.00161	7.2	138.3	25.7	14.4	148	0.055	5.19	0.05	-
Maximum		10.6	10.6	-	5.93	0.00161	14.2	590	25.7	17.1	240	0.46	10.8	0.06	-
Average		8.02	8.02	-	5.223	0.00161	10.49	234.79	25.7	15.84	189.25	0.15	8.13	0.055	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-1G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/19/2020	No	ND	NA	NA	NA	14.3	NA	NA	8.24	ND	NA	NA	NA	NA	NA	NA
11/19/2020	Yes	ND	NA	NA	NA	13.9	NA	NA	8.24	ND	NA	NA	NA	NA	NA	NA
03/11/2021	No	0.27	NA	NA	NA	12.9	NA	NA	6.6	ND	NA	NA	NA	NA	NA	NA
05/12/2021	No	ND	NA	NA	NA	13.1	NA	NA	6.42	ND	NA	NA	NA	NA	NA	NA
07/21/2021	No	ND	NA	NA	NA	13.6	NA	NA	6.09	ND	NA	NA	NA	NA	NA	NA
12/16/2021	No	ND	NA	NA	NA	13.2	NA	NA	6.7	ND	NA	NA	NA	NA	NA	NA
03/30/2022	No	ND	NA	NA	NA	12.8	NA	NA	6.46	ND	NA	NA	NA	NA	NA	NA
05/26/2022	No	ND	NA	NA	NA	12.8	NA	NA	6.07	ND	NA	NA	NA	NA	NA	NA
08/30/2022	No	ND	NA	NA	NA	12.4	NA	NA	5.88	ND	NA	NA	NA	NA	NA	NA
08/30/2022	Yes	ND	NA	NA	NA	12.4	NA	NA	5.88	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	11	NA	NA	3.41	ND	NA	NA	NA	NA	NA	NA
11/28/2022	Yes	ND	NA	NA	NA	11	NA	NA	3.41	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	11.1	NA	NA	4.71	ND	NA	NA	NA	NA	NA	NA
02/14/2023	Yes	ND	NA	NA	NA	11	NA	NA	4.71	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	10.4	NA	NA	5.52	ND	NA	NA	NA	NA	NA	NA
05/11/2023	Yes	ND	NA	NA	NA	10.4	NA	NA	5.52	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	10.7	NA	NA	4.36	ND	NA	NA	NA	NA	NA	NA
08/10/2023	Yes	ND	NA	NA	NA	10.7	NA	NA	4.36	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	10.9	NA	NA	4.55	ND	NA	NA	NA	NA	NA	NA
11/02/2023	Yes	ND	NA	NA	NA	10.9	NA	NA	4.55	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	10.5	NA	NA	4.67	ND	NA	NA	NA	NA	NA	NA
02/08/2024	Yes	ND	NA	NA	NA	10.6	NA	NA	4.67	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.0019	ND	0.276	10.3	ND	ND	5.17	ND	8	ND	ND	1.78	0.011	ND
05/09/2024	Yes	ND	0.0019	ND	0.279	10.3	ND	ND	5.17	ND	8.26	ND	ND	1.85	0.0114	ND
08/08/2024	No	ND	NA	NA	NA	10.3	NA	NA	4.22	ND	NA	NA	NA	NA	NA	NA
08/08/2024	Yes	ND	NA	NA	NA	10.3	NA	NA	4.22	ND	NA	NA	NA	NA	NA	NA
Minimum		0.27	0.0019	-	0.276	10.3	-	-	3.41	-	8.00	-	-	1.78	0.011	-
Maximum		0.27	0.0019	-	0.276	14.3	-	-	8.24	-	8.00	-	-	1.78	0.011	-
Average		0.27	0.0019	-	0.276	11.89	-	-	5.57	-	8.00	-	-	1.78	0.011	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-1G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/19/2020	No	0.23	0.226	ND	5	NA	4.6	49.2	NA	13.4	77.5	0.08	0.305	ND	NA
11/19/2020	Yes	0.23	0.227	ND	5	NA	5.18	49.2	NA	13.4	75	0.07	0.297	ND	NA
03/11/2021	No	0.24	0.238	ND	5.41	NA	3.29	61.3	NA	14.5	55	0.34	0.58	ND	NA
05/12/2021	No	8.28	8.28	ND	5.01	NA	3.25	66.4	NA	13.6	60	ND	8.28	ND	NA
07/21/2021	No	ND	ND	ND	4.95	NA	6.2	39.9	NA	14.3	72.5	0.06	0.064	ND	NA
12/16/2021	No	0.26	0.26	ND	5.38	NA	5.31	33.4	NA	14.7	77.5	0.05	0.314	ND	NA
03/30/2022	No	0.24	0.238	ND	5.48	NA	6.48	32.6	NA	13.3	105	ND	0.238	ND	NA
05/26/2022	No	0.22	0.219	ND	5.13	NA	3.3	31.3	NA	13.8	57.5	0.06	0.283	ND	NA
08/30/2022	No	0.25	0.247	ND	4.77	NA	2.66	1.37	NA	14.9	70	ND	0.247	ND	NA
08/30/2022	Yes	0.25	0.247	ND	4.77	NA	2.47	1.37	NA	14.9	67.5	ND	0.247	ND	NA
11/28/2022	No	0.21	0.214	ND	5.16	NA	4.59	43.8	NA	14.1	40	ND	0.214	ND	NA
11/28/2022	Yes	0.22	0.215	ND	5.16	NA	4.71	43.8	NA	14.1	50	ND	0.215	ND	NA
02/14/2023	No	ND	ND	ND	5.18	NA	5.13	43.4	NA	13.9	92.5	ND	0	ND	NA
02/14/2023	Yes	ND	ND	ND	5.18	NA	5.23	43.4	NA	13.9	87.5	ND	0	ND	NA
05/11/2023	No	0.28	0.283	ND	4.68	NA	4.59	42.5	NA	13.3	42.5	ND	0.283	ND	NA
05/11/2023	Yes	0.28	0.283	ND	4.68	NA	4.71	42.5	NA	13.3	37.5	ND	0.283	ND	NA
08/10/2023	No	0.27	0.27	ND	4.73	NA	5.56	42.9	NA	13.3	37.5	ND	0.27	ND	NA
08/10/2023	Yes	0.27	0.27	ND	4.73	NA	5.63	42.9	NA	13.3	45	ND	0.27	ND	NA
11/02/2023	No	0.3	0.299	ND	4.64	NA	4.46	43.9	NA	14	40	ND	0.299	ND	NA
11/02/2023	Yes	0.3	0.299	ND	4.64	NA	4.64	43.9	NA	14	40	ND	0.299	ND	NA
02/08/2024	No	0.34	0.338	ND	4.89	NA	3.33	44.3	NA	14.1	42.5	0.053	0.391	ND	NA
02/08/2024	Yes	0.34	0.337	ND	4.89	NA	3.59	44.3	NA	14.1	42.5	0.05	0.387	ND	NA
05/09/2024	No	0.23	0.229	ND	4.77	0.00383	4.84	43.1	2.97	13.3	45	ND	0.229	ND	ND
05/09/2024	Yes	0.23	0.23	ND	4.77	0.00383	4.76	43.1	3.02	13.3	50	ND	0.23	ND	ND
08/08/2024	No	0.25	0.247	ND	5.38	NA	2.44	42.9	NA	13.3	40	ND	0.247	ND	NA
08/08/2024	Yes	0.25	0.247	ND	5.38	NA	2.39	42.9	NA	13.3	40	ND	0.247	ND	NA
Minimum		0.21	0.214	-	4.64	0.00383	2.44	1.37	2.97	13.3	37.5	0.05	0	-	-
Maximum		8.28	8.28	-	5.48	0.00383	6.48	66.4	2.97	14.9	105	0.34	8.28	-	-
Average		0.83	0.83	-	5.035	0.00383	4.38	41.39	2.97	13.86	59.69	0.11	0.77	-	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-1L Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel	Nitrate as N
11/24/2020	No	ND	NA	NA	NA	43.9	NA	NA	6.37	ND	NA	NA	NA	NA	NA	NA	2.08
11/24/2020	Yes	ND	NA	NA	NA	43.2	NA	NA	6.37	ND	NA	NA	NA	NA	NA	NA	2.03
05/10/2021	No	ND	NA	NA	NA	29.5	NA	NA	7.46	ND	NA	NA	NA	NA	NA	NA	3.38
05/10/2021	Yes	ND	NA	NA	NA	29	NA	NA	7.46	ND	NA	NA	NA	NA	NA	NA	3.32
07/26/2021	No	ND	NA	NA	NA	38.3	NA	NA	6.39	ND	NA	NA	NA	NA	NA	NA	3.73
12/15/2021	No	ND	NA	NA	NA	61.4	NA	NA	6.55	ND	NA	NA	NA	NA	NA	NA	4.09
03/25/2022	No	ND	NA	NA	NA	98.1	NA	NA	8.04	ND	NA	NA	NA	NA	NA	NA	2.66
05/25/2022	No	ND	NA	NA	NA	90.9	NA	NA	8.14	ND	NA	NA	NA	NA	NA	NA	2.31
08/31/2022	No	ND	NA	NA	NA	74.9	NA	NA	7.24	ND	NA	NA	NA	NA	NA	NA	2.62
08/31/2022	Yes	ND	NA	NA	NA	76.6	NA	NA	7.24	ND	NA	NA	NA	NA	NA	NA	2.67
11/28/2022	No	ND	NA	NA	NA	71	NA	NA	4.17	ND	NA	NA	NA	NA	NA	NA	3.05
11/28/2022	Yes	ND	NA	NA	NA	71	NA	NA	4.17	ND	NA	NA	NA	NA	NA	NA	3.07
02/14/2023	No	ND	NA	NA	NA	45.8	NA	NA	7.77	ND	NA	NA	NA	NA	NA	NA	3.24
02/14/2023	Yes	ND	NA	NA	NA	45.5	NA	NA	7.77	ND	NA	NA	NA	NA	NA	NA	3.27
05/11/2023	No	ND	NA	NA	NA	64.8	NA	NA	8.11	ND	NA	NA	NA	NA	NA	NA	4.29
05/11/2023	Yes	ND	NA	NA	NA	64.9	NA	NA	8.11	ND	NA	NA	NA	NA	NA	NA	4.29
08/10/2023	No	ND	NA	NA	NA	65.9	NA	NA	6.17	ND	NA	NA	NA	NA	NA	NA	6.14
08/10/2023	Yes	ND	NA	NA	NA	66	NA	NA	6.17	ND	NA	NA	NA	NA	NA	NA	6.14
11/02/2023	No	ND	NA	NA	NA	63.4	NA	NA	6.45	ND	NA	NA	NA	NA	NA	NA	4.74
11/02/2023	Yes	ND	NA	NA	NA	63.3	NA	NA	6.45	ND	NA	NA	NA	NA	NA	NA	4.74
02/08/2024	No	ND	NA	NA	NA	23.4	NA	NA	6.35	ND	NA	NA	NA	NA	NA	NA	2.41
02/08/2024	Yes	ND	NA	NA	NA	23.5	NA	NA	6.35	ND	NA	NA	NA	NA	NA	NA	2.42
05/09/2024	No	ND	0.00273	ND	6.07	31.2	ND	ND	7.87	ND	27.3	0.00683	ND	2.95	0.0137	ND	2.56
05/09/2024	Yes	ND	0.00317	ND	6.43	31.2	ND	ND	7.87	ND	28.8	0.00627	ND	3.1	0.0111	ND	2.56
08/08/2024	No	ND	NA	NA	NA	39.4	NA	NA	3.71	4	NA	NA	NA	NA	NA	NA	3.56
08/08/2024	Yes	ND	NA	NA	NA	39.5	NA	NA	3.71	10	NA	NA	NA	NA	NA	NA	3.57
Minimum		-	0.00273	-	6.07	23.4	-	-	3.71	4	27.3	0.00683	-	2.95	0.0137	-	2.08
Maximum		-	0.00273	-	6.07	98.1	-	-	8.14	4	27.3	0.00683	-	2.95	0.0137	-	6.14
Average		-	0.00273	-	6.07	56.13	-	-	6.72	4.00	27.30	0.01	-	2.95	0.01	-	3.39

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-1L Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/24/2020	No	2.08	ND	5.42	NA	15.9	226	NA	17.5	162	0.14	2.23	0.06	NA
11/24/2020	Yes	2.03	ND	5.42	NA	17.4	226	NA	17.5	158	0.19	2.22	0.06	NA
05/10/2021	No	3.38	ND	5.44	NA	17.5	214.2	NA	13.9	142	0.12	3.5	ND	NA
05/10/2021	Yes	3.32	ND	5.44	NA	18.6	214.2	NA	13.9	140	0.14	3.46	ND	NA
07/26/2021	No	3.73	ND	5.18	NA	18.2	152.9	NA	16.5	182	0.14	3.87	ND	NA
12/15/2021	No	4.09	ND	5.21	NA	30.9	187	NA	17	192	0.41	4.5	ND	NA
03/25/2022	No	2.66	ND	5.34	NA	33.7	198	NA	14	258	0.12	2.78	ND	NA
05/25/2022	No	2.31	ND	5.33	NA	36.8	183.9	NA	14.7	288	ND	2.31	ND	NA
08/31/2022	No	2.62	ND	5.1	NA	29.5	684	NA	17.1	242	0.09	2.72	ND	NA
08/31/2022	Yes	2.67	ND	5.1	NA	30.7	684	NA	17.1	250	0.07	2.74	ND	NA
11/28/2022	No	3.05	ND	4.99	NA	22.5	270	NA	16.9	178	0.05	3.1	ND	NA
11/28/2022	Yes	3.07	ND	4.99	NA	21.8	270	NA	16.9	180	0.06	3.12	ND	NA
02/14/2023	No	3.24	ND	5.26	NA	15.8	177	NA	14.7	180	ND	3.24	ND	NA
02/14/2023	Yes	3.27	ND	5.26	NA	16.3	177	NA	14.7	178	ND	3.27	ND	NA
05/11/2023	No	4.29	ND	5.19	NA	18.3	244	NA	14.3	210	ND	4.29	ND	NA
05/11/2023	Yes	4.29	ND	5.19	NA	18.4	244	NA	14.3	222	ND	4.29	ND	NA
08/10/2023	No	6.14	ND	5.04	NA	24.9	261	NA	16.1	208	0.12	6.26	ND	NA
08/10/2023	Yes	6.14	ND	5.04	NA	23.8	261	NA	16.1	215	0.131	6.28	ND	NA
11/02/2023	No	4.74	ND	4.61	NA	27.2	259	NA	17.3	192	0.053	4.8	ND	NA
11/02/2023	Yes	4.74	ND	4.61	NA	27.2	259	NA	17.3	195	ND	4.74	ND	NA
02/08/2024	No	2.41	ND	5.31	NA	11	131	NA	14.9	97.5	0.089	2.5	ND	NA
02/08/2024	Yes	2.42	ND	5.31	NA	11	131	NA	14.9	100	0.096	2.51	ND	NA
05/09/2024	No	2.56	ND	5.19	0.00615	17.2	154	17.3	13.9	118	ND	2.56	ND	ND
05/09/2024	Yes	2.56	ND	5.19	0.00585	18	154	17.3	13.9	115	ND	2.56	ND	ND
08/08/2024	No	3.56	ND	5.34	NA	19.7	187	NA	16.3	130	0.134	3.7	ND	NA
08/08/2024	Yes	3.57	ND	5.34	NA	19.3	187	NA	16.3	135	0.103	3.67	ND	NA
Minimum		2.08	-	4.61	0.00615	11	131	17.3	13.9	97.5	0.05	2.23	0.06	-
Maximum		6.14	-	5.44	0.00615	36.8	684	17.3	17.5	288	0.41	6.26	0.06	-
Average		3.39	-	5.20	0.01	22.61	235.27	17.30	15.67	185.30	0.13	3.49	0.06	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-2F Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/25/2020	No	0.08	NA	NA	NA	11	NA	NA	8.39	ND	NA	NA	NA	NA	NA	NA
03/03/2021	No	0.13	NA	NA	NA	12.5	NA	NA	9.46	ND	NA	NA	NA	NA	NA	NA
05/10/2021	No	ND	NA	NA	NA	11.4	NA	NA	9.24	ND	NA	NA	NA	NA	NA	NA
07/26/2021	No	ND	NA	NA	NA	15.3	NA	NA	8.28	ND	NA	NA	NA	NA	NA	NA
12/15/2021	No	ND	NA	NA	NA	17.7	NA	NA	6.25	ND	NA	NA	NA	NA	NA	NA
03/25/2022	No	ND	NA	NA	NA	12.1	NA	NA	6.19	ND	NA	NA	NA	NA	NA	NA
03/25/2022	Yes	ND	NA	NA	NA	12.1	NA	NA	6.19	ND	NA	NA	NA	NA	NA	NA
05/25/2022	No	ND	NA	NA	NA	12.2	NA	NA	4.76	ND	NA	NA	NA	NA	NA	NA
08/31/2022	No	0.06	NA	NA	NA	11.8	NA	NA	4.07	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	8.85	NA	NA	3.87	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	9.97	NA	NA	6.39	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	11.7	NA	NA	7.2	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	14.1	NA	NA	5.29	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	11.9	NA	NA	5.49	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	9.26	NA	NA	6.16	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00332	0.0008	10.9	11.1	ND	0.00388	5.71	ND	39.9	ND	0.00106	3.11	0.152	ND
08/08/2024	No	ND	NA	NA	NA	12.3	NA	NA	3.92	ND	NA	NA	NA	NA	NA	NA
Minimum		0.06	0.00332	0.0008	10.9	8.85	-	0.00388	3.87	-	39.9	-	0.00106	3.11	0.152	-
Maximum		0.13	0.00332	0.0008	10.9	17.7	-	0.00388	9.46	-	39.9	-	0.00106	3.11	0.152	-
Average		0.09	0.00332	0.0008	10.9	12.08	-	0.00388	6.29	-	39.9	-	0.00106	3.11	0.152	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-2F Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/25/2020	No	14.8	14.8	ND	4.18	NA	3.94	187.6	NA	15.1	168	0.08	14.9	ND	NA
03/03/2021	No	15.5	15.5	ND	4.2	NA	3.2	220	NA	14.8	148	0.19	15.7	ND	NA
05/10/2021	No	15.4	15.4	ND	4.28	NA	4.71	241	NA	14	170	0.06	15.5	ND	NA
07/26/2021	No	21.3	21.3	ND	4.22	NA	5.57	187.3	NA	15.1	208	0.12	21.4	ND	NA
12/15/2021	No	27.9	27.9	ND	4.62	NA	7.74	202	NA	15.1	262	0.54	28.4	ND	NA
03/25/2022	No	14.7	14.7	ND	4.37	NA	4.48	95.2	NA	14.4	135	0.09	14.8	ND	NA
03/25/2022	Yes	14.7	14.7	ND	4.37	NA	4.5	95.2	NA	14.4	135	0.08	14.8	ND	NA
05/25/2022	No	14.4	14.4	ND	4.29	NA	6.61	99	NA	14.1	240	0.18	14.5	ND	NA
08/31/2022	No	15.6	15.6	ND	4	NA	5.38	599	NA	15.2	178	0.17	15.8	ND	NA
11/28/2022	No	12.3	12.3	ND	4.46	NA	4.06	154	NA	14.9	105	0.06	12.4	ND	NA
02/14/2023	No	9.75	9.75	ND	4.52	NA	4.95	137	NA	14.5	198	0.08	9.83	ND	NA
05/11/2023	No	14.1	14.1	ND	4.31	NA	5.73	173	NA	13.7	210	0.06	14.2	ND	NA
08/10/2023	No	18.1	18.1	ND	4.48	NA	7.94	210	NA	13.8	175	0.165	18.3	ND	NA
11/02/2023	No	12.4	12.4	ND	4.11	NA	5.33	169	NA	14.5	142	0.121	12.5	ND	NA
02/08/2024	No	12.1	12.1	ND	4.29	NA	4.24	161	NA	14.5	128	0.154	12.3	ND	NA
05/09/2024	No	12.9	12.9	ND	4.19	0.00431	6.32	171	19.5	13.4	168	ND	12.9	ND	0.453
08/08/2024	No	17.1	17.1	ND	4.39	NA	4.51	203	NA	13.7	168	0.173	17.3	ND	NA
Minimum		9.75	9.75	-	4	0.00431	3.2	95.2	19.5	13.4	105	0.06	9.83	-	0.453
Maximum		27.9	27.9	-	4.62	0.00431	7.94	599	19.5	15.2	262	0.54	28.4	-	0.453
Average		15.47	15.47	-	4.311	0.00431	5.25	194.37	19.5	14.42	172.82	0.15	15.62	-	0.453

Notes:

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ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-2G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/24/2020	No	ND	NA	NA	NA	24.3	NA	NA	9.76	ND	NA	NA	NA	NA	NA	NA
03/10/2021	No	ND	NA	NA	NA	28.5	NA	NA	9.77	ND	NA	NA	NA	NA	NA	NA
05/12/2021	No	ND	NA	NA	NA	28.2	NA	NA	10.1	ND	NA	NA	NA	NA	NA	NA
07/21/2021	No	ND	NA	NA	NA	28.6	NA	NA	9.13	ND	NA	NA	NA	NA	NA	NA
12/16/2021	No	ND	NA	NA	NA	27.7	NA	NA	9.4	ND	NA	NA	NA	NA	NA	NA
03/30/2022	No	ND	NA	NA	NA	27.4	NA	NA	10.2	ND	NA	NA	NA	NA	NA	NA
03/30/2022	Yes	ND	NA	NA	NA	27.6	NA	NA	10.2	ND	NA	NA	NA	NA	NA	NA
05/26/2022	No	ND	NA	NA	NA	28	NA	NA	9.93	ND	NA	NA	NA	NA	NA	NA
08/30/2022	No	ND	NA	NA	NA	26.2	NA	NA	9.18	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	25.2	NA	NA	5.64	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	24.5	NA	NA	8.94	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	23.5	NA	NA	9.86	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	23.4	NA	NA	7.99	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	24	NA	NA	8.25	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	24.6	NA	NA	7.79	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00121	ND	18.8	25.6	0.00102	0.00188	9.24	ND	88.9	0.0467	0.00182	10.2	0.0148	ND
08/08/2024	No	ND	NA	NA	NA	27.1	NA	NA	3.84	ND	NA	NA	NA	NA	NA	NA
Minimum		-	0.00121	-	18.8	23.4	0.00102	0.00188	3.84	-	88.9	0.0467	0.00182	10.2	0.0148	-
Maximum		-	0.00121	-	18.8	28.6	0.00102	0.00188	10.2	-	88.9	0.0467	0.00182	10.2	0.0148	-
Average		-	0.00121	-	18.8	26.14	0.00102	0.00188	8.78	-	88.9	0.0467	0.00182	10.2	0.0148	-

Notes:

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ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-2G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/24/2020	No	19.5	19.5	ND	4.58	NA	8.22	335	NA	15.3	258	0.52	20.1	ND	NA
03/10/2021	No	17.7	17.7	ND	5.29	NA	7.25	342	NA	14.4	248	0.1	17.8	ND	NA
05/12/2021	No	23.7	23.7	ND	4.84	NA	6.99	351	NA	13.7	248	0.16	23.9	ND	NA
07/21/2021	No	16.9	16.9	ND	4.78	NA	9.63	231	NA	14.9	255	0.21	17.1	ND	NA
12/16/2021	No	17.6	17.6	ND	4.86	NA	9.19	204.6	NA	15.8	238	0.23	17.9	ND	NA
03/30/2022	No	15.2	15.2	ND	5.65	NA	10.4	170.6	NA	13.7	268	0.09	15.3	ND	NA
03/30/2022	Yes	15.3	15.3	ND	5.65	NA	10.5	170.6	NA	13.7	258	0.09	15.4	ND	NA
05/26/2022	No	17.2	17.2	ND	5.38	NA	6.49	170.1	NA	15.1	260	0.23	17.4	ND	NA
08/30/2022	No	14.5	14.5	ND	4.81	NA	5.35	655	NA	16.7	270	0.06	14.5	ND	NA
11/28/2022	No	15	15	ND	4.94	NA	7.62	258	NA	15.6	210	0.08	15.1	ND	NA
02/14/2023	No	15.4	15.4	ND	5.03	NA	8.37	247	NA	14.9	208	0.06	15.4	ND	NA
05/11/2023	No	13.8	13.8	ND	4.93	NA	8.03	238	NA	13.8	208	0.13	13.9	ND	NA
08/10/2023	No	12.7	12.7	ND	5.01	NA	8.48	235	NA	14.5	202	0.11	12.8	ND	NA
11/02/2023	No	11.7	11.7	ND	4.59	NA	7.38	237	NA	15.7	210	ND	11.7	ND	NA
02/08/2024	No	11.7	11.7	ND	4.83	NA	6.08	230	NA	14.6	190	0.146	11.9	ND	NA
05/09/2024	No	14.1	14.1	ND	4.87	0.00497	7.37	244	36.5	13.6	242	ND	14.1	ND	ND
08/08/2024	No	14.5	14.5	ND	4.94	NA	5.06	252	NA	14.9	250	0.086	14.6	ND	NA
Minimum		11.7	11.7	-	4.58	0.00497	5.06	170.1	36.5	13.6	190	0.06	11.7	-	-
Maximum		23.7	23.7	-	5.65	0.00497	10.5	655	36.5	16.7	270	0.52	23.9	-	-
Average		15.68	15.68	-	5.00	0.00497	7.79	268.88	36.5	14.76	236.65	0.15	15.82	-	-

Notes:

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NA: Not analyzed.

APPENDIX E.1
MW-2F Water Quality Data
Sussex Regional Recharge (acility)SRR(,
MiltonwDelap are

Date	Dumlicate	AC C onia as N	Arsenic	davC iuC	dalciuC	dhlorive	dhroC iuC	domner	DissolCev f xygenw (ielv	(ecal doliHbrC	Tarvnessw Lotal	Iron	Feav	MagnesiuC	Manganese	Nickel
11/24/2020	No	0.05	NA	NA	NA	14.4	NA	NA	9.21	ND	NA	NA	NA	NA	NA	NA
03/05/2021	No	0.06	NA	NA	NA	13.2	NA	NA	9.95	ND	NA	NA	NA	NA	NA	NA
05/10/2021	No	ND	NA	NA	NA	11.4	NA	NA	10	ND	NA	NA	NA	NA	NA	NA
07/26/2021	No	ND	NA	NA	NA	11.7	NA	NA	8.92	ND	NA	NA	NA	NA	NA	NA
12/15/2021	No	ND	NA	NA	NA	15	NA	NA	9.69	ND	NA	NA	NA	NA	NA	NA
03/25/2022	No	ND	NA	NA	NA	9.86	NA	NA	9.86	ND	NA	NA	NA	NA	NA	NA
03/25/2022	Yes	ND	NA	NA	NA	9.84	NA	NA	9.86	ND	NA	NA	NA	NA	NA	NA
05/25/2022	No	ND	NA	NA	NA	9.44	NA	NA	9.61	ND	NA	NA	NA	NA	NA	NA
08/31/2022	No	ND	NA	NA	NA	8.49	NA	NA	8.76	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	6.18	NA	NA	4.96	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	5.33	NA	NA	8.39	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	5.02	NA	NA	9.56	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	5.34	NA	NA	7.48	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	4.96	NA	NA	7.91	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	13.2	NA	NA	8.54	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	ND	ND	15.7	12.2	ND	0.00178	10.2	ND	67.2	0.00744	0.00127	6.79	0.019	ND
08/08/2024	No	ND	NA	NA	NA	7.51	NA	NA	1.19	ND	NA	NA	NA	NA	NA	NA
Minimum		0.05	-	-	15.7	4.96	-	0.00178	1.19	-	67.2	0.00744	0.00127	6.79	0.019	-
Maximum		0.06	-	-	15.7	15	-	0.00178	10.2	-	67.2	0.00744	0.00127	6.79	0.019	-
Average		0.055	-	-	15.7	9.59	-	0.00178	8.48	-	67.2	0.00744	0.00127	6.79	0.019	-

Notes:

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maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-2F Water Quality Data
Sussex Regional Recharge (acility)SRR(,
MiltonwDelap are

Date	Dunlicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	mT	SeleniuC	SoviuC	Smeci Hc donvuctancew (ielv	SulHate	LeC meraturew (ielv	Lotal DissolCev Solivs	Lotal Kjelvahl Nitrogen	Lotal Nitrogen as N	Lotal Phosmhorus as P	Zinc
11/24/2020	No	10.4	10.4	ND	4.76	NA	4.24	201.7	NA	16.5	178	0.29	10.7	ND	NA
03/05/2021	No	9.6	9.6	ND	6.77	NA	4.43	209.2	NA	10.7	168	0.14	9.74	0.05	NA
05/10/2021	No	8.01	8.01	ND	5.18	NA	3.94	199	NA	12.8	160	0.12	8.13	ND	NA
07/26/2021	No	7.22	7.22	ND	4.79	NA	3.68	136.4	NA	15.6	158	0.15	7.37	0.06	NA
12/15/2021	No	5.31	5.31	ND	5.09	NA	4.38	110	NA	15.6	140	0.46	5.78	ND	NA
03/25/2022	No	6.71	6.71	ND	5.56	NA	4.15	86	NA	13.4	135	0.07	6.78	ND	NA
03/25/2022	Yes	6.68	6.68	ND	5.56	NA	4.19	86	NA	13.4	148	0.1	6.78	ND	NA
05/25/2022	No	6.15	6.15	ND	5.26	NA	5.36	94.4	NA	13.7	208	ND	6.15	ND	NA
08/31/2022	No	5.83	5.83	ND	4.76	NA	3.96	418	NA	15.9	162	0.18	6	0.1	NA
11/28/2022	No	4.28	4.28	ND	4.92	NA	4.63	143	NA	16	95	0.09	4.37	ND	NA
02/14/2023	No	3.6	3.6	ND	4.95	NA	3.87	129	NA	14.3	110	ND	3.6	ND	NA
05/11/2023	No	3.24	3.24	ND	4.73	NA	3.16	125	NA	13.4	130	ND	3.24	ND	NA
08/10/2023	No	3.59	3.59	ND	5.01	NA	4.28	125	NA	15	102	0.157	3.75	ND	NA
11/02/2023	No	2.95	2.95	ND	4.56	NA	3.29	126	NA	16.3	110	ND	2.95	ND	NA
02/08/2024	No	9.25	9.25	ND	4.81	NA	2.59	151	NA	13.4	120	0.137	9.39	ND	NA
05/09/2024	No	13.8	13.8	ND	4.77	0.00387	3.48	174	20.7	12.9	182	ND	13.8	ND	ND
08/08/2024	No	8.02	8.02	ND	4.79	NA	1.36	145	NA	15.3	115	0.169	8.19	ND	NA
Minimum		2.95	2.95	-	4.56	0.00387	1.36	86	20.7	10.7	95	0.07	2.95	0.05	-
Maximum		13.8	13.8	-	6.77	0.00387	5.36	418	20.7	16.5	208	0.46	13.8	0.1	-
Average		6.74	6.74	-	5.07	0.00387	3.82	156.39	20.7	14.36	142.41	0.17	6.87	0.07	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-3F Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/25/2020	No	ND	NA	NA	NA	2.06	NA	NA	8.73	ND	NA	NA	NA	NA	NA	NA
03/03/2021	No	0.12	NA	NA	NA	51.9	NA	NA	8.19	ND	NA	NA	NA	NA	NA	NA
03/03/2021	Yes	ND	NA	NA	NA	52.1	NA	NA	8.19	ND	NA	NA	NA	NA	NA	NA
05/10/2021	No	ND	NA	NA	NA	35.8	NA	NA	8.84	ND	NA	NA	NA	NA	NA	NA
07/26/2021	No	ND	NA	NA	NA	38.8	NA	NA	8.25	ND	NA	NA	NA	NA	NA	NA
07/26/2021	Yes	ND	NA	NA	NA	38.6	NA	NA	8.25	ND	NA	NA	NA	NA	NA	NA
12/15/2021	No	ND	NA	NA	NA	40.8	NA	NA	8.18	ND	NA	NA	NA	NA	NA	NA
03/25/2022	No	ND	NA	NA	NA	34.3	NA	NA	8.2	ND	NA	NA	NA	NA	NA	NA
05/25/2022	No	ND	NA	NA	NA	33.5	NA	NA	8.06	ND	NA	NA	NA	NA	NA	NA
08/31/2022	No	ND	NA	NA	NA	26.9	NA	NA	7.96	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	24.9	NA	NA	4.47	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	25.1	NA	NA	7.36	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	25	NA	NA	7.97	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	25.3	NA	NA	6.74	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	25	NA	NA	7.06	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	25.3	NA	NA	7.26	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00112	ND	17.8	30.2	0.00103	0.00117	8.1	ND	74.2	0.00262	ND	7.21	0.0293	ND
06/06/2024	No	ND	NA	NA	NA	30.6	NA	NA	7.87	ND	NA	NA	NA	NA	NA	NA
06/06/2024	Yes	ND	NA	NA	NA	30.6	NA	NA	7.87	ND	NA	NA	NA	NA	NA	NA
07/17/2024	No	ND	NA	NA	NA	38.3	NA	NA	7.91	ND	NA	NA	NA	NA	NA	NA
07/17/2024	Yes	ND	NA	NA	NA	38.3	NA	NA	7.91	ND	NA	NA	NA	NA	NA	NA
08/08/2024	No	ND	NA	NA	NA	39.7	NA	NA	1.74	ND	NA	NA	NA	NA	NA	NA
09/12/2024	No	ND	NA	NA	NA	38.9	NA	NA	8.04	ND	NA	NA	NA	NA	NA	NA
09/12/2024	Yes	ND	NA	NA	NA	38.9	NA	NA	8.04	ND	NA	NA	NA	NA	NA	NA
10/09/2024	No	ND	NA	NA	NA	35.8	NA	NA	8.33	ND	NA	NA	NA	NA	NA	NA
Minimum		0.12	0.00112	-	17.8	2.06	0.00103	0.00117	1.74	-	74.2	0.00262	-	7.21	0.0293	-
Maximum		0.12	0.00112	-	17.8	52.1	0.00103	0.00117	8.84	-	74.2	0.00262	-	7.21	0.0293	-
Average		0.12	0.00112	-	17.8	33.07	0.00103	0.00117	7.5808	-	74.2	0.00262	-	7.21	0.0293	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-3F Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/25/2020	No	2.84	2.84	ND	4.6	NA	14.6	335	NA	16.1	280	0.09	2.94	ND	NA
03/03/2021	No	10.3	10.3	ND	4.75	NA	27.9	331	NA	14.2	222	0.18	10.4	ND	NA
03/03/2021	Yes	10.4	10.4	ND	4.75	NA	26.4	331	NA	14.2	220	0.17	10.5	ND	NA
05/10/2021	No	7.95	7.95	ND	4.8	NA	25.8	289	NA	13.2	198	ND	7.95	ND	NA
07/26/2021	No	9.17	9.17	ND	4.78	NA	26.5	184.8	NA	15.3	172	0.11	9.28	ND	NA
07/26/2021	Yes	9.14	9.14	ND	4.78	NA	25.5	184.8	NA	15.3	175	0.13	9.27	ND	NA
12/15/2021	No	9.2	9.2	ND	4.87	NA	24.2	177	NA	15.5	215	0.45	9.65	ND	NA
03/25/2022	No	14.9	14.9	ND	4.84	NA	23.1	146.9	NA	13.6	190	0.1	15	ND	NA
05/25/2022	No	13.9	13.9	ND	4.96	NA	19.7	156.9	NA	13.4	288	0.29	14.1	ND	NA
08/31/2022	No	13.1	13.1	ND	4.79	NA	12.7	765	NA	15.9	248	0.11	13.2	ND	NA
11/28/2022	No	12.5	12.5	ND	4.76	NA	7.8	262	NA	15.8	188	12.6	0.14	ND	NA
02/14/2023	No	13.6	13.6	ND	4.82	NA	7.3	262	NA	14.2	308	13.8	0.28	ND	NA
05/11/2023	No	12.7	12.7	ND	4.79	NA	8.02	251	NA	13.1	222	12.9	0.11	ND	NA
08/10/2023	No	13.7	13.7	ND	4.83	NA	8.21	264	NA	14.4	228	14	0.266	ND	NA
11/02/2023	No	13.7	13.7	ND	4.4	NA	7.1	273	NA	16.1	238	13.8	0.141	ND	NA
02/08/2024	No	13.6	13.6	ND	4.61	NA	8.14	264	NA	14.4	220	13.7	0.085	ND	NA
05/09/2024	No	11.3	11.3	ND	4.64	0.00566	14.5	241	38.9	13.1	220	ND	11.3	ND	0.004
06/06/2024	No	10.6	10.6	ND	4.7	NA	14	225	NA	13.3	182	0.293	10.9	ND	NA
06/06/2024	Yes	10.6	10.6	ND	4.7	NA	14.2	225	NA	13.3	175	0.264	10.8	ND	NA
07/17/2024	No	7.57	7.57	ND	4.81	NA	19.8	223	NA	14.3	188	0.218	7.79	ND	NA
07/17/2024	Yes	7.58	7.58	ND	4.81	NA	19.4	223	NA	14.3	202	0.216	7.8	ND	NA
08/08/2024	No	7.72	7.72	ND	4.85	NA	17	236	NA	14.8	185	7.85	0.133	ND	NA
09/12/2024	No	8.58	8.58	ND	4.81	NA	18.2	245	NA	15.9	210	0.174	8.76	ND	NA
09/12/2024	Yes	8.58	8.58	ND	4.81	NA	16.6	245	NA	15.9	215	0.174	8.76	ND	NA
10/09/2024	No	NA	8.91	NA	4.88	NA	12.1	241	NA	16.2	168	NA	8.98	ND	NA
Minimum		2.84	2.84	-	4.4	0.00566	7.1	146.9	38.9	13.1	168	0.09	0.085	-	0.004
Maximum		14.9	14.9	-	4.96	0.00566	27.9	765	38.9	16.2	308	14	15	-	0.004
Average		10.55	10.4856	-	4.766	0.00566	16.75	263.26	38.9	14.63	214.28	4.16	7.14	-	0.004

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-3G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/24/2020	No	ND	NA	NA	NA	37.1	NA	NA	5.79	ND	NA	NA	NA	NA	NA	NA
03/10/2021	No	0.05	NA	NA	NA	31.2	NA	NA	5.53	ND	NA	NA	NA	NA	NA	NA
05/12/2021	No	ND	NA	NA	NA	19.9	NA	NA	6.57	ND	NA	NA	NA	NA	NA	NA
07/21/2021	No	ND	NA	NA	NA	30.2	NA	NA	6.53	ND	NA	NA	NA	NA	NA	NA
12/16/2021	No	ND	NA	NA	NA	29.4	NA	NA	6.32	ND	NA	NA	NA	NA	NA	NA
12/16/2021	Yes	ND	NA	NA	NA	29.1	NA	NA	6.32	ND	NA	NA	NA	NA	NA	NA
03/30/2022	No	ND	NA	NA	NA	32.7	NA	NA	7.65	ND	NA	NA	NA	NA	NA	NA
05/26/2022	No	ND	NA	NA	NA	31	NA	NA	6.89	ND	NA	NA	NA	NA	NA	NA
08/30/2022	No	ND	NA	NA	NA	32.9	NA	NA	6.87	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	36.2	NA	NA	3.09	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	40.3	NA	NA	4.41	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	34.8	NA	NA	7.41	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	33.6	NA	NA	6.34	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	31.6	NA	NA	6.17	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	30.2	NA	NA	6.81	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00249	ND	16.3	26.8	ND	ND	7.69	ND	72.3	0.00145	ND	7.72	0.0166	ND
08/08/2024	No	ND	NA	NA	NA	31	NA	NA	7.1	ND	NA	NA	NA	NA	NA	NA
Minimum		0.05	0.00249	-	16.3	19.9	-	-	3.09	-	72.3	0.00145	-	7.72	0.0166	-
Maximum		0.05	0.00249	-	16.3	40.3	-	-	7.69	-	72.3	0.00145	-	7.72	0.0166	-
Average		0.05	0.00249	-	16.3	31.81	-	-	6.32	-	72.30	0.00145	-	7.72	0.0166	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-3G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/24/2020	No	21.1	21.1	ND	4.85	NA	11.9	381	NA	15.6	298	0.38	21.5	ND	NA
03/10/2021	No	23.7	23.7	ND	5.4	NA	9.23	393	NA	14.6	318	0.16	23.9	ND	NA
05/12/2021	No	12.3	12.3	ND	4.76	NA	7.59	402	NA	13.7	310	0.18	12.5	ND	NA
07/21/2021	No	25.8	25.8	ND	4.82	NA	10.6	277	NA	14.8	348	0.26	26.1	ND	NA
12/16/2021	No	16.2	16.2	ND	5.02	NA	12.3	201.7	NA	15.8	265	0.18	16.3	ND	NA
12/16/2021	Yes	16	16	ND	6.02	NA	12.3	201.7	NA	15.8	515	0.09	16.1	ND	NA
03/30/2022	No	15.7	15.7	ND	5.34	NA	14.5	188.4	NA	13.6	292	0.17	15.8	ND	NA
05/26/2022	No	13.5	13.5	ND	4.92	NA	10	181.7	NA	13.8	268	0.31	13.9	ND	NA
08/30/2022	No	13.8	13.8	ND	5.17	NA	8.14	769	NA	16.5	280	0.15	14	ND	NA
11/28/2022	No	12.8	12.8	ND	5.12	NA	11.6	294	NA	15.7	228	0.11	12.9	ND	NA
02/14/2023	No	13.2	13.2	ND	5.14	NA	12.6	303	NA	14.8	255	0.11	13.3	ND	NA
05/11/2023	No	12.5	12.5	ND	5.09	NA	10.7	267	NA	13.6	255	0.18	12.7	ND	NA
08/10/2023	No	11.4	11.4	ND	5.04	NA	10.6	261	NA	14.2	222	0.177	11.6	ND	NA
11/02/2023	No	11.3	11.3	ND	4.61	NA	9.85	261	NA	15.6	215	0.057	11.3	ND	NA
02/08/2024	No	10.6	10.6	ND	4.77	NA	7.73	244	NA	14.6	198	0.165	10.8	ND	NA
05/09/2024	No	9.5	9.5	ND	4.86	0.00315	9.07	215	36	13.4	215	ND	9.5	ND	0.006
08/08/2024	No	9.26	9.26	ND	4.83	NA	6.79	224	NA	14.2	205	0.082	9.34	ND	NA
Minimum		9.26	9.26	-	4.61	0.00315	6.79	181.7	36	13.4	198	0.057	9.34	-	0.006
Maximum		25.8	25.8	-	5.4	0.00315	14.5	769	36	16.5	348	0.38	26.1	-	0.006
Average		14.54	14.54	-	4.98	0.00315	10.20	303.93	36.00	14.66	260.75	0.18	14.72	-	0.006

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-3F Water Quality Data
Sussex Regional Recharge (acility)SRR(,
MiltonwDelap are

Date	Dumlicate	AC C onia as N	Arsenic	davC iuC	dalciuC	dhlorive	dhroC iuC	domner	DissolCev f xygenw (ielv	(ecal doliHbrC	Tarvnessw Lotal	Iron	Feav	MagnesiuC	Manganese	Nickel
11/24/2020	No	ND	NA	NA	NA	9.54	NA	NA	7.67	ND	NA	NA	NA	NA	NA	NA
03/03/2021	No	ND	NA	NA	NA	6.38	NA	NA	7.2	ND	NA	NA	NA	NA	NA	NA
05/10/2021	No	ND	NA	NA	NA	6.38	NA	NA	7.58	ND	NA	NA	NA	NA	NA	NA
07/26/2021	No	ND	NA	NA	NA	7.64	NA	NA	6.27	ND	NA	NA	NA	NA	NA	NA
07/26/2021	Yes	ND	NA	NA	NA	7.57	NA	NA	6.27	ND	NA	NA	NA	NA	NA	NA
12/15/2021	No	ND	NA	NA	NA	7.13	NA	NA	8.4	ND	NA	NA	NA	NA	NA	NA
03/25/2022	No	ND	NA	NA	NA	6.24	NA	NA	9.29	ND	NA	NA	NA	NA	NA	NA
05/25/2022	No	ND	NA	NA	NA	6.72	NA	NA	9.21	ND	NA	NA	NA	NA	NA	NA
08/31/2022	No	ND	NA	NA	NA	6.3	NA	NA	7.67	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	5.24	NA	NA	4.42	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	5.1	NA	NA	8.21	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	4.41	NA	NA	9.56	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	3.96	NA	NA	6.44	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	3.43	NA	NA	7.17	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	9.12	NA	NA	7.75	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00244	ND	10.3	14.7	0.00108	0.00246	8.67	ND	47.7	0.0318	ND	5.35	0.0711	ND
08/08/2024	No	ND	NA	NA	NA	20.5	NA	NA	2.97	ND	NA	NA	NA	NA	NA	NA
Minimum		-	0.00244	-	10.3	3.43	0.00108	0.00246	2.97	-	47.7	0.0318	-	5.35	0.0711	-
Maximum		-	0.00244	-	10.3	20.5	0.00108	0.00246	9.56	-	47.7	0.0318	-	5.35	0.0711	-
Average		-	0.00244	-	10.3	7.67	0.00108	0.00246	7.41	-	47.7	0.0318	-	5.35	0.0711	-

Notes:

Duplicates not included within minimum,
maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-3F Water Quality Data
Sussex Regional Recharge (acility)SRR(,
MiltonwDelap are

Date	Dunlicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	mT	SeleniuC	SoviuC	Smeci Hc donvuctancew (ielv	SulHate	LeC meraturew (ielv	Lotal DissolCev Solivs	Lotal Kjelvahl Nitrogen	Lotal Nitrogen as N	Lotal Phosmhorus as P	Zinc
11/24/2020	No	6.24	6.24	ND	4.82	NA	3.01	187.5	NA	16.7	182	0.19	6.42	ND	NA
03/03/2021	No	3.36	3.36	ND	4.93	NA	2.93	184.1	NA	11.4	140	0.09	3.45	ND	NA
05/10/2021	No	2.81	2.81	ND	5.03	NA	3.66	184.4	NA	12.5	135	ND	2.81	ND	NA
07/26/2021	No	3.75	3.75	ND	4.8	NA	2.66	119.3	NA	18.4	140	0.16	3.91	ND	NA
07/26/2021	Yes	3.7	3.7	ND	4.8	NA	2.76	119.3	NA	18.4	135	0.18	3.88	ND	NA
12/15/2021	No	4.67	4.67	ND	5.14	NA	2.53	87	NA	16.3	140	0.19	4.86	ND	NA
03/25/2022	No	6.44	6.44	ND	5.32	NA	3.31	79	NA	12	118	0.06	6.51	ND	NA
05/25/2022	No	8.54	8.54	ND	5.43	NA	4.41	85	NA	13.5	182	0.08	8.62	ND	NA
08/31/2022	No	11.5	11.5	ND	4.52	NA	2.75	469	NA	16.9	172	0.08	11.6	0.26	NA
11/28/2022	No	12.8	12.8	ND	4.92	NA	3.96	160	NA	16.4	112	0.06	12.8	ND	NA
02/14/2023	No	14	14	ND	5.01	NA	3.65	157	NA	13.2	165	0.06	14.1	ND	NA
05/11/2023	No	9.82	9.82	ND	4.79	NA	3.14	136	NA	13	142	0.06	9.88	ND	NA
08/10/2023	No	8.49	8.49	ND	5.09	NA	3.91	133	NA	15.7	128	0.08	8.57	ND	NA
11/02/2023	No	6.82	6.82	ND	4.65	NA	2.31	123	NA	17.2	125	ND	6.82	ND	NA
02/08/2024	No	6.77	6.77	ND	4.81	NA	4.53	133	NA	12.4	100	0.115	6.88	ND	NA
05/09/2024	No	5.57	5.57	ND	4.79	0.00429	3.87	141	29.2	12.4	135	ND	5.57	ND	ND
08/08/2024	No	7.26	7.26	ND	4.97	NA	1.24	169	NA	16.8	130	0.164	7.43	ND	NA
Minimum		2.81	2.81	-	4.52	0.00429	1.24	79	29.2	11.4	100	0.06	2.81	0.26	-
Maximum		14.00	14.00	-	5.43	0.00429	4.53	469	29.2	18.4	182	0.19	14.1	0.26	-
Average		7.43	7.43	-	4.94	0.00429	3.24	159.21	29.20	14.68	140.38	0.11	7.51	0.26	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-4F Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/24/2020	No	ND	NA	NA	NA	24.3	NA	NA	8.41	ND	NA	NA	NA	NA	NA	NA
11/24/2020	Yes	ND	NA	NA	NA	24.4	NA	NA	8.41	ND	NA	NA	NA	NA	NA	NA
03/03/2021	No	ND	NA	NA	NA	24.7	NA	NA	8.43	ND	NA	NA	NA	NA	NA	NA
05/10/2021	No	ND	NA	NA	NA	24.4	NA	NA	8.64	ND	NA	NA	NA	NA	NA	NA
05/10/2021	Yes	ND	NA	NA	NA	23.4	NA	NA	8.64	ND	NA	NA	NA	NA	NA	NA
07/26/2021	No	ND	NA	NA	NA	27.1	NA	NA	7.48	ND	NA	NA	NA	NA	NA	NA
12/15/2021	No	ND	NA	NA	NA	26.2	NA	NA	8.28	ND	NA	NA	NA	NA	NA	NA
12/15/2021	Yes	ND	NA	NA	NA	26.1	NA	NA	8.28	ND	NA	NA	NA	NA	NA	NA
03/25/2022	No	ND	NA	NA	NA	24.9	NA	NA	8.6	ND	NA	NA	NA	NA	NA	NA
05/25/2022	No	ND	NA	NA	NA	25.2	NA	NA	8.49	ND	NA	NA	NA	NA	NA	NA
05/25/2022	Yes	ND	NA	NA	NA	24.7	NA	NA	8.49	ND	NA	NA	NA	NA	NA	NA
08/31/2022	No	ND	NA	NA	NA	24.4	NA	NA	7.79	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	23.8	NA	NA	4.86	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	22.9	NA	NA	7.59	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	21.9	NA	NA	7.71	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	21.2	NA	NA	6.35	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	22.2	NA	NA	6.91	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	23.4	NA	NA	6.64	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00155	ND	21.8	22.6	ND	ND	7.86	ND	109	0.00561	ND	13.4	0.0153	ND
06/06/2024	No	ND	NA	NA	NA	23	NA	NA	7.24	ND	NA	NA	NA	NA	NA	NA
07/17/2024	No	ND	NA	NA	NA	23.2	NA	NA	7.1	ND	NA	NA	NA	NA	NA	NA
08/08/2024	No	ND	NA	NA	NA	23	NA	NA	0.6	ND	NA	NA	NA	NA	NA	NA
09/12/2024	No	ND	NA	NA	NA	24	NA	NA	7	2	NA	NA	NA	NA	NA	NA
10/09/2024	No	ND	NA	NA	NA	23.5	NA	NA	7.33	ND	NA	NA	NA	NA	NA	NA
Minimum		-	0.00155	-	21.8	21.2	-	-	0.6	2	109	0.00561	-	13.4	0.0153	-
Maximum		-	0.00155	-	21.8	27.1	-	-	8.64	2	109	0.00561	-	13.4	0.0153	-
Average		-	0.00155	-	21.8	23.80	-	-	7.17	2.00	109	0.00561	-	13.40	0.0153	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-4F Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/24/2020	No	21.9	21.9	ND	5.47	NA	6.65	299	NA	14.3	240	0.22	22.1	ND	NA
11/24/2020	Yes	21.7	21.7	ND	5.47	NA	6.57	299	NA	14.3	250	0.16	21.8	ND	NA
03/03/2021	No	22.6	22.6	ND	5.49	NA	5.32	327	NA	14.1	270	0.14	22.7	ND	NA
05/10/2021	No	22.3	22.3	ND	5.57	NA	6.73	346	NA	13.8	252	0.17	22.4	ND	NA
05/10/2021	Yes	22.5	22.5	ND	5.57	NA	7.04	346	NA	13.8	260	0.19	22.7	ND	NA
07/26/2021	No	23.6	23.6	ND	5.54	NA	6.2	228	NA	14.8	295	0.2	23.8	ND	NA
12/15/2021	No	22.6	22.6	ND	5.53	NA	6.79	200	NA	14.7	272	0.08	22.7	ND	NA
12/15/2021	Yes	22.6	22.6	ND	5.53	NA	6.83	200	NA	14.7	272	0.1	22.7	ND	NA
03/25/2022	No	23.5	23.5	ND	6.13	NA	7.18	183.3	NA	13.7	258	ND	23.5	ND	NA
05/25/2022	No	23.9	23.9	ND	6.05	NA	8.08	167.6	NA	13.5	362	0.19	24.1	ND	NA
05/25/2022	Yes	23.4	23.4	ND	6.05	NA	8.59	167.6	NA	13.5	358	0.19	23.6	ND	NA
08/31/2022	No	23.8	23.8	ND	4.03	NA	6.37	942	NA	14.9	292	0.05	23.8	ND	NA
11/28/2022	No	24.6	24.6	ND	5.49	NA	7.34	276	NA	14.2	250	ND	24.6	ND	NA
02/14/2023	No	24.8	24.8	ND	5.55	NA	7.48	265	NA	13.8	252	0.07	24.8	ND	NA
05/11/2023	No	22.6	22.6	ND	5.53	NA	7.14	254	NA	13.1	262	ND	22.6	ND	NA
08/10/2023	No	21.4	21.4	ND	5.57	NA	7.92	246	NA	13.2	238	0.159	21.6	ND	NA
11/02/2023	No	22.5	22.5	ND	5.09	NA	6.74	256	NA	14.1	258	0.073	22.6	ND	NA
02/08/2024	No	25.1	25.1	ND	5.37	NA	6.51	281	NA	13.9	260	0.154	25.3	ND	NA
05/09/2024	No	24	24	ND	5.27	0.0027	8.26	273	21.5	13.4	285	ND	24	ND	0.007
06/06/2024	No	24.5	24.5	ND	5.29	NA	6.79	271	NA	13.3	258	0.108	24.6	ND	NA
07/17/2024	No	24.5	24.5	ND	5.43	NA	7.92	279	NA	13.4	298	0.25	24.8	ND	NA
08/08/2024	No	24	24	ND	5.34	NA	5.87	274	NA	13.5	278	0.123	24.1	ND	NA
09/12/2024	No	25.5	25.5	ND	5.79	NA	8.19	281	NA	13.9	308	0.172	25.7	0.06	NA
10/09/2024	No	NA	24.8	NA	5.74	NA	6.82	276	NA	14.1	268	NA	24.8	ND	NA
Minimum		21.4	21.4	-	4.03	0.0027	5.32	167.6	21.5	13.1	238	0.05	21.6	0.06	0.007
Maximum		25.5	25.5	-	6.13	0.0027	8.26	942	21.5	14.9	362	0.25	25.7	0.06	0.007
Average		23.56	23.63	-	5.46	0.00	7.02	296.25	21.50	13.89	272.80	0.14	23.73	0.06	0.007

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-4G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/24/2020	No	0.18	NA	NA	NA	14.6	NA	NA	7.34	ND	NA	NA	NA	NA	NA	NA
11/24/2020	Yes	0.19	NA	NA	NA	14.9	NA	NA	7.34	ND	NA	NA	NA	NA	NA	NA
03/10/2021	No	ND	NA	NA	NA	11.5	NA	NA	6.79	ND	NA	NA	NA	NA	NA	NA
05/12/2021	No	ND	NA	NA	NA	9.86	NA	NA	8.39	ND	NA	NA	NA	NA	NA	NA
07/21/2021	No	ND	NA	NA	NA	11.2	NA	NA	7.71	ND	NA	NA	NA	NA	NA	NA
12/16/2021	No	ND	NA	NA	NA	22.5	NA	NA	7.91	ND	NA	NA	NA	NA	NA	NA
03/30/2022	No	ND	NA	NA	NA	28.6	NA	NA	8.81	ND	NA	NA	NA	NA	NA	NA
05/26/2022	No	ND	NA	NA	NA	24.2	NA	NA	8.26	ND	NA	NA	NA	NA	NA	NA
05/26/2022	Yes	ND	NA	NA	NA	24.1	NA	NA	8.26	ND	NA	NA	NA	NA	NA	NA
08/30/2022	No	ND	NA	NA	NA	23	NA	NA	7.15	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	18.4	NA	NA	4.35	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	15.5	NA	NA	7	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	17.6	NA	NA	7.67	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	20.2	NA	NA	6.24	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	17.5	NA	NA	6.27	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	15.5	NA	NA	6.02	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00355	ND	26.6	13.4	ND	ND	7.24	ND	84.6	ND	0.00124	4.39	0.0157	ND
08/08/2024	No	ND	NA	NA	NA	10.7	NA	NA	3.92	ND	NA	NA	NA	NA	NA	NA
09/12/2024	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/09/2024	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Minimum		0.18	0.00355	-	26.6	9.86	-	-	3.92	-	84.6	-	0.00124	4.39	0.0157	-
Maximum		0.18	0.00355	-	26.6	28.60	-	-	8.81	-	84.60	-	0.00	4.39	0.02	-
Average		0.18	0.00355	-	26.6	17.14	-	-	6.94	-	84.60	-	0.00	4.39	0.02	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-4G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/24/2020	No	10.2	10.2	ND	5.37	NA	5.7	262	NA	16.5	232	0.33	10.6	ND	NA
11/24/2020	Yes	10.5	10.5	ND	5.37	NA	5.29	262	NA	16.5	212	0.31	10.8	ND	NA
03/10/2021	No	10.1	10.1	ND	6.55	NA	3.85	265	NA	15.2	212	0.11	10.2	ND	NA
05/12/2021	No	6.12	6.12	ND	5.71	NA	3.4	276	NA	14.2	195	0.14	6.25	0.06	NA
07/21/2021	No	6.84	6.84	ND	5.72	NA	5.93	180	NA	15.6	212	0.18	7.02	ND	NA
12/16/2021	No	6.86	6.86	ND	6.11	NA	5.84	195.5	NA	17.5	235	0.17	7.02	ND	NA
03/30/2022	No	5.8	5.8	ND	6.2	NA	6.8	175.8	NA	14.4	268	0.14	5.94	ND	NA
05/26/2022	No	6	6	ND	6.03	NA	2.96	167.3	NA	14.7	268	0.25	6.26	ND	NA
05/26/2022	Yes	6	6	ND	6.03	NA	3.38	167.3	NA	14.7	260	0.28	6.28	ND	NA
08/30/2022	No	5.67	5.67	ND	5.67	NA	3.17	768	NA	16.6	290	0.15	5.82	ND	NA
11/28/2022	No	5.55	5.55	ND	6.01	NA	5.24	278	NA	16.5	218	0.1	5.66	ND	NA
02/14/2023	No	5.47	5.47	ND	6.13	NA	4.98	263	NA	15.4	368	0.08	5.55	ND	NA
05/11/2023	No	5.16	5.16	ND	5.86	NA	4.71	261	NA	14.1	230	0.11	5.27	ND	NA
08/10/2023	No	5.7	5.7	ND	5.81	NA	5.09	256	NA	15.1	218	0.091	5.8	ND	NA
11/02/2023	No	4.58	4.58	ND	5.44	NA	4.19	267	NA	16.9	218	ND	4.58	ND	NA
02/08/2024	No	11.5	11.5	ND	5.56	NA	3.41	226	NA	15.4	195	0.14	11.7	ND	NA
05/09/2024	No	11.3	11.3	ND	5.61	0.0012	3.89	209	31.3	13.9	225	ND	11.3	ND	ND
08/08/2024	No	6	6	ND	6.02	NA	1.56	185	NA	15.2	168	0.249	6.25	ND	NA
09/12/2024	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/09/2024	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Minimum		4.58	4.58	-	5.37	0.0012	1.56	167.3	31.3	13.9	168	0.08	4.58	0.06	-
Maximum		11.50	11.50	-	6.55	0.00	6.80	768.00	31.30	17.50	368.00	0.33	11.70	0.06	-
Average		7.05	7.05	-	5.86	0.00	4.42	264.66	31.30	15.45	234.50	0.16	7.20	0.06	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-4L Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/24/2020	No	ND	NA	NA	NA	4.18	NA	NA	5.89	ND	NA	NA	NA	NA	NA	NA
03/03/2021	No	0.12	NA	NA	NA	5.32	NA	NA	7.04	ND	NA	NA	NA	NA	NA	NA
03/03/2021	Yes	ND	NA	NA	NA	4.58	NA	NA	7.04	ND	NA	NA	NA	NA	NA	NA
05/10/2021	No	ND	NA	NA	NA	6.44	NA	NA	6.92	ND	NA	NA	NA	NA	NA	NA
07/26/2021	No	ND	NA	NA	NA	9.2	NA	NA	5.3	ND	NA	NA	NA	NA	NA	NA
12/15/2021	No	ND	NA	NA	NA	7.91	NA	NA	4.54	ND	NA	NA	NA	NA	NA	NA
12/15/2021	Yes	ND	NA	NA	NA	7.91	NA	NA	4.54	ND	NA	NA	NA	NA	NA	NA
03/25/2022	No	ND	NA	NA	NA	5.85	NA	NA	4.71	ND	NA	NA	NA	NA	NA	NA
05/25/2022	No	ND	NA	NA	NA	6.08	NA	NA	4.35	ND	NA	NA	NA	NA	NA	NA
05/25/2022	Yes	ND	NA	NA	NA	6	NA	NA	4.35	ND	NA	NA	NA	NA	NA	NA
08/31/2022	No	ND	NA	NA	NA	6.39	NA	NA	3.57	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	4.82	NA	NA	1.65	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	9.82	NA	NA	4.43	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	8.33	NA	NA	4.11	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	14.5	NA	NA	2.72	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	10.5	NA	NA	3.4	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	0.05	NA	NA	NA	8.48	NA	NA	7.96	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00215	ND	7.73	4.86	0.00169	0.00911	6.76	ND	31.1	0.186	0.00508	2.87	0.00382	ND
08/08/2024	No	ND	NA	NA	NA	9.18	NA	NA	0.74	20	NA	NA	NA	NA	NA	NA
Minimum		0.05	0.00215	-	7.73	4.18	0.00169	0.00911	0.74	20	31.1	0.186	0.00508	2.87	0.00382	-
Maximum		0.12	0.00215	-	7.73	14.5	0.00169	0.00911	7.96	20	31.1	0.186	0.00508	2.87	0.00382	-
Average		0.085	0.00215	-	7.73	7.62	0.00169	0.00911	4.63	20	31.1	0.186	0.00508	2.87	0.00382	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-4L Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/24/2020	No	2.61	2.61	ND	5.74	NA	2.23	93	NA	15.1	310	0.58	3.19	0.31	NA
03/03/2021	No	3.45	3.45	ND	5.82	NA	2.19	91.1	NA	8.7	270	0.57	4.02	0.16	NA
03/03/2021	Yes	3.45	3.45	ND	5.82	NA	1.81	91.1	NA	8.7	270	0.38	3.83	0.17	NA
05/10/2021	No	3.78	3.78	ND	6.04	NA	2.22	91.7	NA	13.4	110	0.87	4.65	0.72	NA
07/26/2021	No	4.72	4.72	ND	5.51	NA	1.63	81.6	NA	19	290	0.22	4.94	0.12	NA
12/15/2021	No	3.47	3.47	ND	5.48	NA	2.36	64	NA	15.2	138	0.49	3.96	0.06	NA
12/15/2021	Yes	3.46	3.46	ND	5.48	NA	2.58	64	NA	15.2	132	0.48	3.94	0.07	NA
03/25/2022	No	5.04	5.04	ND	6.22	NA	2.36	58.3	NA	10.7	182	0.3	5.34	0.07	NA
05/25/2022	No	6.04	6.04	ND	6.08	NA	3.37	59.8	NA	13.8	280	0.48	6.53	0.1	NA
05/25/2022	Yes	5.97	5.97	ND	6.08	NA	3.68	59.8	NA	13.8	282	0.51	6.47	0.09	NA
08/31/2022	No	6.73	6.73	ND	4.87	NA	2.48	369	NA	19	212	0.26	6.99	0.1	NA
11/28/2022	No	9.59	9.59	ND	5.27	NA	3.65	120	NA	15.7	165	0.25	9.84	ND	NA
02/14/2023	No	9.01	9.01	ND	5.58	NA	3.03	112	NA	10.8	135	0.17	9.18	ND	NA
05/11/2023	No	8.34	8.34	ND	5.34	NA	2.44	114	NA	12.9	125	0.42	8.76	ND	NA
08/10/2023	No	8.47	8.47	ND	5.16	NA	3.7	148	NA	18.2	132	0.247	8.72	ND	NA
11/02/2023	No	5.69	5.69	ND	4.96	NA	2.27	124	NA	17	138	0.169	5.86	ND	NA
02/08/2024	No	5.13	5.13	ND	5.59	NA	2.7	92.9	NA	9.8	150	0.44	5.57	0.06	NA
05/09/2024	No	5.51	5.51	ND	5.5	ND	2.48	84.3	7.57	13.4	478	0.422	5.93	0.1	ND
08/08/2024	No	5.97	5.97	ND	5.52	NA	0.882	118	NA	18.9	368	0.553	6.52	0.18	NA
Minimum		2.61	2.61	-	4.87	-	0.882	58.3	7.57	8.7	110	0.169	3.19	0.06	-
Maximum		9.59	9.59	-	6.22	-	3.7	369	7.57	19	478	0.87	9.84	0.72	-
Average		5.85	5.85	-	5.54	-	2.50	113.86	7.57	14.475	217.69	0.40	6.25	0.18	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-5F Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/24/2020	No	ND	NA	NA	NA	17.9	NA	NA	9.31	ND	NA	NA	NA	NA	NA	NA
03/03/2021	No	1.26	NA	NA	NA	19.1	NA	NA	9.24	ND	NA	NA	NA	NA	NA	NA
05/10/2021	No	ND	NA	NA	NA	18	NA	NA	10.1	ND	NA	NA	NA	NA	NA	NA
07/26/2021	No	ND	NA	NA	NA	24.9	NA	NA	8.95	ND	NA	NA	NA	NA	NA	NA
12/15/2021	No	ND	NA	NA	NA	23.3	NA	NA	9.18	ND	NA	NA	NA	NA	NA	NA
03/25/2022	No	ND	NA	NA	NA	24.5	NA	NA	9.28	ND	NA	NA	NA	NA	NA	NA
05/25/2022	No	ND	NA	NA	NA	96.8	NA	NA	9.48	ND	NA	NA	NA	NA	NA	NA
08/31/2022	No	ND	NA	NA	NA	51.4	NA	NA	8.78	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	115	NA	NA	5.15	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	118	NA	NA	8.01	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	85.4	NA	NA	8.97	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	92.8	NA	NA	7.17	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	83.5	NA	NA	7.91	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	90.1	NA	NA	8.11	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00321	ND	32.7	84.9	ND	ND	8.71	ND	137	0.00407	ND	13.5	0.0165	ND
06/06/2024	No	ND	NA	NA	NA	95.9	NA	NA	7.87	ND	NA	NA	NA	NA	NA	NA
07/17/2024	No	ND	NA	NA	NA	111	NA	NA	8.64	ND	NA	NA	NA	NA	NA	NA
08/08/2024	No	ND	NA	NA	NA	96.2	NA	NA	0.78	ND	NA	NA	NA	NA	NA	NA
09/12/2024	No	ND	NA	NA	NA	97.6	NA	NA	7.76	ND	NA	NA	NA	NA	NA	NA
10/09/2024	No	ND	NA	NA	NA	111	NA	NA	7.9	ND	NA	NA	NA	NA	NA	NA
Minimum		1.26	0.00321	-	32.7	17.9	-	-	0.78	-	137	0.00407	-	13.5	0.0165	-
Maximum		1.26	0.00321	-	32.7	118	-	-	10.1	-	137	0.00407	-	13.5	0.0165	-
Average		1.26	0.00321	-	32.7	72.865	-	-	8.065	-	137	0.00407	-	13.5	0.0165	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-5F Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/24/2020	No	17.1	17.1	ND	5.37	NA	6.27	291	NA	15.5	215	0.11	17.2	ND	NA
03/03/2021	No	20.5	20.5	ND	5.59	NA	5.84	327	NA	14.9	240	1.32	21.8	ND	NA
05/10/2021	No	17.1	17.1	ND	5.58	NA	6.84	340	NA	13.9	255	0.24	17.3	ND	NA
07/26/2021	No	15.6	15.6	ND	5.69	NA	5.3	226	NA	15.1	285	0.22	15.8	ND	NA
12/15/2021	No	16.3	16.3	ND	5.71	NA	5.63	200	NA	15.3	250	0.13	16.4	ND	NA
03/25/2022	No	13.9	13.9	ND	5.93	NA	5.07	151.2	NA	14.3	242	0.11	14	ND	NA
05/25/2022	No	16.2	16.2	ND	6.13	NA	47.2	348	NA	14.1	525	0.31	16.5	ND	NA
08/31/2022	No	17	17	ND	5.49	NA	5.72	1058	NA	16.3	352	0.13	17.1	ND	NA
11/28/2022	No	17.9	17.9	ND	5.69	NA	11.1	521	NA	15.8	448	0.14	18	ND	NA
02/14/2023	No	21	21	ND	5.79	NA	16.5	532	NA	15	492	0.14	21.1	ND	NA
05/11/2023	No	16.3	16.3	ND	5.81	NA	20.1	430	NA	14	428	0.25	16.6	ND	NA
08/10/2023	No	18.1	18.1	ND	5.74	NA	26.7	472	NA	14.2	432	0.212	18.3	ND	NA
11/02/2023	No	15.2	15.2	ND	5.37	NA	30.7	461	NA	15.4	368	0.125	15.3	ND	NA
02/08/2024	No	15.7	15.7	ND	5.59	NA	17.5	446	NA	15.1	375	0.118	15.8	ND	NA
05/09/2024	No	14	14	ND	5.53	0.0031	20.1	434	42.1	13.7	402	0.202	14.2	ND	0.012
06/06/2024	No	13.9	13.9	ND	5.55	NA	19.6	456	NA	13.7	410	0.143	14	ND	NA
07/17/2024	No	13.2	13.2	ND	5.6	NA	24.5	499	NA	14.1	492	0.22	13.4	ND	NA
08/08/2024	No	13.3	13.3	ND	5.57	NA	21.8	464	NA	14.2	362	0.287	13.6	ND	NA
09/12/2024	No	13	13	ND	5.63	NA	25.3	482	NA	14.9	432	0.306	13.4	ND	NA
10/09/2024	No	NA	13.1	NA	5.71	NA	30.8	509	NA	15.4	362	NA	13.2	ND	NA
Minimum		13	13	-	5.37	0.0031	5.07	151.2	42.1	13.7	215	0.11	13.2	-	0.012
Maximum		21	21	-	6.13	0.0031	47.2	1058	42.1	16.3	525	1.32	21.8	-	0.012
Average		16.07	15.92	-	5.654	0.0031	17.63	432.36	42.1	14.745	368.35	0.25	16.15	-	0.012

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-5G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/24/2020	No	0.11	NA	NA	NA	28.8	NA	NA	9.21	ND	NA	NA	NA	NA	NA	NA
03/11/2021	No	0.19	NA	NA	NA	25	NA	NA	8.89	ND	NA	NA	NA	NA	NA	NA
05/12/2021	No	ND	NA	NA	NA	22.5	NA	NA	9.33	ND	NA	NA	NA	NA	NA	NA
07/21/2021	No	ND	NA	NA	NA	23.7	NA	NA	8.71	ND	NA	NA	NA	NA	NA	NA
07/21/2021	Yes	ND	NA	NA	NA	23.7	NA	NA	8.71	ND	NA	NA	NA	NA	NA	NA
12/16/2021	No	ND	NA	NA	NA	22.5	NA	NA	8.55	ND	NA	NA	NA	NA	NA	NA
03/30/2022	No	ND	NA	NA	NA	23.3	NA	NA	9.16	ND	NA	NA	NA	NA	NA	NA
05/26/2022	No	ND	NA	NA	NA	23.7	NA	NA	8.64	ND	NA	NA	NA	NA	NA	NA
08/30/2022	No	ND	NA	NA	NA	30.5	NA	NA	7.97	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	30.1	NA	NA	4.79	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	24.6	NA	NA	7.63	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	23.1	NA	NA	8.46	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	23.6	NA	NA	6.5	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	26.4	NA	NA	7.26	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	30.4	NA	NA	6.71	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00273	ND	25.5	47.8	ND	ND	7.93	ND	107	0.0524	ND	10.5	0.00854	ND
08/08/2024	No	ND	NA	NA	NA	56.9	NA	NA	3.11	ND	NA	NA	NA	NA	NA	NA
Minimum		0.11	0.00273	-	25.5	22.5	-	-	3.11	-	107	0.0524	-	10.5	0.00854	-
Maximum		0.19	0.00273	-	25.5	56.9	-	-	9.33	-	107	0.0524	-	10.5	0.00854	-
Average		0.15	0.00273	-	25.5	28.93	-	-	7.68	-	107	0.0524	-	10.5	0.00854	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-5G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/24/2020	No	21.8	21.8	ND	5.43	NA	8.9	335	NA	14.7	282	0.31	22.1	ND	NA
03/11/2021	No	19.3	19.3	ND	5.68	NA	7.28	333	NA	14.3	238	0.24	19.5	ND	NA
05/12/2021	No	17.5	17.5	ND	5.37	NA	6.62	334	NA	13.5	250	0.23	17.8	ND	NA
07/21/2021	No	17.8	17.8	ND	5.47	NA	9.86	220	NA	14.8	258	0.15	18	ND	NA
07/21/2021	Yes	17.8	17.8	ND	5.47	NA	9.98	220	NA	14.8	258	0.14	17.9	ND	NA
12/16/2021	No	15.1	15.1	ND	5.62	NA	8.88	174	NA	16	240	0.12	15.2	ND	NA
03/30/2022	No	14.4	14.4	ND	5.86	NA	9.41	162	NA	13.8	240	0.12	14.5	ND	NA
05/26/2022	No	15.5	15.5	ND	5.28	NA	6.32	158.2	NA	14	242	0.23	15.7	ND	NA
08/30/2022	No	16.1	16.1	ND	5.09	NA	4.88	686	NA	15.8	302	0.12	16.2	ND	NA
11/28/2022	No	16.9	16.9	ND	5.29	NA	8.41	263	NA	15.4	240	0.06	16.9	ND	NA
02/14/2023	No	16.5	16.5	ND	5.29	NA	8.31	237	NA	14.6	225	0.07	16.5	ND	NA
05/11/2023	No	13.9	13.9	ND	5.13	NA	7.73	221	NA	13.7	248	0.07	14	ND	NA
08/10/2023	No	12.5	12.5	ND	5.21	NA	8.88	223	NA	14.4	205	0.14	12.6	ND	NA
11/02/2023	No	12.3	12.3	ND	4.82	NA	7.97	234	NA	15.4	218	0.098	12.4	ND	NA
02/08/2024	No	12.2	12.2	ND	5.01	NA	7.19	237	NA	14.4	208	0.132	12.4	ND	NA
05/09/2024	No	13	13	ND	5.04	0.00213	10.5	291	29	13.6	318	ND	13	ND	0.003
08/08/2024	No	17.3	17.3	ND	5.14	NA	14.5	350	NA	14.4	368	0.257	17.5	ND	NA
Minimum		12.2	12.2	-	4.82	0.00213	4.88	158.2	29	13.5	205	0.06	12.4	-	0.003
Maximum		21.8	21.8	-	5.86	0.00213	14.5	686	29	16	368	0.31	22.1	-	0.003
Average		15.76	15.76	-	5.30	0.00213	8.48	278.64	29	14.55	255.13	0.16	15.89	-	0.003

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-6G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/24/2020	No	0.35	NA	NA	NA	25.4	NA	NA	8.03	ND	NA	NA	NA	NA	NA	NA
03/11/2021	No	ND	NA	NA	NA	25.7	NA	NA	7.74	ND	NA	NA	NA	NA	NA	NA
05/12/2021	No	0.07	NA	NA	NA	23.8	NA	NA	7.59	ND	NA	NA	NA	NA	NA	NA
07/21/2021	No	ND	NA	NA	NA	26	NA	NA	6.7	ND	NA	NA	NA	NA	NA	NA
12/16/2021	No	ND	NA	NA	NA	24.9	NA	NA	7.66	ND	NA	NA	NA	NA	NA	NA
03/30/2022	No	ND	NA	NA	NA	26	NA	NA	8.31	ND	NA	NA	NA	NA	NA	NA
05/26/2022	No	ND	NA	NA	NA	25.1	NA	NA	7.8	ND	NA	NA	NA	NA	NA	NA
08/30/2022	No	ND	NA	NA	NA	25	NA	NA	7.29	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	23.5	NA	NA	4.17	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	24.4	NA	NA	6.47	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	22.8	NA	NA	7.16	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	24.6	NA	NA	6.22	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	24.3	NA	NA	6.21	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	25.1	NA	NA	6.67	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00143	0.00058	13.7	24.3	0.00164	ND	7.17	ND	83.8	0.0409	ND	12.1	0.0475	ND
06/06/2024	No	ND	NA	NA	NA	24.9	NA	NA	7.88	ND	NA	NA	NA	NA	NA	NA
07/17/2024	No	ND	NA	NA	NA	25.4	NA	NA	5.67	ND	NA	NA	NA	NA	NA	NA
08/08/2024	No	ND	NA	NA	NA	24.9	NA	NA	6.12	ND	NA	NA	NA	NA	NA	NA
09/12/2024	No	ND	NA	NA	NA	26.6	NA	NA	6.7	ND	NA	NA	NA	NA	NA	NA
10/09/2024	No	ND	NA	NA	NA	26.2	NA	NA	6.85	ND	NA	NA	NA	NA	NA	NA
Minimum		0.07	0.00143	0.00058	13.7	22.8	0.00164	-	4.17	-	83.8	0.0409	-	12.1	0.0475	-
Maximum		0.35	0.00143	0.00058	13.7	26.6	0.00164	-	8.31	-	83.8	0.0409	-	12.1	0.0475	-
Average		0.21	0.00143	0.00058	13.7	24.945	0.00164	-	6.92	-	83.8	0.0409	-	12.1	0.0475	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-6G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/24/2020	No	15.8	15.8	ND	4.98	NA	7.47	248	NA	15.2	235	0.37	16.2	ND	NA
03/11/2021	No	15.8	15.8	ND	5.31	NA	5.73	270	NA	14.9	198	0.07	15.9	ND	NA
05/12/2021	No	13.8	13.8	ND	4.98	NA	6.27	269	NA	16.1	175	0.13	13.9	ND	NA
07/21/2021	No	14.5	14.5	ND	5.05	NA	9.72	171.9	NA	14.8	198	ND	14.5	ND	NA
12/16/2021	No	14.6	14.6	ND	5.34	NA	8.44	155.6	NA	15.9	215	ND	14.6	ND	NA
03/30/2022	No	14.8	14.8	ND	5.79	NA	9.11	146.1	NA	14.1	222	0.08	14.9	ND	NA
05/26/2022	No	14.7	14.7	ND	5.13	NA	6.48	133.8	NA	14.3	242	0.31	15	ND	NA
08/30/2022	No	14.6	14.6	ND	4.9	NA	5.57	557	NA	16.3	240	0.13	14.7	0.05	NA
11/28/2022	No	14.7	14.7	ND	5.24	NA	7.89	214	NA	15.5	188	ND	14.7	ND	NA
02/14/2023	No	14.7	14.7	ND	5.28	NA	7.92	211	NA	14.9	200	ND	14.7	ND	NA
05/11/2023	No	14.5	14.5	ND	5.14	NA	7.67	211	NA	14.4	202	0.1	14.6	ND	NA
08/10/2023	No	15.3	15.3	ND	5.19	NA	8.43	217	NA	15	182	0.21	15.5	ND	NA
11/02/2023	No	15.2	15.2	ND	4.74	NA	8.21	224	NA	15.9	188	ND	15.2	ND	NA
02/08/2024	No	16.4	16.4	ND	4.89	NA	7.08	230	NA	14.4	205	0.095	16.5	ND	NA
05/09/2024	No	15.1	15.1	ND	4.95	0.00639	8.61	224	19.9	14.3	208	ND	15.1	ND	0.053
06/06/2024	No	15.3	15.3	ND	5.31	NA	7.7	221	NA	14.7	192	0.09	15.4	ND	NA
07/17/2024	No	15.8	15.8	ND	5.44	NA	8.22	221	NA	15.4	228	0.19	16	ND	NA
08/08/2024	No	15.4	15.4	ND	5.37	NA	6.24	222	NA	15.1	205	0.08	15.5	ND	NA
09/12/2024	No	16.5	16.5	ND	5.71	NA	8.82	249	NA	16.3	242	0.186	16.7	ND	NA
10/09/2024	No	NA	16.9	NA	5.79	NA	7.45	239	NA	16.4	192	NA	17.1	ND	NA
Minimum		13.8	13.8	-	4.74	0.00639	5.57	133.8	19.9	14.1	175	0.07	13.9	0.05	0.053
Maximum		16.5	16.9	-	5.79	0.00639	9.72	557	19.9	16.4	242	0.37	17.1	0.05	0.053
Average		15.13	15.22	-	5.227	0.00639	7.6515	231.72	19.9	15.195	207.85	0.157	15.335	0.05	0.053

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-7G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/24/2020	No	0.07	NA	NA	NA	28.5	NA	NA	9.36	ND	NA	NA	NA	NA	NA	NA
03/11/2021	No	ND	NA	NA	NA	25.5	NA	NA	8.86	ND	NA	NA	NA	NA	NA	NA
05/12/2021	No	ND	NA	NA	NA	27.4	NA	NA	9.56	ND	NA	NA	NA	NA	NA	NA
07/21/2021	No	ND	NA	NA	NA	28.3	NA	NA	8.39	ND	NA	NA	NA	NA	NA	NA
12/16/2021	No	ND	NA	NA	NA	27.9	NA	NA	8.99	ND	NA	NA	NA	NA	NA	NA
03/30/2022	No	ND	NA	NA	NA	27.8	NA	NA	9.67	ND	NA	NA	NA	NA	NA	NA
05/26/2022	No	ND	NA	NA	NA	28.8	NA	NA	9.16	ND	NA	NA	NA	NA	NA	NA
08/30/2022	No	ND	NA	NA	NA	26.8	NA	NA	8.34	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	26	NA	NA	5.06	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	26.1	NA	NA	7.81	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	23.3	NA	NA	8.96	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	20.7	NA	NA	7.08	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	20.9	NA	NA	7.13	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	21.2	NA	NA	6.96	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00146	ND	19.5	23.5	ND	ND	7.88	ND	100	0.00887	0.00152	12.5	0.0532	ND
06/06/2024	No	ND	NA	NA	NA	23.6	NA	NA	7.76	ND	NA	NA	NA	NA	NA	NA
07/17/2024	No	ND	NA	NA	NA	24.7	NA	NA	4.61	ND	NA	NA	NA	NA	NA	NA
08/08/2024	No	ND	NA	NA	NA	24.2	NA	NA	2.97	ND	NA	NA	NA	NA	NA	NA
09/12/2024	No	ND	NA	NA	NA	24.4	NA	NA	8.07	ND	NA	NA	NA	NA	NA	NA
10/09/2024	No	ND	NA	NA	NA	25.2	NA	NA	7.94	ND	NA	NA	NA	NA	NA	NA
Minimum		0.07	0.00146	-	19.5	20.7	-	-	2.97	-	100	0.00887	0.00152	12.5	0.0532	-
Maximum		0.07	0.00146	-	19.5	28.8	-	-	9.67	-	100	0.00887	0.00152	12.5	0.0532	-
Average		0.07	0.00146	-	19.5	25.2	-	-	7.73	-	100	0.00887	0.00152	12.5	0.0532	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-7G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/24/2020	No	17.5	17.5	ND	4.64	NA	7.69	320	NA	14.8	245	0.23	17.8	ND	NA
03/11/2021	No	16.1	16.1	ND	4.81	NA	6.4	337	NA	15	222	0.12	16.2	ND	NA
05/12/2021	No	18.8	18.8	ND	4.59	NA	7.36	376	NA	13.7	225	0.16	19	ND	NA
07/21/2021	No	21.2	21.2	ND	4.6	NA	10.2	259	NA	15	318	0.13	21.3	ND	NA
12/16/2021	No	21.8	21.8	ND	4.75	NA	10.2	224	NA	15.9	265	0.11	22	ND	NA
03/30/2022	No	19.7	19.7	ND	4.83	NA	9.23	193.4	NA	13.9	280	0.09	19.8	ND	NA
05/26/2022	No	20.7	20.7	ND	4.7	NA	6.6	183.3	NA	14.4	528	0.29	21	ND	NA
08/30/2022	No	20.9	20.9	ND	4.7	NA	5.67	780	NA	16.8	310	0.1	21	ND	NA
11/28/2022	No	20.6	20.6	ND	4.67	NA	8.33	295	NA	15.5	232	0.05	20.7	ND	NA
02/14/2023	No	20.9	20.9	ND	4.71	NA	8.35	289	NA	14.9	218	0.07	21	ND	NA
05/11/2023	No	18	18	ND	4.61	NA	7.39	268	NA	14.3	240	ND	18	ND	NA
08/10/2023	No	14.9	14.9	ND	4.71	NA	7.73	249	NA	14.4	218	0.237	15.2	ND	NA
11/02/2023	No	14.3	14.3	ND	4.31	NA	7.29	251	NA	15.4	205	0.086	14.4	ND	NA
02/08/2024	No	13.4	13.4	ND	4.57	NA	5.85	249	NA	15.2	215	0.194	13.6	ND	NA
05/09/2024	No	12.8	12.8	ND	4.61	0.00169	7.63	248	46.8	14.1	220	ND	12.8	ND	ND
06/06/2024	No	13	13	ND	4.56	NA	5.99	249	NA	14.2	192	0.143	13.2	ND	NA
07/17/2024	No	12.7	12.7	ND	4.75	NA	7.49	247	NA	14.5	240	0.287	13	ND	NA
08/08/2024	No	12.2	12.2	ND	4.77	NA	5.2	246	NA	14.6	235	0.219	12.4	ND	NA
09/12/2024	No	12.7	12.7	ND	4.97	NA	7.87	251	NA	15.1	228	0.226	12.9	ND	NA
10/09/2024	No	NA	12.7	NA	5.11	NA	6.34	254	NA	15.4	200	NA	12.7	ND	NA
Minimum		12.2	12.2	-	4.31	0.00169	5.20	183.3	46.8	13.7	192	0.05	12.4	-	-
Maximum		21.8	21.8	-	5.11	0.00169	10.20	780	46.8	16.8	528	0.29	22	-	-
Average		16.96	16.745	-	4.70	0.00169	7.44	288.44	46.8	14.86	252	0.16	16.9	-	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-8G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/23/2020	No	ND	NA	NA	NA	22.8	NA	NA	6.95	ND	NA	NA	NA	NA	NA	NA
11/23/2020	Yes	ND	NA	NA	NA	22.7	NA	NA	6.95	ND	NA	NA	NA	NA	NA	NA
03/11/2021	No	ND	NA	NA	NA	26	NA	NA	6.04	ND	NA	NA	NA	NA	NA	NA
03/11/2021	Yes	ND	NA	NA	NA	26.3	NA	NA	6.04	ND	NA	NA	NA	NA	NA	NA
05/12/2021	No	ND	NA	NA	NA	29.8	NA	NA	6.14	ND	NA	NA	NA	NA	NA	NA
07/21/2021	No	ND	NA	NA	NA	31	NA	NA	5.4	ND	NA	NA	NA	NA	NA	NA
12/16/2021	No	ND	NA	NA	NA	21.3	NA	NA	5.38	ND	NA	NA	NA	NA	NA	NA
03/30/2022	No	ND	NA	NA	NA	22.6	NA	NA	6.76	ND	NA	NA	NA	NA	NA	NA
05/26/2022	No	ND	NA	NA	NA	19.2	NA	NA	5.94	ND	NA	NA	NA	NA	NA	NA
08/30/2022	No	ND	NA	NA	NA	13.3	NA	NA	5.36	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	11	NA	NA	2.81	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	14.4	NA	NA	3.19	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	12.8	NA	NA	2.86	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	11.8	NA	NA	2.41	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	10.6	NA	NA	2.69	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	14.4	NA	NA	2.91	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00266	ND	22.9	25.6	0.00153	ND	4.62	ND	100	ND	0.00167	10.5	0.0262	ND
06/06/2024	No	ND	NA	NA	NA	27.2	NA	NA	4.31	ND	NA	NA	NA	NA	NA	NA
07/17/2024	No	ND	NA	NA	NA	22	NA	NA	3.96	ND	NA	NA	NA	NA	NA	NA
08/08/2024	No	ND	NA	NA	NA	19.4	NA	NA	4.12	ND	NA	NA	NA	NA	NA	NA
09/12/2024	No	ND	NA	NA	NA	19.1	NA	NA	4.33	ND	NA	NA	NA	NA	NA	NA
10/09/2024	No	ND	NA	NA	NA	20.1	NA	NA	4.41	ND	NA	NA	NA	NA	NA	NA
Minimum		-	0.00266	-	22.9	10.6	0.00153	-	2.41	-	100	-	0.00167	10.5	0.0262	-
Maximum		-	0.00266	-	22.9	31	0.00153	-	6.95	-	100	-	0.00167	10.5	0.0262	-
Average		-	0.00266	-	22.9	19.72	0.00153	-	4.53	-	100	-	0.00167	10.5	0.0262	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-8G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/23/2020	No	16	16	ND	5.36	NA	6.93	256	NA	16.3	225	ND	16	ND	NA
11/23/2020	Yes	16.1	16.1	ND	5.36	NA	6.72	256	NA	16.3	225	ND	16.1	ND	NA
03/11/2021	No	22.1	22.1	ND	5.51	NA	5.53	339	NA	15.9	248	0.08	22.1	ND	NA
03/11/2021	Yes	22.2	22.2	ND	5.51	NA	6.14	339	NA	15.9	252	0.11	22.3	ND	NA
05/12/2021	No	29.4	29.4	ND	5.28	NA	5.81	434	NA	14.4	340	0.2	29.6	ND	NA
07/21/2021	No	30.6	30.6	ND	5.27	NA	8.84	295	NA	15.5	395	0.15	30.8	ND	NA
12/16/2021	No	17.5	17.5	ND	5.44	NA	8.15	171.4	NA	16.2	242	ND	17.5	ND	NA
03/30/2022	No	18.1	18.1	ND	5.42	NA	9.36	158.7	NA	13.9	260	0.09	18.2	ND	NA
05/26/2022	No	15.3	15.3	ND	5.42	NA	5.69	124.3	NA	14.4	210	0.26	15.6	ND	NA
08/30/2022	No	6.97	6.97	ND	5.21	NA	3.53	308	NA	17.5	178	0.09	7.06	ND	NA
11/28/2022	No	5.31	5.31	ND	5.51	NA	6.57	111	NA	15.4	90	ND	5.31	ND	NA
02/14/2023	No	8.12	8.12	ND	5.47	NA	6.06	144	NA	14.5	130	ND	8.12	ND	NA
05/11/2023	No	5.46	5.46	ND	5.21	NA	5.44	119	NA	13.9	138	ND	5.46	ND	NA
08/10/2023	No	4.2	4.2	ND	5.33	NA	5.88	109	NA	14.4	97.5	ND	4.2	ND	NA
11/02/2023	No	2.82	2.82	ND	5.04	NA	4.61	91.6	NA	15.3	85	ND	2.82	ND	NA
02/08/2024	No	7.85	7.85	ND	5.2	NA	6.42	146	NA	15	118	0.093	7.94	ND	NA
05/09/2024	No	15.7	15.7	ND	5.17	ND	7.9	255	37	14.4	335	ND	15.7	ND	ND
06/06/2024	No	15	15	ND	5.17	NA	7.05	259	NA	14.3	242	0.147	15.1	ND	NA
07/17/2024	No	10.1	10.1	ND	5.23	NA	7.1	225	NA	14.6	210	0.092	10.2	ND	NA
08/08/2024	No	9.2	9.2	ND	5.29	NA	5.12	197	NA	14.8	210	0.093	9.3	ND	NA
09/12/2024	No	10.4	10.4	ND	5.36	NA	7.35	204	NA	15.1	242	0.138	10.5	ND	NA
10/09/2024	No	NA	11.5	NA	5.34	NA	5.77	214	NA	15.4	182	NA	11.6	ND	NA
Minimum		2.82	2.82	-	5.04	-	3.53	91.6	37	13.9	85	0.08	2.82	-	-
Maximum		30.6	30.6	-	5.51	-	9.36	434	37	17.5	395	0.26	30.8	-	-
Average		13.16	13.08	-	5.31	-	6.46	208.05	37	15.06	208.88	0.13	13.16	-	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-9G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Ammonia as N	Arsenic	Cadmium	Calcium	Chloride	Chromium	Copper	Dissolved Oxygen, Field	Fecal Coliform	Hardness, Total	Iron	Lead	Magnesium	Manganese	Nickel
11/19/2020	No	0.45	NA	NA	NA	24.9	NA	NA	10.3	ND	NA	NA	NA	NA	NA	NA
05/12/2021	No	ND	NA	NA	NA	25	NA	NA	10.8	ND	NA	NA	NA	NA	NA	NA
05/12/2021	Yes	0.07	NA	NA	NA	25.1	NA	NA	10.8	ND	NA	NA	NA	NA	NA	NA
07/21/2021	No	ND	NA	NA	NA	24.9	NA	NA	9.15	ND	NA	NA	NA	NA	NA	NA
12/16/2021	No	ND	NA	NA	NA	24.2	NA	NA	9.36	ND	NA	NA	NA	NA	NA	NA
03/30/2022	No	ND	NA	NA	NA	25.5	NA	NA	9.96	ND	NA	NA	NA	NA	NA	NA
05/26/2022	No	ND	NA	NA	NA	25.1	NA	NA	9.54	ND	NA	NA	NA	NA	NA	NA
08/30/2022	No	ND	NA	NA	NA	75.5	NA	NA	7.93	ND	NA	NA	NA	NA	NA	NA
11/28/2022	No	ND	NA	NA	NA	30	NA	NA	5.2	ND	NA	NA	NA	NA	NA	NA
02/14/2023	No	ND	NA	NA	NA	29.7	NA	NA	8.5	ND	NA	NA	NA	NA	NA	NA
05/11/2023	No	ND	NA	NA	NA	31.9	NA	NA	9.21	ND	NA	NA	NA	NA	NA	NA
08/10/2023	No	ND	NA	NA	NA	32.7	NA	NA	7.87	ND	NA	NA	NA	NA	NA	NA
11/02/2023	No	ND	NA	NA	NA	34	NA	NA	8.26	ND	NA	NA	NA	NA	NA	NA
02/08/2024	No	ND	NA	NA	NA	53.7	NA	NA	7.69	ND	NA	NA	NA	NA	NA	NA
05/09/2024	No	ND	0.00348	ND	27.9	52.2	ND	ND	8.79	ND	121	ND	ND	12.5	0.105	ND
06/06/2024	No	ND	NA	NA	NA	51.4	NA	NA	8.36	ND	NA	NA	NA	NA	NA	NA
07/17/2024	No	ND	NA	NA	NA	47	NA	NA	5.27	ND	NA	NA	NA	NA	NA	NA
08/08/2024	No	ND	NA	NA	NA	47.3	NA	NA	6.01	ND	NA	NA	NA	NA	NA	NA
09/12/2024	No	ND	NA	NA	NA	47.5	NA	NA	7.81	ND	NA	NA	NA	NA	NA	NA
10/09/2024	No	ND	NA	NA	NA	39.5	NA	NA	8.41	ND	NA	NA	NA	NA	NA	NA
Minimum		0.07	0.00348	-	27.9	24.2	-	-	5.2	-	121	-	-	12.5	0.105	-
Maximum		0.45	0.00348	-	27.9	75.5	-	-	10.8	-	121	-	-	12.5	0.105	-
Average		0.26	0.00348	-	27.9	38	-	-	8.34	-	121	-	-	12.5	0.105	-

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

APPENDIX E.1
MW-9G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Nitrate as N	Nitrate+Nitrite as N	Nitrite as N	pH	Selenium	Sodium	Specific Conductance, Field	Sulfate	Temperature, Field	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Zinc
11/19/2020	No	21.8	21.8	ND	4.85	NA	7.66	297	NA	14.5	272	0.54	22.3	ND	NA
05/12/2021	No	19.5	19.5	ND	4.78	NA	5.77	367	NA	13	298	0.12	19.6	ND	NA
05/12/2021	Yes	20	20	ND	4.78	NA	6.04	367	NA	13	290	0.13	20.1	ND	NA
07/21/2021	No	18.5	18.5	ND	5	NA	7.33	229	NA	14.4	298	0.18	18.6	ND	NA
12/16/2021	No	20.5	20.5	ND	5.1	NA	7.38	208	NA	15.5	262	0.07	20.5	ND	NA
03/30/2022	No	19.5	19.5	ND	5.74	NA	8.29	189.4	NA	13.5	285	0.09	19.6	ND	NA
05/26/2022	No	18.9	18.9	ND	5.22	NA	5.29	165.4	NA	13.9	268	0.14	19.1	ND	NA
08/30/2022	No	14.4	14.4	ND	5.18	NA	31	1129	NA	18.9	478	0.2	14.6	ND	NA
11/28/2022	No	14.4	14.4	ND	5.05	NA	12.3	291	NA	15.8	228	0.06	14.4	ND	NA
02/14/2023	No	20	20	ND	5.09	NA	9.31	286	NA	14.6	245	ND	20	ND	NA
05/11/2023	No	19.2	19.2	ND	5.02	NA	7.56	286	NA	13.6	298	0.15	19.3	ND	NA
08/10/2023	No	17.1	17.1	ND	5.01	NA	7.94	284	NA	14.1	268	0.222	17.3	ND	NA
11/02/2023	No	15.2	15.2	ND	4.84	NA	9.82	293	NA	15.3	260	0.105	15.3	ND	NA
02/08/2024	No	21.8	21.8	ND	5.17	NA	13.5	374	NA	14.6	315	0.218	22	ND	NA
05/09/2024	No	14.3	14.3	ND	5.14	0.00287	12.9	327	44.8	13.6	342	ND	14.3	ND	0.003
06/06/2024	No	13.7	13.7	ND	5.19	NA	12.2	326	NA	13.4	300	0.152	13.9	ND	NA
07/17/2024	No	12.1	12.1	ND	5.34	NA	16.2	319	NA	13.9	305	0.231	12.3	ND	NA
08/08/2024	No	13.6	13.6	ND	5.04	NA	12.2	321	NA	14.2	305	0.172	13.8	ND	NA
09/12/2024	No	13.5	13.5	ND	5.27	NA	17.4	339	NA	14.9	315	0.165	13.7	ND	NA
10/09/2024	No	NA	13	NA	5.49	NA	18	312	NA	15.1	245	NA	13	ND	NA
Minimum		12.1	12.1	-	4.78	0.00287	5.29	165.4	44.8	13	228	0.06	12.3	-	0.003
Maximum		21.8	21.8	-	5.74	0.00287	31	1129	44.8	18.9	478	0.54	22.3	-	0.003
Average		17.11	16.89	-	5.133	0.00287	11.69	333.83	44.8	14.57	294.05	0.18	17.03	-	0.003

Notes:

Duplicates not included within minimum, maxium and average statistics.
ND: Not detected.
NA: Not analyzed.

BrightFields, Inc.
Environmental Services

Appendix E.2

Lysimeter Water Quality Data

APPENDIX E.2
LY-1F Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Ammonia as N mg/L	Chloride mg/L	Nitrate as N mg/L	Nitrate+Nitrite as N mg/L	Nitrite as N mg/L	pH	Sodium mg/L	Specific Conductance, Field umhos/cm	Temperature, Field °C	Total Dissolved Solids mg/L	Total Kjeldahl Nitrogen mg/L	Total Nitrogen as N mg/L	Total Phosphorus as P mg/L	Volume Pumped mL
09/17/2020	ND	38.9	21.9	21.9	ND	6.9	247	920	22.4	798	1.5	23.4	0.37	NA
10/28/2020	ND	23.7	20.6	20.6	ND	7.2	186	1136	18.5	TNV-V	1.71	22.4	1.38	NA
12/02/2020	ND	8.95	19.6	19.6	ND	7.25	250	1088	12.5	878	1.74	21.3	0.15	NA
12/23/2020	ND	7.68	19.2	19.2	ND	7.28	216	1096	6	810	1.23	20.4	ND	NA
01/29/2021	ND	45.4	16.1	16.1	ND	7.63	185	1752	4.7	922	3.43	19.6	0.75	NA
02/26/2021	ND	32.9	12.1	12.1	ND	7.17	164	1464	6.4	867	0.7	12.8	0.24	NA
03/25/2021	ND	30.1	10.7	10.7	ND	7.09	261	1293	12.7	825	1.11	11.8	0.15	NA
04/21/2021	ND	30.5	5	5	ND	7.43	280	1394	16.4	890	0.98	5.99	0.11	NA
05/10/2021	ND	30.3	5.08	5.08	ND	7.31	194	1256	14.6	752	0.89	5.97	ND	NA
06/08/2021	ND	25.7	5.26	5.26	ND	7.56	227	870	25.5	770	0.96	6.22	0.05	NA
07/13/2021	ND	22	17.6	17.6	ND	7.42	194	793	26.4	735	1.02	18.6	0.07	NA
08/11/2021	ND	25	49.8	49.8	ND	7.13	240	819	25.3	965	1.26	51.1	0.06	NA
09/22/2021	ND	24.3	108	108	ND	7.01	222	992	23.9	1040	1.14	109	0.22	NA
10/20/2021	ND	35.2	120	120	ND	6.99	224	1000	20	1080	0.57	120	0.09	NA
11/17/2021	ND	32	110	110	ND	7.01	231	902	14.6	1010	0.98	111	0.07	NA
12/14/2021	0.29	44	103	103	ND	7.21	180	923	11.5	1010	1.28	104	0.06	NA
01/25/2022	ND	71	70.2	70.2	ND	7.29	208	755	11.9	TNV-V	1.74	71.9	0.14	NA
03/25/2022	ND	71.7	12.4	12.4	ND	7.1	171	481	12.2	605	0.64	13	0.07	NA
04/27/2022	ND	86.4	2.72	2.72	ND	7.07	170	534	14.7	602	0.73	3.46	0.2	NA
05/25/2022	ND	139	1.79	1.79	ND	6.95	169	572	18.4	695	0.37	2.15	ND	NA
06/24/2022	ND	162	3.57	3.57	ND	6.86	143	562	22.6	625	0.67	4.24	0.12	NA
07/21/2022	ND	236	29.4	29.4	ND	6.57	202	791	26.3	855	0.58	30	0.15	NA
08/31/2022	ND	245	35.3	35.3	ND	6.46	218	361	25.1	950	0.7	36	0.08	NA
09/29/2022	ND	225	38.7	38.7	ND	7.03	248	347	21.4	948	0.49	39.2	ND	NA
10/28/2022	ND	123	29.1	29.1	ND	7.69	207	1102	15	850	0.72	29.8	ND	NA
11/23/2022	ND	101	23.9	23.9	ND	7.85	180	1030	14.1	848	1.47	25.4	0.11	300
03/10/2023	ND	59.5	18.8	18.8	ND	7.52	181	733	8.8	685	0.48	19.3	ND	950
04/14/2023	ND	59.6	18.3	18.3	ND	7.17	142	782	15.2	588	0.69	19	ND	900
05/11/2023	ND	56.9	17.4	17.4	ND	7.24	151	763	16.2	575	0.33	17.8	ND	900
06/16/2023	ND	49.8	15.7	15.7	ND	7.17	124	839	20.8	615	0.53	16.2	ND	950
10/04/2023	ND	61.1	17.6	17.6	ND	6.87	146	850	22.1	568	0.793	18.4	ND	900
01/12/2024	ND	38.4	11.9	11.9	ND	NA	122	NA	NA	580	0.708	12.6	0.07	150
Minimum	0.29	7.68	1.79	1.79	-	6.46	122	347	4.7	568	0.33	2.15	0.05	0
Maximum	0.29	245	120	120	-	7.85	280	1752	26.4	1080	3.43	120	1.38	950
Average	0.29	70.06	30.96	30.96	-	7.18	196.34	909.68	16.97	798.03	1.00	31.94	0.21	210.42

Notes:
ND: Not detected.
NA: Not analyzed.
TNV-V Test Not Valid due to sample volume

APPENDIX E.2
LY-1G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Ammonia as N mg/L	Chloride mg/L	Nitrate as N mg/L	Nitrate+Nitrite as N mg/L	Nitrite as N mg/L	pH SU	Sodium mg/L	Specific Conductance, Field umhos/cm	Temperature, Field °C	Total Dissolved Solids mg/L	Total Kjeldahl Nitrogen mg/L	Total Nitrogen as N mg/L	Total Phosphorus as P mg/L	Volume Pumped mL
09/17/2020	ND	14.3	0.26	0.265	ND	6.38	92.8	309	24.8	362	0.41	0.674	ND	NA
10/28/2020	ND	14	0.23	0.228	ND	6.78	70.3	458	19.8	324	0.31	0.542	ND	NA
11/19/2020	ND	17.3	0.22	0.219	ND	6.69	88.1	529	14.6	382	0.12	0.337	ND	NA
12/23/2020	ND	9.24	0.22	0.219	ND	6.28	80.6	437	7	372	0.22	0.442	ND	NA
01/29/2021	ND	18.5	0.24	0.245	ND	6.68	17.9	177.2	6.2	192	0.19	0.431	ND	NA
02/26/2021	ND	19.5	0.23	0.228	ND	6.22	10.2	250	8.2	293	0.07	0.298	0.14	NA
03/25/2021	ND	11.2	0.3	0.301	ND	6	14.5	175	13.6	138	0.15	0.449	0.11	NA
04/21/2021	ND	11.7	ND	ND	ND	6.03	10.6	99.7	17.2	80	0.28	0.277	ND	NA
05/10/2021	ND	8.13	ND	ND	ND	5.85	7.66	155.7	15.5	97.5	ND	ND	ND	NA
06/08/2021	ND	14.5	0.22	0.22	ND	5.6	11.3	108.6	26.1	150	0.07	0.287	0.16	NA
07/13/2021	ND	20.7	0.23	0.231	ND	4.72	14.7	109.2	24.3	248	ND	0.231	ND	NA
08/11/2021	ND	16.9	0.51	0.511	ND	4.94	36	162.1	25.1	275	0.17	0.681	ND	NA
09/22/2021	ND	17	0.58	0.581	ND	5.05	41.9	166.6	24	278	0.18	0.76	ND	NA
10/20/2021	ND	31.7	0.56	0.561	ND	5.1	50	217.1	21.5	302	0.19	0.751	ND	NA
11/17/2021	ND	41.3	0.84	0.84	ND	5.54	57.9	218	15.7	300	0.1	0.939	ND	NA
12/14/2021	ND	72.3	3.42	3.42	ND	5.69	58.7	247	11.9	308	0.45	3.87	ND	NA
01/20/2022	ND	145	9.21	9.21	ND	6.4	130	426	6.4	410	0.48	9.7	0.08	NA
02/22/2022	ND	183	10.7	10.7	ND	6.43	131	446	10.3	465	0.55	11.2	0.09	NA
03/30/2022	ND	177	9.77	9.77	ND	6.31	138	347	10.8	470	0.32	10.1	ND	NA
04/27/2022	ND	36.2	1.36	1.36	ND	7.31	63.4	200.8	13.6	290	0.2	1.56	0.11	NA
05/23/2022	ND	153	12.1	12.1	ND	5.07	117	406	20.5	448	0.45	12.5	ND	NA
06/24/2022	ND	215	14.1	14.1	ND	5.25	135	509	23.2	575	0.72	14.8	0.05	NA
07/21/2022	ND	221	15.9	15.9	ND	5.53	155	499	25.1	628	0.38	16.3	0.07	NA
08/30/2022	0.41	231	15.6	15.6	ND	4.7	43	2168	26.7	620	0.53	16.2	ND	NA
09/29/2022	ND	304	17.2	17.2	ND	4.61	233	269	21.4	755	0.3	17.5	ND	NA
10/28/2022	ND	244	11	11	ND	5.03	230	1081	16.9	758	0.7	11.7	ND	NA
11/23/2022	ND	186	8.51	8.51	ND	5.07	170	846	12.1	710	0.7	9.21	ND	1550
12/09/2022	ND	163	8.75	8.75	ND	5	194	756	10.3	570	0.64	9.39	ND	1550
02/10/2023	ND	135	9.11	9.11	ND	6.56	167	689	10.2	570	0.8	9.91	ND	550
03/10/2023	ND	124	9.23	9.23	ND	6.9	197	704	9.4	620	0.76	9.99	ND	700
04/14/2023	ND	117	10.8	10.8	ND	6.75	175	869	17.2	622	0.6	11.3	ND	900
05/11/2023	ND	117	10.9	10.9	ND	6.79	202	910	17.9	648	0.83	11.7	ND	850
06/16/2023	ND	115	9.78	9.78	ND	6.81	191	978	21.3	630	0.89	10.7	ND	850
07/14/2023	ND	97.7	6.9	6.9	ND	3.71	167	946	22.1	650	0.9	7.8	ND	400
08/10/2023	ND	101	6.44	6.44	ND	6.92	170	884	22.1	565	0.957	7.4	ND	500
09/07/2023	ND	85.5	8.46	8.46	ND	6.53	135	978	30.4	525	0.963	9.43	ND	750
10/04/2023	ND	81.6	9.3	9.3	ND	6.74	173	871	25.1	540	0.916	10.2	ND	800
11/02/2023	0.05	112	12	12	ND	6.57	202	887	15.8	678	1.39	13.4	ND	400
01/12/2024	0.05	117	10.3	10.3	ND	7.16	221	887	9.5	805	0.996	11.3	ND	300
02/08/2024	ND	72.9	5.85	5.85	ND	6.87	162	626	11.9	505	1.36	7.21	ND	200
03/08/2024	ND	65.1	6.1	6.1	ND	6.61	97.2	484	10.6	395	0.555	6.66	ND	250
04/10/2024	ND	95.5	9.28	9.28	ND	6.27	128	679	17.1	485	0.649	9.92	ND	250
05/09/2024	ND	82.7	8.36	8.36	ND	6.24	125	629	17.6	445	0.701	9.07	ND	350
06/06/2024	ND	75.1	9.26	9.26	ND	6.21	73.5	328	22.1	358	0.322	9.58	ND	300
07/17/2024	ND	94.1	12.1	12.1	ND	6.25	93.3	731	24.6	472	0.587	12.7	ND	450
08/08/2024	ND	117	17.7	17.7	ND	6.77	187	1071	22.3	718	1.06	18.7	ND	400
10/09/2024	ND	186	14.8	14.2	NA	TNV-V	231	TNV-V	TNV-V	TNV-V	NA	NA	ND	NA
Minimum	0.05	8.13	0.22	0.219	-	3.71	7.66	99.7	6.2	80	0.07	0.231	0.05	0
Maximum	0.41	304	17.7	17.7	-	7.31	233	2168	30.4	805	1.39	18.7	0.16	1550
Average	0.17	97.61	7.31	7.30	-	6.02	117.01	563.57	17.39	457.21	0.55	7.51	0.10	534.78

Notes:
ND: Not detected.
NA: Not analyzed.
TNV-V Test Not Valid due to sample volume

APPENDIX E.2
LY-2G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Ammonia as N mg/L	Chloride mg/L	Nitrate as N mg/L	Nitrate+Nitrite as N mg/L	Nitrite as N mg/L	pH SU	Sodium mg/L	Specific Conductance, Field umhos/cm	Temperature, Field °C	Total Dissolved Solids mg/L	Total Kjeldahl Nitrogen mg/L	Total Nitrogen as N mg/L	Total Phosphorus as P mg/L	Volume Pumped mL
09/17/2020	ND	15.9	10.1	10.1	ND	7.01	132	464	24.6	432	0.58	10.7	0.23	NA
10/28/2020	ND	10.4	7.96	7.96	ND	7.44	94.8	632	19.1	386	0.3	8.26	ND	NA
11/19/2020	ND	6.16	6.88	6.88	ND	7.03	103	463	13.8	400	0.17	7.05	ND	NA
12/23/2020	ND	17.4	5.32	5.32	ND	7.2	71.7	603	5.6	318	0.21	5.53	0.07	NA
01/29/2021	ND	22.8	3.1	3.1	ND	7.26	40.9	1296	4.6	268	0.22	3.32	ND	NA
02/26/2021	ND	44.3	10.1	10.1	ND	6.79	32.9	457	7.5	280	0.11	10.2	0.15	NA
04/21/2021	0.5	6.35	12.6	12.6	ND	6.88	37.9	328	16.7	220	2.31	14.9	ND	NA
05/10/2021	ND	15.3	28	28	ND	6.64	37.3	492	15.3	308	0.11	28.1	ND	NA
06/08/2021	0.05	16.5	36.5	36.5	ND	6.84	46.6	351	26.8	365	0.32	36.8	0.06	NA
07/13/2021	ND	11	39.1	39.1	ND	6.72	45.3	350	27	395	0.06	39.2	ND	NA
08/11/2021	ND	7.93	25.3	25.3	ND	6.59	52.7	265	25.9	382	0.25	25.5	ND	NA
09/22/2021	ND	15	31	31	ND	6.69	69.1	337	24.7	340	0.3	31.3	ND	NA
10/20/2021	ND	21.5	32.3	32.3	ND	6.76	78.7	353	20.1	430	0.31	32.6	ND	NA
11/17/2021	ND	18.7	22.6	22.6	ND	6.86	75.7	312	14.4	385	0.24	22.8	ND	NA
12/14/2021	ND	29.6	15.6	15.6	ND	7.27	65.4	303	11.7	355	0.62	16.2	ND	NA
01/20/2022	ND	29.9	7.3	7.3	ND	7.44	75	279	5.7	335	0.51	7.81	0.21	NA
02/22/2022	ND	53.6	7.15	7.15	ND	7.33	72.8	315	12.3	392	0.91	8.06	0.3	NA
03/30/2022	ND	14.9	3.11	3.11	ND	6.14	67.8	212.3	9.2	255	0.12	3.23	ND	NA
04/27/2022	ND	127	6.91	6.91	ND	6.03	106	348	14.5	395	0.52	7.43	0.05	NA
05/26/2022	ND	41.5	0.38	0.378	ND	6.6	59.4	218	19.4	280	0.17	0.545	ND	NA
06/24/2022	ND	61.5	0.9	0.898	ND	6.91	58.5	244	25.2	365	0.31	1.21	0.05	NA
07/21/2022	ND	61.8	6.5	6.5	ND	6.69	85.4	294	26.2	395	0.18	6.68	0.1	NA
08/30/2022	ND	49.5	10.4	10.4	ND	6.48	69.7	1157	27	432	0.25	10.7	ND	NA
09/29/2022	ND	51.1	1.36	1.36	ND	7.21	86.9	1111	21.3	375	ND	1.36	ND	NA
10/28/2022	ND	25.9	0.37	0.367	ND	7.28	74.7	411	15.4	392	ND	0.367	ND	NA
11/23/2022	ND	21.7	0.57	0.568	ND	7.29	47.8	271	10.4	248	0.11	0.675	ND	1100
12/09/2022	ND	38.7	1	0.996	ND	7.16	48	307	9.9	255	0.15	1.15	ND	1050
03/10/2023	ND	16	1.09	1.09	ND	7.17	31.3	241	9	195	ND	1.09	ND	1000
04/14/2023	ND	12.9	1.72	1.72	ND	6.93	30.6	290	17.7	185	0.15	1.87	0.2	850
05/11/2023	ND	11.5	1.92	1.92	ND	7.04	27.7	279	18.1	175	0.06	1.98	ND	900
06/16/2023	ND	11.8	1.85	1.85	ND	6.87	26.7	305	21.6	200	ND	1.85	ND	950
07/14/2023	ND	16.1	3.4	3.4	ND	6.97	24.2	339	24.6	255	0.31	3.71	ND	800
08/10/2023	ND	21.7	7.83	7.83	ND	6.93	33.3	374	23	255	0.28	8.11	ND	850
09/07/2023	ND	16.3	5.28	5.28	ND	6.51	24.8	383	30.1	235	0.612	5.89	ND	1850
10/04/2023	ND	11.1	3.06	3.06	ND	6.6	29.6	307	23.1	190	0.275	3.34	ND	900
11/02/2023	1.39	44.6	7.1	7.1	ND	NA	31.2	NA	NA	TNV-V	3.78	10.9	0.07	<50
05/09/2024	ND	2.88	0.96	0.964	ND	6.39	2.81	105	18.1	82.5	0.158	1.12	ND	450
06/06/2024	ND	2.41	0.81	0.809	ND	6.39	3.84	125	20.9	85	0.105	0.914	ND	500
07/17/2024	ND	3.22	6.22	6.22	ND	6.51	4.4	193	25.7	138	0.455	6.67	ND	850
08/08/2024	ND	9.17	4.77	4.77	ND	6.49	10.5	219	23.6	148	0.196	4.97	ND	900
09/12/2024	ND	9.7	4.9	4.9	ND	6.47	13.1	211	21.9	160	0.253	5.15	ND	950
10/09/2024	ND	10.7	NA	8.47	NA	6.6	14	221	19.8	160	NA	8.54	ND	NA
Minimum	0.05	2.41	0.37	0.367	-	6.03	2.81	105	4.6	82.5	0.06	0.367	0.05	0
Maximum	1.39	127	39.1	39.1	-	7.44	132	1296	30.1	432	3.78	39.2	0.3	1850
Average	0.65	24.67	9.35	9.33	-	6.84	51.05	384.52	18.33	288.94	0.43	9.71	0.14	631.82

Notes:
ND: Not detected.
NA: Not analyzed.
TNV-V Test Not Valid due to sample volume

APPENDIX E.2
LY-3G Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Ammonia as N mg/L	Chloride mg/L	Nitrate as N mg/L	Nitrate+Nitrite as N mg/L	Nitrite as N mg/L	pH SU	Sodium mg/L	Specific Conductance, Field umhos/cm	Temperature, Field °C	Total Dissolved Solids mg/L	Total Kjeldahl Nitrogen mg/L	Total Nitrogen as N mg/L	Total Phosphorus as P mg/L	Volume Pumped mL
09/17/2020	ND	19	14.4	14.4	ND	6.81	284	1036	23.5	970	1.05	15.5	ND	NA
10/28/2020	ND	17.5	15.3	15.3	ND	7.01	254	1445	18.5	978	1.21	16.5	ND	NA
11/19/2020	ND	23.9	16.1	16.1	ND	7.03	304	1417	11.7	1020	0.59	16.7	ND	NA
12/23/2020	ND	13.7	15.5	15.5	ND	7.26	293	1413	6.1	1040	1.35	16.8	0.14	NA
01/29/2021	ND	37.2	13.4	13.4	ND	7.56	251	1750	4.7	1020	1.97	15.4	ND	NA
02/26/2021	ND	12.1	14.5	14.5	ND	7.3	197	1592	7.8	937	0.57	15	0.12	NA
03/25/2021	ND	22.2	9.5	9.5	ND	7.65	280	1485	12.5	932	1.02	10.5	0.12	NA
04/21/2021	ND	21.4	3.79	3.79	ND	7.46	273	1437	17.6	888	1.06	4.84	0.07	NA
05/10/2021	ND	14.4	1.06	1.06	ND	7.28	244	1425	14.7	878	0.65	1.7	ND	NA
06/08/2021	0.1	19.1	2.52	2.52	ND	7.66	242	832	27.2	TNV-V	0.82	3.35	ND	NA
07/13/2021	ND	15.2	0.78	0.785	ND	7.53	224	851	26	780	0.59	1.38	0.07	NA
08/11/2021	0.16	13	2.1	2.1	ND	7.25	235	735	26.1	848	1	3.1	ND	NA
09/22/2021	ND	19.8	8.76	8.76	ND	7.23	235	741	24.3	750	1	9.76	ND	NA
10/20/2021	ND	26.9	12.8	12.8	ND	7.32	229	767	20.1	828	1.37	14.2	ND	NA
11/17/2021	ND	24.4	14.2	14.2	ND	7.3	226	677	14.3	745	1.02	15.2	ND	NA
12/14/2021	ND	42.5	5.46	5.46	ND	7.46	168	655	12	718	1.02	6.47	ND	NA
01/20/2022	ND	46.6	0.73	0.728	ND	7.34	213	599	6.1	632	0.64	1.36	0.1	NA
02/22/2022	ND	55	0.67	0.666	ND	7.33	181	580	10.8	658	0.74	1.4	0.09	NA
03/30/2022	ND	42.8	0.88	0.879	ND	7.44	205	548	10.1	668	0.49	1.37	ND	NA
04/27/2022	ND	26.6	1.33	1.33	ND	7.16	194	612	13.6	705	0.5	1.83	0.08	NA
05/26/2022	ND	37.5	1.21	1.21	ND	6.96	169	570	19.3	710	0.57	1.78	ND	NA
06/24/2022	ND	52.1	2.74	2.74	ND	7.04	160	583	24.5	728	0.84	3.58	0.08	NA
07/21/2022	ND	85.4	13.6	13.6	ND	6.96	223	697	26.8	820	0.74	14.4	0.14	NA
08/30/2022	ND	129	29.7	29.7	ND	6.8	266	337	26.3	1030	0.78	30.5	ND	NA
09/29/2022	ND	148	32	32	ND	6.95	302	353	20.9	1020	0.62	32.6	ND	NA
10/28/2022	ND	119	12	12	ND	7.57	293	1253	15.4	958	0.82	12.9	ND	NA
12/09/2022	ND	94.9	9.82	9.82	ND	7.53	283	1041	10	885	0.61	10.4	ND	900
01/13/2023	ND	66.1	8.81	8.81	ND	7.4	241	907	8.5	842	0.85	9.66	ND	800
03/10/2023	ND	66.2	7.14	7.14	ND	7.51	239	886	8.2	785	0.56	7.7	ND	1000
04/14/2023	ND	55.5	5.16	5.16	ND	7.35	213	1049	17.3	738	0.4	5.56	ND	900
05/11/2023	ND	50.2	3.8	3.8	ND	7.39	229	1034	18.1	740	0.39	4.19	ND	900
01/12/2024	ND	43.3	2.66	2.66	ND	7.11	196	789	8	710	0.456	3.12	ND	850
04/10/2024	ND	35.2	5.53	5.53	ND	6.94	183	791	14.5	628	0.485	6.02	ND	850
05/09/2024	ND	26.6	7.43	7.43	ND	6.94	99.8	617	16.9	470	0.371	7.8	ND	900
06/06/2024	ND	19.3	13.5	13.5	ND	6.98	93.9	657	22.3	422	0.163	13.6	ND	900
07/17/2024	ND	16.5	18.8	18.8	ND	7.09	88.4	695	26.4	468	0.393	19.2	ND	900
08/08/2024	ND	13.6	26.4	26.4	ND	7	66	637	23.1	415	0.277	26.7	ND	900
09/12/2024	ND	13	33.4	33.4	ND	7.21	82.3	629	22.4	470	0.282	33.7	0.05	950
Minimum	0.1	12.1	0.67	0.666	-	6.8	66	337	4.7	415	0.163	1.36	0.05	0
Maximum	0.16	148	33.4	33.4	-	7.66	304	1750	27.2	1040	1.97	33.7	0.14	1000
Average	0.13	41.70	10.20	10.20	-	7.24	214.72	897.95	16.75	779.30	0.74	10.94	0.10	447.92

Notes:
ND: Not detected.
NA: Not analyzed.
TNV-V Test Not Valid due to sample volume

BrightFields, Inc.
Environmental Services

Appendix E.3

Surface Water Water Quality Data

APPENDIX E.3
SW #1 Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Biochemical Oxygen Demand 5	Chloride	Fecal Coliform	Enterococcus	Sodium	Ammonia as N	Nitrite as N	Nitrate as N	Total Dissolved Solids	Total Kjeldahl Nitrogen
12/11/2020	No	ND	6.82	>160	98.4	13	ND	ND	10	105	0.15
03/12/2021	No	ND	9.46	50	1	4.36	0.06	ND	ND	100	0.06
05/26/2021	No	ND	10.4	10	56.1	4.59	0.05	ND	ND	120	0.37

APPENDIX E.3
SW #1 Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Total Nitrogen as N	Total Phosphorus as P	Total Suspended Solids @103-105°C
12/11/2020	10.2	ND	3.2
03/12/2021	0.062	ND	ND
05/26/2021	0.371	ND	4

APPENDIX E.3
SW #2 Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Biochemical Oxygen Demand 5	Chloride	Fecal Coliform	Enterococcus	Sodium	Ammonia as N	Nitrite as N	Nitrate as N	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P
12/11/2020	No	ND	13	96	13.1	13.4	ND	ND	0.22	150	0.22	0.448	0.05
03/12/2021	No	ND	11.5	28	13.5	4.96	ND	ND	0.22	100	0.07	0.291	ND
05/26/2021	No	ND	9.91	10	53.7	4.45	0.18	ND	ND	82.5	0.34	0.345	0.12
09/15/2021	No	3.1	11.9	ND	238.2	5.73	0.29	ND	0.25	115	1.1	1.35	0.14
12/03/2021	No	ND	23.4	50	72.8	8.83	ND	ND	5.16	132	0.4	5.56	ND
03/21/2022	No	ND	14.1	180	59.8	8.01	ND	ND	ND	150	0.37	0.371	0.05
06/07/2022	No	ND	12.5	60	277.8	6.81	0.51	ND	ND	112	1.07	1.07	0.16
12/29/2022	No	3.6	11.9	60	159.7	7.33	ND	ND	0.22	148	0.51	0.737	0.08
03/31/2023	No	ND	11.5	ND	4.1	7.73	0.08	ND	0.25	112	0.32	0.578	ND
06/20/2023	No	ND	9.58	70	93.4	6.18	0.09	ND	0.21	130	0.6	0.81	0.16
09/22/2023	No	3.2	9.26	270	140.8	6.69	0.37	ND	0.23	100	1.25	1.49	0.18
12/08/2023	No	ND	9.65	10	42.4	6.34	ND	ND	ND	82.5	0.453	0.453	0.06
03/22/2024	No	3.5	14.2	ND	8.4	9.44	ND	ND	0.26	62.5	0.26	0.518	ND
06/14/2024	No	ND	9.25	400	410.6	7.7	0.22	ND	ND	57.5	0.406	0.406	ND
09/06/2024	No	5.6	11	>800	>2419.6	6.5	1.84	ND	0.23	118	2.44	2.68	0.09

APPENDIX E.3
SW #2 Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Total Suspended Solids @103-105°C	pH	Specific Conductance, Field	Dissolved Oxygen, Field	Nitrate+Nitrite as N	Temperature, Field
12/11/2020	2.8	NA	NA	NA	NA	NA
03/12/2021	3.6	NA	NA	NA	NA	NA
05/26/2021	9.6	NA	NA	NA	NA	NA
09/15/2021	24	NA	NA	NA	NA	NA
12/03/2021	5.6	NA	110.8	9.75	5.16	10.6
03/21/2022	7	NA	66.6	6.15	ND	13.3
06/07/2022	12	NA	52.9	4.88	ND	23.3
12/29/2022	2.8	5.5	161	2.22	0.225	2.1
03/31/2023	2.8	6.23	49.8	11.2	0.254	11.4
06/20/2023	18.4	6	59.8	1.73	0.206	20.2
09/22/2023	78	6.32	79.3	4.22	0.233	19.3
12/08/2023	10.4	6.27	57.3	8.21	ND	5.9
03/22/2024	ND	6.3	60	12.4	0.258	6.9
06/14/2024	3.6	5.97	57.5	3.27	ND	20.3
09/06/2024	99.3	6.59	78.8	3.01	0.231	20.6

APPENDIX E.3
SW #3 Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Biochemical Oxygen Demand 5	Chloride	Fecal Coliform	Dissolved Oxygen, Field	Fecal Coliform	Ammonia as N	Nitrite as N	Nitrate as N	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Total Suspended Solids @103-105°C	Total Kjeldahl Nitrogen
12/11/2020	Yes	ND	17.8	NA	NA	>160	131.4	14.9	ND	NA	ND	NA	132	NA	0.41
12/11/2020	No	ND	17.7	NA	NA	144	88.4	14.4	ND	ND	4.54	NA	105	NA	0.41
03/12/2021	No	ND	13.6	NA	NA	38	35.4	6.28	ND	ND	2.8	NA	118	NA	0.11
05/26/2021	No	ND	14	NA	NA	320	816.4	6.43	0.16	ND	2.44	NA	87.5	NA	0.32
09/15/2021	No	ND	16.3	NA	NA	410	>2419.6	7.68	ND	ND	3.4	NA	108	NA	0.43
12/03/2021	No	ND	18.8	89.9	5.79	670	1732.9	9.57	0.07	ND	3.36	3.36	138	11.6	0.49
03/21/2022	No	ND	20.5	140.2	9.58	220	127.4	10.6	ND	ND	5.93	5.93	145	15.8	0.57
03/21/2022	Yes	ND	20.1	140.2	9.58	170	127.4	10.8	ND	ND	5.84	5.84	152	15.8	0.57
06/07/2022	No	ND	17.3	79.1	7.82	460	1553.1	8.4	ND	ND	5.79	5.79	130	20.8	0.32
12/29/2022	No	2.8	20.5	160	10.3	360	167.4	10.7	ND	ND	10.5	10.5	160	7.4	0.4
03/31/2023	No	ND	17.4	110	10.3	110	159.7	10.3	0.08	ND	5.34	5.34	145	13.1	0.34
06/20/2023	No	ND	16	118.8	6.43	410	658.6	7.96	0.06	ND	4.2	4.2	128	18.9	0.33
09/22/2023	No	ND	13.7	104.9	6.35	>800	>2419.6	7.78	ND	ND	2.18	2.18	87.5	18	0.307
12/08/2023	No	ND	18.7	116.3	7.14	300	>2419.6	10.7	ND	ND	5.71	5.71	108	9	0.431
03/22/2024	No	3.4	15.7	79.8	10.4	60	23.5	9.89	ND	ND	2.6	2.6	77.5	7.9	0.255
06/14/2024	No	ND	12.4	87.4	6.35	280	1119.9	8.35	0.13	ND	2.26	2.26	82.5	19.2	0.349
09/06/2024	No	ND	12.6	101	6.97	>800	>2419.6	5.9	0.07	ND	1.47	1.47	97.5	18.8	0.428

APPENDIX E.3
SW #3 Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Specific Conductance, Field	Dissolved Oxygen, Field	Nitrate+Nitrite as N	Temperature, Field
12/11/2020	4.98	ND	ND	NA
12/11/2020	4.95	ND	ND	NA
03/12/2021	2.91	ND	3.2	NA
05/26/2021	2.75	0.12	29	NA
09/15/2021	3.83	0.08	14	NA
12/03/2021	3.85	ND	53.6	NA
03/21/2022	6.5	0.11	11.6	NA
03/21/2022	6.41	0.1	11.6	NA
06/07/2022	6.11	0.1	33.3	NA
12/29/2022	10.9	0.07	2.4	7.11
03/31/2023	5.68	ND	16.8	6.5
06/20/2023	4.53	0.08	30.4	6.41
09/22/2023	2.49	0.1	313	6.68
12/08/2023	6.14	ND	5.6	5.98
03/22/2024	2.85	ND	2.8	5.91
06/14/2024	2.61	ND	42	6.34
09/06/2024	1.9	0.07	56	6.82

APPENDIX E.3
SW #4 Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Biochemical Oxygen Demand 5	Chloride	Fecal Coliform	Dissolved Oxygen, Field	Fecal Coliform	Ammonia as N	Nitrite as N	Nitrate as N	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Total Suspended Solids @103-105°C
12/11/2020	No	ND	11.3	NA	NA	>160	18.5	12.2	ND	ND	1.97	NA	85	NA
03/12/2021	No	ND	12.5	NA	NA	154	133.3	5.2	ND	ND	2.23	NA	122	NA
05/26/2021	No	ND	11.6	NA	NA	100	272.3	5.21	0.06	ND	1.92	NA	110	NA
09/15/2021	No	ND	13.6	NA	NA	590	>2419.6	4.39	ND	ND	1.6	NA	87.5	NA
12/03/2021	No	ND	14.2	54.2	6.16	>800	1553.1	5.14	ND	ND	2.12	2.12	115	11.2
03/21/2022	No	3.6	20.4	68.6	8.38	140	35.9	5.8	ND	ND	2.09	2.09	122	15.7
06/07/2022	No	ND	13.6	78.7	6.65	50	96	5.84	ND	ND	2.67	2.67	108	25
06/07/2022	Yes	ND	14.1	78.7	6.65	10	116.6	6.19	ND	ND	2.72	2.72	110	25
09/15/2022	No	2.9	21.6	406	4.29	20	178.5	3.81	0.36	ND	0.27	0.266	138	23.8
09/15/2022	Yes	2.6	14.9	406	4.29	ND	105	3.28	0.38	ND	0.24	0.245	128	23.8
12/29/2022	No	ND	13.1	142	10.4	20	39.9	6.48	ND	ND	3.61	3.61	295	5.2
03/31/2023	No	ND	13.4	77.5	9.15	90	18.7	7.02	ND	ND	2.49	2.49	90	12
06/20/2023	No	ND	12.6	107	4.3	20	18.1	4.15	0.09	ND	1.71	1.71	100	22.5
09/22/2023	No	ND	12.6	113.8	3.37	120	54.5	4.47	ND	ND	1.44	1.44	100	19.5
12/08/2023	No	ND	13.5	82.8	7.31	70	21.1	5.84	ND	ND	2.8	2.8	85	7.4
03/22/2024	No	ND	11.8	108.3	11.2	20	24.6	6.16	ND	ND	2.23	2.23	55	10.1
06/14/2024	No	ND	11.2	99.3	3.5	70	56.1	6.53	0.11	ND	2.68	2.68	92.5	21.6
09/06/2024	No	ND	12.6	113	3.04	90	42.8	3.1	0.05	ND	1.44	1.44	120	21.3

APPENDIX E.3
SW #4 Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Total Kjeldahl Nitrogen	Specific Conductance, Field	Dissolved Oxygen, Field	Nitrate+Nitrite as N	Temperature, Field
12/11/2020	0.32	2.29	ND	ND	NA
03/12/2021	0.12	2.35	ND	2.4	NA
05/26/2021	2.06	3.98	0.08	13	NA
09/15/2021	0.4	2	0.07	ND	NA
12/03/2021	0.36	2.48	ND	22	NA
03/21/2022	0.34	2.43	ND	2.8	NA
06/07/2022	0.3	2.97	ND	4.8	NA
06/07/2022	0.3	3.02	ND	4	NA
09/15/2022	1.04	1.31	ND	32	NA
09/15/2022	1.01	1.26	ND	8	NA
12/29/2022	0.31	3.92	0.05	ND	6.24
03/31/2023	0.27	2.76	ND	ND	6.64
06/20/2023	0.32	2.02	ND	6	8.53
09/22/2023	0.527	1.96	ND	ND	6.8
12/08/2023	0.206	3.01	ND	2	6.29
03/22/2024	0.266	2.5	ND	ND	6.58
06/14/2024	0.329	3.01	ND	11.3	6.93
09/06/2024	0.336	1.77	ND	3.6	7.74

APPENDIX E.3
SW #5 Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Biochemical Oxygen Demand 5	Chloride	Fecal Coliform	Enterococcus	Sodium	Ammonia as N	Nitrite as N	Nitrate as N	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P
12/11/2020	No	ND	14.8	8	3	14.6	0.17	ND	4.55	115	0.42	4.96	0.08
03/12/2021	No	ND	21.4	2	16	8.56	ND	ND	5.62	152	0.22	5.84	ND
05/26/2021	No	ND	22.1	ND	ND	9.12	ND	ND	3.25	165	0.26	3.51	ND
09/15/2021	No	ND	21.3	ND	2	7.8	ND	ND	3.07	150	0.53	3.6	ND
12/03/2021	No	ND	25.9	ND	ND	10.1	ND	ND	5.26	152	0.46	5.72	ND
03/21/2022	No	ND	22.3	ND	27.5	9	ND	ND	4.68	115	0.38	5.06	ND
06/07/2022	No	ND	18.7	130	172.7	10.2	ND	2.07	5.78	142	0.36	8.21	ND
09/15/2022	No	ND	23.1	ND	3	8.02	0.11	ND	1.66	125	0.43	2.09	ND
12/29/2022	No	ND	20.9	10	1	9.77	ND	ND	6.6	135	0.27	6.87	0.05
03/31/2023	No	ND	22.9	ND	ND	10.9	ND	ND	4.89	130	0.34	5.23	ND
06/20/2023	No	ND	22.9	ND	6.3	8.95	ND	ND	2.2	128	0.19	2.4	ND
09/22/2023	No	ND	22	ND	ND	9.55	ND	ND	2.01	97.5	0.373	2.39	ND
12/08/2023	No	ND	21.9	ND	1	10.3	ND	ND	4.17	110	0.229	4.4	ND
03/22/2024	No	ND	20	ND	ND	9.6	ND	ND	5.44	108	0.457	5.9	ND
06/14/2024	No	ND	22.6	10	2	10.5	0.09	ND	3.07	118	0.306	3.38	ND
09/06/2024	No	ND	22.6	ND	3	8.25	ND	ND	2.18	142	0.341	2.52	ND

APPENDIX E.3
SW #5 Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Total Suspended Solids @103-105°C	pH	Specific Conductance, Field	Dissolved Oxygen, Field	Nitrate+Nitrite as N	Temperature, Field
12/11/2020	2.4	NA	NA	NA	NA	NA
03/12/2021	2	NA	NA	NA	NA	NA
05/26/2021	3.2	NA	NA	NA	NA	NA
09/15/2021	ND	NA	NA	NA	NA	NA
12/03/2021	3.2	NA	96.8	10.7	5.26	8.6
03/21/2022	2.4	NA	106.3	10.7	4.68	16.3
06/07/2022	3.6	NA	85.9	10.4	7.85	26.8
09/15/2022	2	NA	551	10.1	1.66	26.9
12/29/2022	ND	6.77	132	12.1	6.6	6
03/31/2023	2.8	7.28	128.3	12	4.89	14.1
06/20/2023	ND	9.58	162.2	8.44	2.2	26.3
09/22/2023	ND	7.99	145.4	6.54	2.01	22.4
12/08/2023	2.8	6.68	103.6	10.2	4.17	6.8
03/22/2024	ND	5.87	52.7	12.2	5.44	6.4
06/14/2024	2.8	7.15	169.9	7.02	3.07	26.1
09/06/2024	3.6	9.65	162	10.8	2.18	23.6

APPENDIX E.3
SW #6 Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	Duplicate	Biochemical Oxygen Demand 5	Chloride	Fecal Coliform	Enterococcus	Sodium	Ammonia as N	Nitrite as N	Nitrate as N	Total Dissolved Solids	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P	Total Suspended Solids @103-105°C
12/11/2020	No	ND	19.4	86	33.6	14.4	1.04	ND	5.36	122	1.45	6.81	0.05	2.8
03/12/2021	No	ND	21.5	10	17.1	8.09	ND	ND	5.88	155	0.26	6.14	ND	ND
05/26/2021	No	ND	23	70	108.6	9.05	ND	ND	4.24	142	0.27	4.52	ND	2.4
09/15/2021	No	ND	22.1	30	1986.3	8.51	ND	ND	4.01	140	0.56	4.57	ND	ND
09/15/2021	Yes	ND	21.7	160	2419.6	8.46	ND	ND	4	145	0.59	4.58	ND	5.3
12/03/2021	No	ND	25.6	270	131.7	9.97	ND	ND	6.35	150	0.47	6.82	ND	4
12/03/2021	Yes	ND	25.8	530	114.5	10.3	ND	ND	6.41	148	0.42	6.83	ND	4.8
03/21/2022	No	ND	22.9	120	41.4	9.8	ND	ND	5.68	132	0.55	6.23	0.12	3.6
06/07/2022	No	ND	24.3	10	5.1	10.1	ND	ND	2.68	140	0.32	3	ND	3.2
09/15/2022	No	ND	24.1	40	119.1	8.09	0.18	ND	3.61	138	0.51	4.12	ND	3.6
12/29/2022	No	ND	21.5	130	36.8	9.14	ND	ND	7.35	135	0.32	7.66	0.08	ND
12/29/2022	Yes	ND	21.6	120	24.1	9.88	ND	ND	7.35	135	0.34	7.69	0.07	2.8
03/31/2023	No	ND	23.5	ND	10.8	11.2	ND	ND	5.77	132	0.29	6.06	ND	3.2
03/31/2023	Yes	ND	23.5	ND	10.8	12.1	ND	ND	5.76	148	0.28	6.04	ND	3.2
06/20/2023	No	ND	23.4	140	301.5	8.9	ND	ND	3.9	152	0.2	4.1	ND	12.8
06/20/2023	Yes	ND	23.2	200	362.3	8.83	ND	ND	3.85	150	0.18	4.04	ND	12.8
09/22/2023	No	ND	22.3	400	509.9	9.66	ND	ND	3.42	120	0.507	3.92	ND	2.8
09/22/2023	Yes	ND	22.5	390	343.3	9.99	ND	ND	3.47	115	0.503	3.98	ND	4
12/08/2023	No	3.3	22.4	140	23.5	9.27	ND	ND	5.21	125	0.302	5.51	ND	3.2
12/08/2023	Yes	3	22.4	230	21.1	10	ND	ND	5.21	125	0.329	5.54	ND	4
03/22/2024	No	ND	20.3	30	12	9.79	ND	ND	4.97	112	0.314	5.29	ND	ND
03/22/2024	Yes	ND	20.3	20	13.2	9.58	ND	ND	4.97	102	0.304	5.27	ND	ND
06/14/2024	No	ND	22.5	200	128.7	10.7	0.05	ND	5.47	142	0.377	5.85	ND	11.6
06/14/2024	Yes	ND	22.5	180	137.4	11.1	0.06	ND	4.1	142	0.367	4.47	ND	12
09/06/2024	No	ND	22.9	590	488.4	8.04	ND	ND	4.81	182	0.33	5.14	ND	ND
09/06/2024	Yes	ND	22.9	440	517.2	8.71	ND	ND	4.81	190	0.331	5.14	ND	3.2

APPENDIX E.3
SW #6 Water Quality Data
Sussex Regional Recharge Facility (SRRF)
Milton, Delaware

Date	pH	Specific Conductance, Field	Dissolved Oxygen, Field	Nitrate+Nitrite as N	Temperature, Field
12/11/2020	NA	NA	NA	NA	NA
03/12/2021	NA	NA	NA	NA	NA
05/26/2021	NA	NA	NA	NA	NA
09/15/2021	NA	NA	NA	NA	NA
09/15/2021	NA	NA	NA	NA	NA
12/03/2021	NA	110.6	9.85	6.35	9.1
12/03/2021	NA	110.6	9.15	6.41	9.1
03/21/2022	NA	108	9.87	5.68	16.1
06/07/2022	NA	101.8	8.07	2.68	24.4
09/15/2022	NA	645	8.06	3.61	23.7
12/29/2022	6.83	140	11	7.35	5.2
12/29/2022	6.81	145	12.1	7.35	5.4
03/31/2023	6.74	136.9	11.9	5.77	13.7
03/31/2023	6.74	136.9	11.9	5.76	13.7
06/20/2023	7	170.8	5.87	3.9	23.7
06/20/2023	7	170.8	5.87	3.85	23.7
09/22/2023	6.96	161	6.79	3.42	20.4
09/22/2023	6.96	161	6.79	3.47	20.4
12/08/2023	6.46	119.1	10.7	5.21	8.4
12/08/2023	6.46	119.1	10.7	5.21	8.4
03/22/2024	6.33	11.6	11.2	4.97	9.1
03/22/2024	6.33	11.6	11.2	4.97	9.1
06/14/2024	6.75	175.3	6.35	5.47	23.3
06/14/2024	6.75	175.3	6.35	4.1	23.3
09/06/2024	6.97	174	6.72	4.81	21
09/06/2024	6.97	174	6.72	4.81	21

BrightFields, Inc.
Environmental Services

Appendix E.4

Monitoring Wells Background Water Quality Data

ENVIROCORP LABS SINCE 1981

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID: 240622 | Matrix: Ground Water | Sample Start: 11/16/17 11:38
Description: | Site: MW - 1F | SampleEnd:
Type: Grab | Date Received: 11/16/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	11/16/17 15:30	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	11/16/17 15:30	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	11/29/17 10:51	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	11/29/17 10:51	JMW	EPA 200.8
Chromium	mg/L	<0.0010	11/29/17 10:51	JMW	EPA 200.8
Copper	mg/L	<0.0010	11/29/17 10:51	JMW	EPA 200.8
Iron	mg/L	0.481	11/29/17 10:51	JMW	EPA 200.8
Lead	mg/L	<0.0010	11/29/17 10:51	JMW	EPA 200.8
Manganese	mg/L	0.042	11/29/17 10:51	JMW	EPA 200.8
Mercury	mg/L	<0.00020	11/21/17 10:50	SLI	EPA 245.1
Nickel	mg/L	0.0033	11/29/17 10:51	JMW	EPA 200.8
Selenium	mg/L	<0.0010	11/29/17 10:51	JMW	EPA 200.8
Sodium	mg/L	5.6	11/29/17 10:51	JMW	EPA 200.8
Zinc	mg/L	0.0032	11/29/17 10:51	JMW	EPA 200.8
Minerals					
Chloride	mg/L	21.7	11/17/17 17:28	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	76.0	11/16/17 16:02	ML	SM2340-C
Sulfate	mg/L	23	11/17/17 17:28	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	11/28/17 12:51	CC	SM4500-NH3-G
Nitrate as N	mg/L	12.4	11/17/17 17:28	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	11/17/17 17:28	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.09	12/1/17 10:15	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.09	11/30/17 16:22	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	12.5	12/1/17 10:15	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	11/30/17 16:10	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

Printed: Dec 1 2017 10:57AM

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	240622	Matrix:	Ground Water	Sample Start:	11/16/17 11:38
Description:		Site:	MW - 1F	SampleEnd:	
Type:	Grab			Date Received:	11/16/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Physical					
Total Dissolved Solids @ 180 C	mg/L	110	11/22/17 14:45	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	51.2	11/21/17 10:50	HJG3	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

240022

SAMPLING LOG

Date: 11/16/17
Site: ANSRWRF
Monitoring Well Permit No.: 258634

Sampler(s): RN
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 1.96 ✓ Ft.
Well Number: 1F Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 14.90 Ft.
N) Total Depth (TD) (TOC) 31.14 Ft.
O) Ht. H20 Column = (N-M) = _____ - _____ = 16.24 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.65 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 7.95 =gal. 3.97 min
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 15.8 oC
Temperature (stabilized) 15.8 oC

Sp. Cond. (Initial) 239 umhos
Sp. Cond. (Stabilized) 241 umhos

Dissolved Oxygen (Initial) 10.10 mg/l
Dissolved Oxygen (Stabilized) 10.29 mg/l

PH (initial) 5.36 S.U.
PH (stabilized) 5.33 S.U.

Time Taken: 11:24 / 1138

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: none Odor: none Clarity: clear
Comments: Test for – Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc.

R Nadar
11/16/17 1450

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247706	Matrix:	Ground Water	Sample Start:	3/19/18 13:19
Description:	258634	Site:	MW - 1F	SampleEnd:	
Type:	Grab			Date Received:	3/19/18 15:35

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	3/19/18 16:40	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	3/19/18 16:40	HM	SM9222-B
Metals					
Arsenic	mg/L	<0.0040	3/29/18 10:34	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	3/29/18 10:34	JMW	EPA 200.8
Chromium	mg/L	<0.0010	3/29/18 10:34	JMW	EPA 200.8
Copper	mg/L	<0.0010	3/29/18 10:34	JMW	EPA 200.8
Iron	mg/L	0.162	3/29/18 10:34	JMW	EPA 200.8
Lead	mg/L	<0.0010	3/29/18 10:34	JMW	EPA 200.8
Manganese	mg/L	0.032	3/29/18 10:34	JMW	EPA 200.8
Mercury	mg/L	<0.00020	4/2/18 8:49	SLI	EPA 245.1
Nickel	mg/L	0.0018	3/29/18 10:34	JMW	EPA 200.8
Selenium	mg/L	<0.0010	3/29/18 10:34	JMW	EPA 200.8
Sodium	mg/L	4.6	3/29/18 10:34	JMW	EPA 200.8
Zinc	mg/L	0.0027	3/29/18 10:34	JMW	EPA 200.8
Minerals					
Chloride	mg/L	19.7	3/20/18 17:44	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	91.0	3/20/18 14:21	ML	SM2340-C
Sulfate	mg/L	25.2	3/20/18 17:44	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/22/18 12:09	CC	SM4500-NH3-G
Nitrate as N	mg/L	11.0	3/20/18 17:44	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/20/18 17:44	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	3/28/18 10:47	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	3/27/18 16:09	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<11.1	3/28/18 10:46	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	3/27/18 14:25	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

Printed: Apr 3 2018 9:09AM

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247706	Matrix:	Ground Water	Sample Start:	3/19/18 13:19
Description:	258634	Site:	MW - 1F	SampleEnd:	
Type:	Grab			Date Received:	3/19/18 15:35

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.68	3/19/18 13:19	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	17.36	3/19/18 13:19	CLT	None
pH-field	SU	5.41	3/19/18 13:19	CLT	150.1
Specific Conductance - field	umhos/cm	228	3/19/18 13:19	CLT	SM2510-B
Temperature-field	oC	14.0	3/19/18 13:19	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	166	3/22/18 17:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	6.5	3/21/18 13:57	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250538	Matrix:	Ground Water	Sample Start:	5/1/18 12:55
Description:		Site:	MW - 1F [258634]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	5/9/18 10:33	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	5/9/18 10:33	JMW	EPA 200.8
Chromium	mg/L	<0.0010	5/9/18 10:33	JMW	EPA 200.8
Copper	mg/L	<0.0010	5/9/18 10:33	JMW	EPA 200.8
Iron	mg/L	0.150	5/9/18 10:33	JMW	EPA 200.8
Lead	mg/L	<0.0010	5/9/18 10:33	JMW	EPA 200.8
Manganese	mg/L	0.046	5/9/18 10:33	JMW	EPA 200.8
Mercury	mg/L	<0.00020	5/10/18 16:31	SWL	EPA 245.1
Nickel	mg/L	0.0026	5/9/18 10:33	JMW	EPA 200.8
Selenium	mg/L	<0.0010	5/9/18 10:33	JMW	EPA 200.8
Sodium	mg/L	6.0	5/9/18 10:33	JMW	EPA 200.8
Zinc	mg/L	0.0030	5/9/18 10:33	JMW	EPA 200.8
Minerals					
Chloride	mg/L	18.6	5/2/18 12:04	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	68.0	5/1/18 14:55	MJM	SM2340-C
Sulfate	mg/L	28.2	5/2/18 12:04	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/7/18 13:39	CC	SM4500-NH3-G
Nitrate as N	mg/L	9.67	5/2/18 12:04	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/2/18 12:04	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.12	5/11/18 14:10	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.12	5/9/18 14:32	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	9.79	5/11/18 14:09	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	5/9/18 16:13	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250538	Matrix:	Ground Water	Sample Start:	5/1/18 12:55
Description:		Site:	MW - 1F [258634]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.69	5/1/18 12:55	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	14.71	5/1/18 12:55	CLT	None
pH-field	SU	5.26	5/1/18 12:55	CLT	150.1
Specific Conductance - field	umhos/cm	218.5	5/1/18 12:55	CLT	SM2510-B
Temperature-field	oC	15.4	5/1/18 12:55	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	196	5/4/18 14:33	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	2.0	5/2/18 10:21	HJG	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

SAMPLING LOG

250538

Date: 5.1.18
Site: ANSRWRF
Monitoring Well Permit No.: 258634 ✓
Sampler(s): Monica Bayer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.96 Ft.
Well Number: 1F ✓ Casing intact? Yes ✓ No ____
Monitoring Well Cap Locked? Yes ✓ No ____
Casing Material: PVC X Steel ____ Other ____

M) Static DTW (TOC) 14.71 Ft.
N) Total Depth (TD) (TOC) 31.14 Ft.
O) Ht. H20 Column = (N-M) = ____ - ____ = 16.43 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.68 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 8.04 =gal. 5XE= ____ =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 2 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes ____ No ✓ After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? ____
Estimated depth samples were taken from= ____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:	
Temperature	18.1	oC	15.4	oC
Sp. Cond.	213.1	umhos	218.5	umhos
Dissolved Oxygen	9.32	mg/L	9.69	mg/L
PH	5.45	S.U.	5.26	S.U.
Start Time	~~12:52~~		~~12:55~~	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: grey became clear Odor: none Clarity: cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

5-1-18 1435

EP

SAMPLING LOG

247706

Date: 3/19/18
Site: ANSRWRF
Monitoring Well Permit No.: 258634

Sampler(s): M Sapp
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.96 Ft.
Well Number: 1F Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 17.36 Ft.
N) Total Depth (TD) (TOC) 31.14 Ft.
O) Ht. H2O Column = (N-M) = _____ - _____ = 13.78 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.25 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 6.75 =gal. 5XE= _____ =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes _____ No ✓ After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:		
Temperature	14.3	oC	Temperature	14.0	oC
Sp. Cond.	243	umhos	Sp. Cond.	228	umhos
Dissolved Oxygen	9.51	mg/L	Dissolved Oxygen	9.68	mg/L
PH	5.49	S.U.	PH	5.41	S.U.
Start Time	13:16		Start Time	13:19	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: Sand color became clear Odor: none Clarity: Cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

Ecoli 1535 5.2°C eDD

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238382	Matrix:	Ground Water	Sample Start:	10/17/17 14:12
Description:		Site:	MW - 1G	SampleEnd:	
Type:	Grab			Date Received:	10/17/17 16:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	10/17/17 16:50	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	>160	10/17/17 16:50	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	10/26/17 10:24	RLF	EPA 200.8
Cadmium	mg/L	<0.00050	10/26/17 10:24	RLF	EPA 200.8
Chromium	mg/L	<0.0010	10/26/17 10:24	RLF	EPA 200.8
Copper	mg/L	<0.0010	10/26/17 10:24	RLF	EPA 200.8
Iron	mg/L	0.011	10/26/17 10:24	RLF	EPA 200.8
Lead	mg/L	<0.0010	10/26/17 10:24	RLF	EPA 200.8
Manganese	mg/L	0.012	10/26/17 10:24	RLF	EPA 200.8
Mercury	mg/L	<0.00020	10/26/17 11:31	SL	EPA 245.1
Nickel	mg/L	<0.0010	10/26/17 10:24	RLF	EPA 200.8
Selenium	mg/L	<0.0010	10/26/17 10:24	RLF	EPA 200.8
Sodium	mg/L	4.3	10/26/17 10:24	RLF	EPA 200.8
Zinc	mg/L	0.0043	10/26/17 10:24	RLF	EPA 200.8
Minerals					
Chloride	mg/L	11.5	10/18/17 15:13	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	28.0	10/20/17 15:55	ML	SM2340-C
Sulfate	mg/L	2.92	10/18/17 15:13	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	10/18/17 15:24	CC	SM4500-NH3-G
Nitrate as N	mg/L	<0.2	10/18/17 15:13	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	10/18/17 15:13	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	10/24/17 9:08	KLS	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	10/23/17 17:24	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<0.25	10/24/17 9:08	KLS	Calc
Total Phosphorus as P	mg/L	<0.05	10/23/17 16:16	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

Printed: Oct 30 2017 2:29PM

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238382	Matrix:	Ground Water	Sample Start:	10/17/17 14:12
Description:		Site:	MW - 1G	SampleEnd:	
Type:	Grab			Date Received:	10/17/17 16:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	6.70	10/17/17 14:12	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	10.11	10/17/17 14:12	CLT	None
pH-field	SU	5.14	10/17/17 14:12	CLT	150.1
Specific Conductance - field	umhos/cm	50.3	10/17/17 14:12	CLT	SM2510-B
Temperature-field	oC	14.3	10/17/17 14:12	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	54.0	10/21/17 14:00	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	9.6	10/23/17 14:05	HM	SM2540-D
QA/QC					
Total Kjeldahl Nitrogen (% Recovery)	% Rec.	114.6	10/23/17 15:24	CC	SM4500-Norg-C
Total Phosphorus as P (% Recovery)	% Rec.	102.3	10/23/17 16:16	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

238382

SAMPLING LOG

Date: 10/17/12
Site: ANSRWRF
Monitoring Well Permit No.: 258620

Sampler(s): R Fleck S Haynes
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 2.47 ✓ Ft.
Well Number: 1G Casing intact? Yes _____ No _____
Monitoring Well Cap Locked? Yes _____ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 10.11 Ft.
N) Total Depth (TD) (TOC) 31.97 Ft.
O) Ht. H20 Column = (N-M) = _____ - _____ = 21.86 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.57 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 10.71 =gal. 3.57 min
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No _____
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 14.8 oC
Temperature (stabilized) 14.3 oC

Sp. Cond. (Initial) 52.9 umhos
Sp. Cond. (Stabilized) 50.3 umhos

Dissolved Oxygen (Initial) 9.30 mg/l
Dissolved Oxygen (Stabilized) 6.70 mg/l

PH (initial) 5.31 S.U.
PH (stabilized) 5.14 S.U.

Time Taken: 1408 1412

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: none Odor: no Clarity: Clear
Comments: Test for – Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc. TKN ✓

E. Pro ✓ @1543
4.3°C @E1

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247563	Matrix:	Ground Water	Sample Start:	3/15/18 14:12
Description:	258620	Site:	MW - 1G	SampleEnd:	
Type:	Grab			Date Received:	3/15/18 16:14

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/15/18 17:21	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/15/18 17:21	HJG	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	3/21/18 11:07	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	3/21/18 11:07	JMW	EPA 200.8
Chromium	mg/L	<0.0010	3/21/18 11:07	JMW	EPA 200.8
Copper	mg/L	<0.0010	3/21/18 11:07	JMW	EPA 200.8
Iron	mg/L	0.017	3/21/18 11:07	JMW	EPA 200.8
Lead	mg/L	<0.0010	3/21/18 11:07	JMW	EPA 200.8
Manganese	mg/L	0.0077	3/21/18 11:07	JMW	SM3111-B
Mercury	mg/L	<0.00020	4/2/18 8:49	SLI	EPA 245.1
Nickel	mg/L	<0.0010	3/21/18 11:07	JMW	EPA 200.8
Selenium	mg/L	0.0011	3/21/18 11:07	JMW	EPA 200.8
Sodium	mg/L	4.7	3/21/18 11:07	JMW	SM3111-B
Zinc	mg/L	0.0017	3/21/18 11:07	JMW	EPA 200.8
Minerals					
Chloride	mg/L	9.88	3/16/18 22:54	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	14.0	3/16/18 15:10	MJM	SM2340-C
Sulfate	mg/L	2.66	3/16/18 22:54	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/20/18 15:18	JW	SM4500-NH3-G
Nitrate as N	mg/L	<0.2	3/16/18 22:54	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/16/18 22:54	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.09	3/23/18 17:25	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.09	3/23/18 13:35	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<0.29	3/23/18 17:25	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	3/23/18 13:38	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247563	Matrix:	Ground Water	Sample Start:	3/15/18 14:12
Description:	258620	Site:	MW - 1G	SampleEnd:	
Type:	Grab			Date Received:	3/15/18 16:14

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.58	3/15/18 14:12	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	7.35	3/15/18 14:12	CLT	None
pH-field	SU	6.51	3/15/18 14:12	CLT	150.1
Specific Conductance - field	umhos/cm	63.9	3/15/18 14:12	CLT	SM2510-B
Temperature-field	oC	13.3	3/15/18 14:12	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	54.0	3/20/18 17:15	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	6.0	3/20/18 15:00	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

247563

SAMPLING LOG

Date: 9/15/13

Site: ANSRWRF ✓

Monitoring Well Permit No.: 258620

Sampler(s): M Boyer R Plack

Company: Artesian Wastewater Management Inc.

Address: 664 Churchman's Rd. Newark DE 19702

Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.47 Ft.

Well Number: 1G Casing intact? Yes ✓ No _____

Monitoring Well Cap Locked? Yes ✓ No _____

Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 7.35 Ft.

N) Total Depth (TD) (TOC) 31.97 Ft.

O) Ht. H20 Column = (N-M) = _____ - _____ = 24.62 Ft.

P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632

Q) Vol. H2O in Well=CXD= 4.02 gal.

R) Vol. H2O to remove from well = (Circle one used)

3XE= 12.05 =gal. 5XE= _____ =gal. 6 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM

PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes _____ No ✓ After how many gallons were removed? ____

If well went dry, how long did it take to recover before samples were taken? _____

Estimated depth samples were taken from= _____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:		
Temperature	12.1	oC	Temperature	13.3	oC
Sp. Cond.	98.0	umhos	Sp. Cond.	63.9	umhos
Dissolved Oxygen	7.72	mg/L	Dissolved Oxygen	7.58	mg/L
PH	6.54	S.U.	PH	6.51	S.U.
Start Time	14:06		Start Time	~~@ 14:12~~	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.

Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:

Color: lt. orange became clear Odor: none Clarity: cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

RT 6114 3-15-18

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250539	Matrix:	Ground Water	Sample Start:	5/1/18 10:46
Description:		Site:	MW - 1G [258620]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	5/9/18 10:39	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	5/9/18 10:39	JMW	EPA 200.8
Chromium	mg/L	<0.0010	5/9/18 10:39	JMW	EPA 200.8
Copper	mg/L	<0.0010	5/9/18 10:39	JMW	EPA 200.8
Iron	mg/L	0.0095	5/9/18 10:39	JMW	EPA 200.8
Lead	mg/L	<0.0010	5/9/18 10:39	JMW	EPA 200.8
Manganese	mg/L	0.0089	5/9/18 10:39	JMW	EPA 200.8
Mercury	mg/L	<0.00020	5/10/18 16:31	SWL	EPA 245.1
Nickel	mg/L	<0.0010	5/9/18 10:39	JMW	EPA 200.8
Selenium	mg/L	<0.0010	5/9/18 10:39	JMW	EPA 200.8
Sodium	mg/L	5.2	5/9/18 10:39	JMW	EPA 200.8
Zinc	mg/L	0.0032	5/9/18 10:39	JMW	EPA 200.8
Minerals					
Chloride	mg/L	10.5	5/2/18 12:04	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	32.0	5/1/18 14:55	MJM	SM2340-C
Sulfate	mg/L	3.03	5/2/18 12:04	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/7/18 13:39	CC	SM4500-NH3-G
Nitrate as N	mg/L	<0.2	5/2/18 12:04	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/2/18 12:04	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.09	5/11/18 14:10	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.09	5/9/18 14:32	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<0.29	5/11/18 14:10	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	5/9/18 16:13	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250539	Matrix:	Ground Water	Sample Start:	5/1/18 10:46
Description:		Site:	MW - 1G [258620]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	6.75	5/1/18 10:46	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	7.49	5/1/18 10:46	CLT	None
pH-field	SU	5.16	5/1/18 10:46	CLT	150.1
Specific Conductance - field	umhos/cm	52.3	5/1/18 10:46	CLT	SM2510-B
Temperature-field	oC	14.5	5/1/18 10:46	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	56.0	5/4/18 14:33	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	2.8	5/2/18 10:21	HJG	SM2540-D
QA/QC					
Cadmium (% Recovery)	% Rec.	89.3	5/9/18 10:39	JMW	EPA 200.8
Copper (% Recovery)	% Rec.	114.5	5/9/18 10:39	JMW	EPA 200.8
Lead (% Recovery)	% Rec.	79.3	5/9/18 10:39	JMW	EPA 200.8

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

250639

SAMPLING LOG

Date: 5-1-18

Site: ANSRWRF ✓

Monitoring Well Permit No.: 258620

Sampler(s): Monica Bayer

Company: Artesian Wastewater Management Inc.

Address: 664 Churchman's Rd. Newark DE 19702

Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.47 Ft.

Well Number: 1G ✓ Casing intact? Yes ✓ No _____

Monitoring Well Cap Locked? Yes ✓ No _____

Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 7.49 Ft.

N) Total Depth (TD) (TOC) 31.97 Ft.

O) Ht. H20 Column = (N-M) = _____ - _____ = 24.48 Ft.

P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632

Q) Vol. H2O in Well=CXD= 4.00 gal.

R) Vol. H2O to remove from well = (Circle one used)

3XE= 12 =gal. 5XE= _____ =gal. 4 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 ½ GPM

PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes _____ No ✓ After how many gallons were removed? ____

If well went dry, how long did it take to recover before samples were taken? _____

Estimated depth samples were taken from= _____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:		**STABILIZED** FIELD PARAMETERS:	
Temperature	15.7 oC	Temperature	14.5 oC
Sp. Cond.	57.2 umhos	Sp. Cond.	52.3 umhos
Dissolved Oxygen	6.49 mg/L	Dissolved Oxygen	6.75 mg/L
PH	5.29 S.U.	PH	5.16 S.U.
Start Time	10:42	Start Time	10:46

Decontamination Procedure: Pump and hose flushed with mild bleach solution.

Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:

Color: lt. orange became clear Odor: none Clarity: Cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

5-1-18 1435

EP

revised / scanned 5/21/18 MB

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	225533	Matrix:	Ground Water	Sample Start:	3/30/17 13:31
Description:	254881	Site:	MW - 1	SampleEnd:	
Type:	Grab			Date Received:	3/30/17 15:08

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/30/17 16:05	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/30/17 16:05	RD	SM9222-B
Metals					
Sodium	mg/L	29.7	4/5/17 10:13	JW	SM3111-B
Minerals					
Chloride	mg/L	43.5	3/30/17 17:32	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	4/3/17 12:13	CC	SM4500-NH3-G
Nitrate as N	mg/L	9.88	3/30/17 17:32	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/30/17 17:32	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.13	4/6/17 15:54	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	10.0	4/7/17 8:53	KLS	Calc
Total Phosphorus as P	mg/L	<0.05	4/6/17 15:53	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.93	3/30/17 13:31	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	14.65	3/30/17 13:31	CLT	None
pH-field	SU	4.99	3/30/17 13:31	CLT	150.1
Specific Conductance - field	umhos/cm	336	3/30/17 13:31	CLT	SM2510-B
Temperature-field	oC	13.5	3/30/17 13:31	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	236	4/4/17 15:52	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

2295533

SAMPLING LOG

Date: 3/30/17
Site: ANSWRF WWTP
Monitoring Well Permit No.: 254881

Sampler(s): Mitchell & NP/Ladd
Company: Artesian Wastewater Management Inc.
Address: 664 Churchmans Rd. Newark DE 19702
Telephone: (302) 453 6900

Ht. TOC above ground surface: ~~2.56~~ 2.14 Ft.
Well Number: 1 Casing intact? Yes X No
Monitoring Well Cap Locked? Yes X No
Casing Material: PVC Steel Other

M) Static DTW (TOC) 14.65 Ft.
N) Total Depth (TD) (TOC) ~~36.67~~ 25.46 Ft.
O) Ht. H2O Column=B-A= ~~36.67~~ 25.46 - 10.81 = 22.02 Ft.
P) Conversion factor from H2O column to gallons for 2 @ I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= ~~3.59~~ 1.76 gal.
R) Vol. H2O to remove from well=(Circle one used)
3XE= ~~10.77~~ 5.29 =gal. 5.4 min 3 min ✓
5XE= =gal.

EVACUATION METHOD: Pump Type Rate 2 gpm
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No X
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 12.9 oC
Temperature (stabilized) 13.5 oC

Sp. Cond. (Initial) 301 umhos
Sp. Cond. (Stabilized) 334 umhos

D.O. (Inital) 9.44
D.O. (Stabilized) 8.93

pH (initial) 5.24 S.U.
pH (stabilized) 4.44 S.U.

Time Taken: 1326 / 1331

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: N/A Odor: None Clarity: Clear

Comments: TEST For: Nitrate ✓, Nitrite ✓, TN ✓, Ammonia ✓, Total Phosphorus ✓, Chloride ✓, Sodium ✓, Fecal Coliform ✓, Total Coliform ✓, TDS ✓, TKN ✓

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	227916	Matrix:	Ground Water	Sample Start:	5/9/17 13:04
Description:		Site:	MW - 1	SampleEnd:	
Type:	Grab			Date Received:	5/9/17 14:14

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	5/9/17 16:00	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	5/9/17 16:00	RON	SM9222-B
Metals					
Sodium	mg/L	30.5	5/17/17 14:56	JW	SM3111-B
Minerals					
Chloride	mg/L	77.7	5/10/17 13:01	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/16/17 14:06	CC	SM4500-NH3-G
Nitrate as N	mg/L	7.90	5/10/17 13:01	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/10/17 13:01	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	<0.05	5/17/17 13:55	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<7.95	5/17/17 15:44	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/17/17 12:38	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.61	5/9/17 13:04	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	14.89	5/9/17 13:04	CLT	None
pH-field	SU	4.92	5/9/17 13:04	CLT	150.1
Specific Conductance - field	umhos/cm	395	5/9/17 13:04	CLT	SM2510-B
Temperature-field	oC	14.6	5/9/17 13:04	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	230	5/11/17 11:30	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

Printed: May 17 2017 3:59PM

2279114

SAMPLING LOG

Date: 5-9-17
Site: ANSWRF WWTP
Monitoring Well Permit No.: 254881

Sampler(s): RPlack MKS
Company: Artesian Wastewater Management Inc.
Address: 664 Churchmans Rd. Newark DE 19702
Telephone: (302) 453 6900

Ht. TOC above ground surface: ~~2.56~~ 2.14 Ft.
Well Number: 1 Casing intact? Yes ___ No ___
Monitoring Well Cap Locked? Yes ___ No ___
Casing Material: PVC ___ Steel ___ Other ___

M) Static DTW (TOC) 14.84 Ft.
N) Total Depth (TD) (TOC) ~~36.67~~ 25.40 Ft.
O) Ht. H20 Column=B-A= ~~36.67~~ 25.40 - ___ = ~~21.78~~ 10.57 Ft.
P) Conversion factor from H2O column to gallons for 2 @ I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= ~~3.55~~ 1.73 gal.
R) Vol. H2O to remove from well=(Circle one used)
3XE= ~~10.66~~ 5.19 =gal. 5.33 min 3 min
5XE= ___ =gal.

EVACUATION METHOD: Pump ___ Type ___ Rate 2 gpm
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes ___ No ✓
After how many gallons were removed? ___
If well went dry, how long did it take to recover before samples were taken? ___
Estimated depth samples were taken from= ___ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 14.8 oC
Temperature (stabilized) 14.5 oC

Sp. Cond. (Initial) 368 umhos
Sp. Cond. (Stabilized) 345 umhos

D.O. (Inital) 8.34
D.O. (Stabilized) 8.61

pH (initial) 5.07 S.U.
pH (stabilized) 4.92 S.U.

Time Taken: 1259 / 1304

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: none Odor: N/A Clarity: clear

Comments: TEST For: Nitrate, Nitrite, TN, Ammonia, Total Phosphorus, Chloride, Sodium, Fecal Coliform, Total Coliform, TDS

R. Needam
5/9/17 1414

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	230314	Matrix:	Ground Water	Sample Start:	6/16/17 14:39
Description:		Site:	MW - 1	SampleEnd:	
Type:	Grab			Date Received:	6/16/17 15:14

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	6/16/17 15:30	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	6/16/17 15:30	HJG	SM9222-B
Metals					
Sodium	mg/L	19.8	6/19/17 12:53	JMW	SM3111-B
Minerals					
Chloride	mg/L	63.3	6/16/17 20:08	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	6/20/17 13:20	JMW	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	10.1	6/16/17 20:08	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.23	6/20/17 16:52	JMW	SM4500-Norg-C
Total Nitrogen as N	mg/L	10.3	6/21/17 11:46	KLS	Calc
Total Phosphorus as P	mg/L	<0.05	6/20/17 16:06	JW	SM4500-P-F(w/Dig)
Physical					
Total Dissolved Solids @ 180 C	mg/L	354	6/20/17 16:30	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

230314

SAMPLING LOG

Date: 6/14/17
Site: ANSWRF WWTP
Monitoring Well Permit No.: 254881

Sampler(s): MKV EP
Company: Artesian Wastewater Management Inc.
Address: 664 Churchmans Rd. Newark DE 19702
Telephone: (302) 453 6900

Ht. TOC above ground surface: ~~2.56~~ 2.14 Ft.
Well Number: 1 Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC Steel Other

M) Static DTW (TOC) 15.44 Ft.
N) Total Depth (TD) (TOC) ~~36.67~~ 25.46 Ft.
O) Ht. H20 Column=B-A= ~~36.67~~ 25.46 - 10.02 = 26.23 Ft.
P) Conversion factor from H2O column to gallons for 2 @ I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= ~~3.96~~ 1.64 gal.
R) Vol. H2O to remove from well=(Circle one used)
3XE= ~~16.39~~ 4.91 =gal. 5.2 min 3 min
5XE= =gal.

EVACUATION METHOD: Pump Type Rate 2 gpm
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No ✓
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 17.7 oC
Temperature (stabilized) 16.7 oC

Sp. Cond. (Initial) 433 umhos
Sp. Cond. (Stabilized) 407 umhos

D.O. (Inital) 5.13
D.O. (Stabilized) 5.13

pH (initial) 9.57 S.U.
pH (stabilized) 9.72 S.U.

Time Taken: 1438 / 1439

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: Non Odor: non Clarity: None

Comments: TEST For: Nitrate, Nitrite, TN, Ammonia, Total Phosphorus, Chloride, Sodium, Fecal Coliform, Total Coliform, TDS

R. Needam
6/16/17 1514

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	237146	Matrix:	Ground Water	Sample Start:	9/29/17 13:43
Description:	Duplicate of 237145	Site:	MW - 1	SampleEnd:	
Type:	Grab			Date Received:	9/29/17 15:20

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	9/29/17 16:00	HJG3	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	9/29/17 16:00	HJG3	SM9222-B
Metals					
Sodium	mg/L	25.5	10/4/17 16:38	JMW	SM3111-B
Minerals					
Chloride	mg/L	53.3	9/29/17 17:40	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	10/3/17 11:55	CC	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	6.58	9/29/17 17:40	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.09	10/4/17 12:32	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	6.67	10/5/17 18:40	KLS	Calc
Total Phosphorus as P	mg/L	<0.05	10/4/17 12:36	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.04	9/29/17 13:43	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	15.49	9/29/17 13:43	CLT	None
pH-field	SU	5.38	9/29/17 13:43	CLT	150.1
Specific Conductance - field	umhos/cm	6.82	9/29/17 13:43	CLT	SM2510-B
Temperature-field	oC	17.6	9/29/17 13:43	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	174	10/5/17 18:19	HM	SM2540-C
QA/QC					
Ammonia as N (% Recovery)	% Rec.	99.8	10/3/17 11:55	CC	SM4500-NH3-G
Chloride (% Recovery)	% Rec.	105.1	9/29/17 17:40	HJG	EPA 300.0
Nitrate+Nitrite as N (% Recovery)	% Rec.	102.3	9/29/17 17:40	HJG	EPA 300.0
Sodium (% Recovery)	% Rec.	107.6	10/4/17 16:38	JMW	SM3111-B
Total Kjeldahl Nitrogen (% Recovery)	% Rec.	116.2	10/4/17 12:32	CC	SM4500-Norg-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	237146	Matrix:	Ground Water	Sample Start:	9/29/17 13:43
Description:	Duplicate of 237145	Site:	MW - 1	SampleEnd:	
Type:	Grab			Date Received:	9/29/17 15:20

Parameters	Units	Results	Analyzed	By	Method
QA/QC					
Total Phosphorus as P (% Recovery)	% Rec.	98.4		CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

237145/
237140

SAMPLING LOG

Date: 9/29/17
Site: ANSRWRF
Monitoring Well Permit No: 254081

Sampler(s): RR MK JS
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 2.5 2.14 Ft.
Well Number: 1 Casing intact? Yes X No
Monitoring Well Cap Locked? Yes No X
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 15.49 Ft.
N) Total Depth (TD) (TOC) 25.46 Ft.
O) Ht. H20 Column= (N-M) = 25.46 - 15.49 = 9.97 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 1.63 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 4.88 =gal. 2.5 mins
5XE= =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No X
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 17.8 oC
Temperature (stabilized) 17.5 oC

Sp. Cond. (Initial) 6.46 umhos
Sp. Cond. (Stabilized) 6.52 umhos

Dissolved Oxygen (Initial) 8.02 mg/l
Dissolved Oxygen (Stabilized) 8.04 mg/l

PH (initial) 5.73 S.U.
PH (stabilized) 5.38 S.U.

Time Taken: 1340 / 1343

D/S

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: Brown Odor: N/A Clarity: Cloudy
Comments: Test for – Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Coliforms Fecal Coliform, Total TKN Phosphorus, Sodium, Chloride, Total Dissolved Solids

R. Nudam
9/29/17 1520

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238528	Matrix:	Ground Water	Sample Start:	10/18/17 11:34
Description:		Site:	MW - 1L	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	10/30/17 10:45	JMW	EPA 200.8
Cadmium	mg/L	0.0012	10/30/17 10:45	JMW	EPA 200.8
Chromium	mg/L	<0.0010	10/30/17 10:45	JMW	EPA 200.8
Copper	mg/L	0.0015	10/30/17 10:45	JMW	EPA 200.8
Iron	mg/L	0.375	10/30/17 10:45	JMW	EPA 200.8
Lead	mg/L	0.0086	10/30/17 10:45	JMW	EPA 200.8
Manganese	mg/L	0.060	10/30/17 10:45	JMW	EPA 200.8
Mercury	mg/L	<0.00020	11/3/17 17:30	SWL	EPA 245.1
Nickel	mg/L	0.0034	10/30/17 10:45	JMW	EPA 200.8
Selenium	mg/L	0.015	10/30/17 10:45	JMW	EPA 200.8
Sodium	mg/L	23.8	10/30/17 10:45	JMW	EPA 200.8
Zinc	mg/L	0.024	10/30/17 10:45	JMW	EPA 200.8
Minerals					
Chloride	mg/L	60.5	10/31/17 15:48	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	57.0	10/20/17 15:55	ML	SM2340-C
Sulfate	mg/L	17.2	10/19/17 15:34	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	10/19/17 13:02	CC	SM4500-NH3-G
Nitrate as N	mg/L	4.67	10/19/17 15:34	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	10/19/17 15:34	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.17	10/25/17 10:02	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.17	10/24/17 16:43	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	4.84	10/25/17 10:02	RLF	Calc
Total Phosphorus as P	mg/L	0.06	10/24/17 16:23	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

Printed: Nov 13 2017 4:14PM

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	237145	Matrix:	Ground Water	Sample Start:	9/29/17 13:43
Description:		Site:	MW - 1	SampleEnd:	
Type:	Grab			Date Received:	9/29/17 15:20

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	9/29/17 16:00	HJG3	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	9/29/17 16:00	HJG3	SM9222-B
Metals					
Sodium	mg/L	25.5	10/4/17 16:38	JMW	SM3111-B
Minerals					
Chloride	mg/L	54.0	9/29/17 17:40	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	10/3/17 11:55	CC	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	6.50	9/29/17 17:40	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.10	10/4/17 12:32	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	6.60	10/5/17 18:40	KLS	Calc
Total Phosphorus as P	mg/L	<0.05	10/4/17 12:36	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.04	9/29/17 13:43	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	15.49	9/29/17 13:43	CLT	None
pH-field	SU	5.38	9/29/17 13:43	CLT	150.1
Specific Conductance - field	umhos/cm	6.82	9/29/17 13:43	CLT	SM2510-B
Temperature-field	oC	17.6	9/29/17 13:43	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	172	10/5/17 18:19	HM	SM2540-C

ND = Not Detected
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ENVIROCORP LABS SINCE 1991

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238528	Matrix:	Ground Water	Sample Start:	10/18/17 11:34
Description:		Site:	MW - 1L	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.98	10/18/17 11:34	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	15.82	10/18/17 11:34	CLT	None
pH-field	SU	4.87	10/18/17 11:34	CLT	150.1
Specific Conductance - field	umhos/cm	293	10/18/17 11:34	CLT	SM2510-B
Temperature-field	oC	16.8	10/18/17 11:34	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	182	10/24/17 16:50	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	754	10/19/17 14:45	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

238528

SAMPLING LOG

Date: 10/18/17
Site: ANSRWRF
Monitoring Well Permit No: 254881

Sampler(s): S.A. J.S.
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 2.14 Ft.
Well Number: 1L Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 15.82 Ft.
N) Total Depth (TD) (TOC) 25.46 Ft.
O) Ht. H20 Column= (N-M) = 25.46 - 15.82 = 9.64 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 1.57 gal.
R) Vol. H2O to remove from well = (Circle one used) 2 MIN
3XE= 4.71 =gal.
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial)	16.8	oC
Temperature (stabilized)	16.8	oC
Sp. Cond. (Initial)	252	umhos
Sp. Cond. (Stabilized)	293	umhos
Dissolved Oxygen (Initial)	7.97	mg/l
Dissolved Oxygen (Stabilized)	7.98	mg/l
PH (initial)	4.97	S.U.
PH (stabilized)	4.87	S.U.
Time Taken:	11:32 S / 11:34 F.	

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: ORANGE @ STRT Odor: NO Clarity: LITE ORANGE @ SAMPLE TIME.
Comments: Test for – Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Coliforms, Fecal Coliform, Total Phosphorus, Sodium, Chloride, Total Dissolved Solids

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	240623	Matrix:	Ground Water	Sample Start:	11/16/17 11:00
Description:		Site:	MW - 1L	SampleEnd:	
Type:	Grab			Date Received:	11/16/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	11/16/17 15:30	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	11/16/17 15:30	RD	SM9222-B
Metals					
Sodium	mg/L	43.3	11/30/17 16:09	JMW	SM3111-B
Minerals					
Chloride	mg/L	64.3	11/21/17 17:39	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	11/28/17 12:51	CC	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	3.88	11/17/17 17:28	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.11	11/30/17 16:22	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	3.99	12/1/17 10:15	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	11/30/17 16:10	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.85	11/16/17 11:00	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	15.81	11/16/17 11:00	CLT	None
pH-field	SU	5.68	11/16/17 11:00	CLT	150.1
Specific Conductance - field	umhos/cm	321	11/16/17 11:00	CLT	SM2510-B
Temperature-field	oC	17.2	11/16/17 11:00	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	196	11/22/17 14:45	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

ENVIROCORP LABS SINCE 1981 51 CLARK ST HARRINGTON DE 19952 ANALYTICAL CHEMISTRY

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	240732	Matrix:	Ground Water	Sample Start:	11/16/17 11:00
Description:	Duplicate of 240623	Site:	MW - 1L	SampleEnd:	
Type:	Grab			Date Received:	

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	11/16/17 15:30	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	11/16/17 15:30	RD	SM9222-B
Metals					
Sodium	mg/L	43.3	11/30/17 16:09	JMW	SM3111-B
Minerals					
Chloride	mg/L	63.4	11/21/17 17:39	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	11/28/17 12:51	CC	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	3.84	11/17/17 17:28	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.10	11/30/17 16:22	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	3.94	12/1/17 10:27	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	11/30/17 16:10	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.85	11/16/17 11:00	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	15.81	11/16/17 11:00	CLT	None
pH-field	SU	5.68	11/16/17 11:00	CLT	150.1
Specific Conductance - field	umhos/cm	321	11/16/17 11:00	CLT	SM2510-B
Temperature-field	oC	17.2	11/16/17 11:00	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	160	11/22/17 14:45	HM	SM2540-C
QA/QC					
Ammonia as N (% Recovery)	% Rec.	95.8	11/28/17 12:51	CC	SM4500-NH3-G
Chloride (% Recovery)	% Rec.	101.6	11/21/17 17:39	HJG	EPA 300.0
Nitrate+Nitrite as N (% Recovery)	% Rec.	100.4	11/17/17 17:28	HJG	EPA 300.0
Sodium (% Recovery)	% Rec.	96.1	11/30/17 16:09	JMW	SM3111-B
Total Kjeldahl Nitrogen (% Recovery)	% Rec.	106.4	11/30/17 16:22	CC	SM4500-Norg-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

Printed: Dec 1 2017 10:57AM

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	240732	Matrix:	Ground Water	Sample Start:	11/16/17 11:00
Description:	Duplicate of 240623	Site:	MW - 1L	SampleEnd:	
Type:	Grab			Date Received:	

Parameters	Units	Results	Analyzed	By	Method
QA/QC					
Total Phosphorus as P (% Recovery)	% Rec.	99.7	11/30/17 16:10	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

240623
~~240624~~
240732

SAMPLING LOG

Date: 11/26/17
Site: ANSRWRF
Monitoring Well Permit No: 254881

Sampler(s): [illegible]
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: ~~2.87~~ 2.14 Ft.
Well Number: 1L Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes _____ No ✓
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 15.81 Ft.
N) Total Depth (TD) (TOC) 25.46 Ft.
O) Ht. H20 Column= (N-M) = _____ - _____ = 9.65 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 1.58 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 4.74 =gal. 2.4gm
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 17.3 oC
Temperature (stabilized) 17.2 oC

Sp. Cond. (Initial) 260 umhos
Sp. Cond. (Stabilized) 321 umhos

Dissolved Oxygen (Initial) 7.9 mg/l
Dissolved Oxygen (Stabilized) 7.85 mg/l

PH (initial) 5.99 S.U.
PH (stabilized) 5.68 S.U.

Time Taken: 1057 : 1100

D/S

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: orange/brown Odor: non Clarity: Little murky
Comments: Test for – Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Coliforms, Fecal Coliform, Total Phosphorus, Sodium, Chloride, Total Dissolved Solids

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247707	Matrix:	Ground Water	Sample Start:	3/19/18 12:58
Description:	254881	Site:	MW - 1L	SampleEnd:	
Type:	Grab			Date Received:	3/19/18 15:35

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	3/19/18 16:40	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	3/19/18 16:40	HM	SM9222-B
Metals					
Arsenic	mg/L	0.0012	3/29/18 10:46	JMW	EPA 200.8
Cadmium	mg/L	0.0012	3/29/18 10:46	JMW	EPA 200.8
Chromium	mg/L	<0.0010	3/29/18 10:46	JMW	EPA 200.8
Copper	mg/L	<0.0010	3/29/18 10:46	JMW	EPA 200.8
Iron	mg/L	0.218	3/29/18 10:46	JMW	EPA 200.8
Lead	mg/L	0.0022	3/29/18 10:46	JMW	EPA 200.8
Manganese	mg/L	0.046	3/29/18 10:46	JMW	EPA 200.8
Mercury	mg/L	<0.00020	4/2/18 8:49	SLI	EPA 245.1
Nickel	mg/L	0.0025	3/29/18 10:46	JMW	EPA 200.8
Selenium	mg/L	0.0017	3/29/18 10:46	JMW	EPA 200.8
Sodium	mg/L	42.8	3/29/18 10:46	JMW	EPA 200.8
Zinc	mg/L	0.012	3/29/18 10:46	JMW	EPA 200.8
Minerals					
Chloride	mg/L	96.9	3/20/18 17:44	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	78.0	3/20/18 14:21	ML	SM2340-C
Sulfate	mg/L	21.9	3/20/18 17:44	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/22/18 12:09	CC	SM4500-NH3-G
Nitrate as N	mg/L	5.59	3/20/18 17:44	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/20/18 17:44	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	3/28/18 10:47	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	3/27/18 16:09	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<5.64	3/28/18 10:47	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	3/27/18 14:25	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247707	Matrix:	Ground Water	Sample Start:	3/19/18 12:58
Description:	254881	Site:	MW - 1L	SampleEnd:	
Type:	Grab			Date Received:	3/19/18 15:35

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.93	3/19/18 12:58	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	16.14	3/19/18 12:58	CLT	None
pH-field	SU	4.99	3/19/18 12:58	CLT	150.1
Specific Conductance - field	umhos/cm	448	3/19/18 12:58	CLT	SM2510-B
Temperature-field	oC	14.9	3/19/18 12:58	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	276	3/22/18 17:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	139	3/21/18 13:57	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

SAMPLING LOG

24770J

Date: 3/1/18

Site: ANSRWRF ✓
Monitoring Well Permit No: 254881
Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.14 Ft.
Well Number: 1L Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 16.14 Ft.
N) Total Depth (TD) (TOC) 25.46 Ft.
O) Ht. H2O Column= (N-M) = - = 9.32 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 1.52 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 4.56 =gal. 5XE= =gal. 2 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 ½ GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No — After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			**STABILIZED** FIELD PARAMETERS:	
Temperature	15.5	oC	Temperature	14.9 oC
Sp. Cond.	447	umhos	Sp. Cond.	448 umhos
Dissolved Oxygen	7.62	mg/L	Dissolved Oxygen	7.93 mg/L
PH	5.01	S.U.	PH	4.99 S.U.
Start Time	12:56		Start Time	12:58

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: Orange Odor: none Clarity: Cloudy
H orange at sampling

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

51 Clark St. Harrington, DE 19952
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ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250540	Matrix:	Ground Water	Sample Start:	5/1/18 11:33
Description:		Site:	MW - 1L [254881]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-B
Metals					
Arsenic	mg/L	0.0011	5/9/18 10:50	JMW	EPA 200.8
Cadmium	mg/L	0.0012	5/9/18 10:50	JMW	EPA 200.8
Chromium	mg/L	<0.0010	5/9/18 10:50	JMW	EPA 200.8
Copper	mg/L	0.0017	5/9/18 10:50	JMW	EPA 200.8
Iron	mg/L	0.184	5/9/18 10:50	JMW	EPA 200.8
Lead	mg/L	0.0039	5/9/18 10:50	JMW	EPA 200.8
Manganese	mg/L	0.046	5/9/18 10:50	JMW	EPA 200.8
Mercury	mg/L	<0.00020	5/10/18 16:31	SWL	EPA 245.1
Nickel	mg/L	0.0019	5/9/18 10:50	JMW	EPA 200.8
Selenium	mg/L	0.0025	5/9/18 10:50	JMW	EPA 200.8
Sodium	mg/L	24.4	5/9/18 10:50	JMW	EPA 200.8
Zinc	mg/L	0.010	5/9/18 10:50	JMW	EPA 200.8
Minerals					
Chloride	mg/L	34.9	5/2/18 12:04	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	40.0	5/1/18 14:55	MJM	SM2340-C
Sulfate	mg/L	19.0	5/2/18 12:04	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/7/18 13:39	CC	SM4500-NH3-G
Nitrate as N	mg/L	5.15	5/2/18 12:04	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/2/18 12:04	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.07	5/11/18 14:10	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.07	5/9/18 14:32	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	5.22	5/11/18 14:10	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	5/9/18 16:13	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250540	Matrix:	Ground Water	Sample Start:	5/1/18 11:33
Description:		Site:	MW - 1L [254881]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.61	5/1/18 11:33	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	15.17	5/1/18 11:33	CLT	None
pH-field	SU	4.95	5/1/18 11:33	CLT	150.1
Specific Conductance - field	umhos/cm	210.7	5/1/18 11:33	CLT	SM2510-B
Temperature-field	oC	15.3	5/1/18 11:33	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	140	5/4/18 14:33	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	466	5/2/18 10:21	HJG	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

25052D

SAMPLING LOG

Date: 5-1-18

Site: ANSRWRF
Monitoring Well Permit No: 254881 ✓

Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc. ✓
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.14 Ft.
Well Number: 1L ✓ Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 15.17 Ft.
N) Total Depth (TD) (TOC) 25.46 Ft.
O) Ht. H20 Column= (N-M) = _____ - _____ = 10.29 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 1.68 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 5.04 =gal. 5XE= _____ =gal. 2 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3/2 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes _____ No ✓ After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from=_____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:

Temperature	16.7	oC
Sp. Cond.	176.9	umhos
Dissolved Oxygen	8.35	mg/L
PH	5.03	S.U.
Start Time	11:31	

STABILIZED FIELD PARAMETERS:

Temperature	15.3	oC
Sp. Cond.	210.7	umhos
Dissolved Oxygen	8.61	mg/L
PH	4.95	S.U.
Start Time	11:33	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: Orange Odor: none Clarity: Cloudy

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab
Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

5/1/18 1438

EVO

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244878	Matrix:	Ground Water	Sample Start:	2/1/18 12:58
Description:	258632	Site:	MW - 2F	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	2/7/18 10:18	JMW	EPA 200.8
Cadmium	mg/L	0.0013	2/7/18 10:18	JMW	EPA 200.8
Chromium	mg/L	<0.0010	2/7/18 10:18	JMW	EPA 200.8
Copper	mg/L	0.0060	2/7/18 10:18	JMW	EPA 200.8
Iron	mg/L	0.0210	2/7/18 10:18	JMW	EPA 200.8
Lead	mg/L	0.0024	2/7/18 10:18	JMW	EPA 200.8
Manganese	mg/L	0.171	2/7/18 10:18	JMW	EPA 200.8
Mercury	mg/L	<0.00020	2/21/18 15:50	SLI	EPA 245.1
Nickel	mg/L	0.0064	2/7/18 10:18	JMW	EPA 200.8
Selenium	mg/L	0.0013	2/7/18 10:18	JMW	EPA 200.8
Sodium	mg/L	5.5	2/7/18 10:18	JMW	EPA 200.8
Zinc	mg/L	0.759	2/7/18 10:18	JMW	EPA 200.8
Minerals					
Chloride	mg/L	12.2	2/1/18 23:31	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	50.0	2/2/18 14:51	RON	SM2340-C
Sulfate	mg/L	13.1	2/1/18 23:31	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	2/6/18 13:32	CC	SM4500-NH3-G
Nitrate as N	mg/L	15.3	2/1/18 23:31	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	2/1/18 23:31	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.28	2/13/18 13:44	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.28	2/12/18 15:49	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	15.6	2/13/18 13:44	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	2/12/18 15:33	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244878	Matrix:	Ground Water	Sample Start:	2/1/18 12:58
Description:	258632	Site:	MW - 2F	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.26	2/1/18 12:58	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	17.52	2/1/18 12:58	CLT	None
pH-field	SU	4.37	2/1/18 12:58	CLT	150.1
Specific Conductance - field	umhos/cm	230	2/1/18 12:58	CLT	SM2510-B
Temperature-field	oC	15.0	2/1/18 12:58	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	142	2/7/18 12:00	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	26.7	2/7/18 14:52	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

2448758

SAMPLING LOG

Date: 2/1/18
Site: ANSRWRF
Monitoring Well Permit No.: 258632

Sampler(s): S.H. + M.B.
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.93 Ft.
Well Number: 2F Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 17.52 Ft.
N) Total Depth (TD) (TOC) 30.63 Ft.
O) Ht. H20 Column = (N-M) = 30.63 - 17.52 = 13.11 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.13 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 6.41 =gal.
5XE= =gal.

4 min

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No ✓
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 14.6 oC
Temperature (stabilized) 15.0 oC

Sp. Cond. (Initial) 241 umhos
Sp. Cond. (Stabilized) 230 umhos

Dissolved Oxygen (Initial) 7.87 mg/l
Dissolved Oxygen (Stabilized) 7.26 mg/l

PH (initial) 4.32 S.U.
PH (stabilized) 4.37 S.U.

Time Taken: 12:54 / 12:58 F.

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: lt brown Odor: — Clarity: milky at start
Comments: Test for – Ammonia, Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc.

see attached for full list of parameters

16:16 2/1/18 Mon Sayer
R Nunla 2/1/18
16:16

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	248126	Matrix:	Ground Water	Sample Start:	3/26/18 11:19
Description:	258632	Site:	MW - 2F	SampleEnd:	
Type:	Grab			Date Received:	3/26/18 15:05

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/26/18 16:45	HJG3	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/26/18 16:45	HJG3	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	4/5/18 10:41	JMW	EPA 200.8
Cadmium	mg/L	0.00078	4/5/18 10:41	JMW	EPA 200.8
Chromium	mg/L	<0.0010	4/5/18 10:41	JMW	EPA 200.8
Copper	mg/L	<0.0010	4/5/18 10:41	JMW	EPA 200.8
Iron	mg/L	0.121	4/5/18 10:41	JMW	EPA 200.8
Lead	mg/L	0.0012	4/5/18 10:41	JMW	EPA 200.8
Manganese	mg/L	0.165	4/5/18 10:41	JMW	EPA 200.8
Mercury	mg/L	<0.00020	4/2/18 15:51	SLI	EPA 245.1
Nickel	mg/L	0.0052	4/5/18 10:41	JMW	EPA 200.8
Selenium	mg/L	<0.0010	4/5/18 10:41	JMW	EPA 200.8
Sodium	mg/L	4.9	4/5/18 10:41	JMW	EPA 200.8
Zinc	mg/L	0.600	4/5/18 10:41	JMW	EPA 200.8
Minerals					
Chloride	mg/L	11.9	3/27/18 16:43	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	53.3	3/27/18 12:30	HB	SM2340-C
Sulfate	mg/L	13.1	3/27/18 16:43	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/28/18 12:28	CC	SM4500-NH3-G
Nitrate as N	mg/L	16	3/27/18 16:43	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/27/18 16:43	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	4/3/18 14:28	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	4/2/18 13:54	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<16.1	4/3/18 14:28	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	4/2/18 15:40	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	248126	Matrix:	Ground Water	Sample Start:	3/26/18 11:19
Description:	258632	Site:	MW - 2F	SampleEnd:	
Type:	Grab			Date Received:	3/26/18 15:05

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.47	3/26/18 11:19	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	16.03	3/26/18 11:19	CLT	None
pH-field	SU	4.37	3/26/18 11:19	CLT	150.1
Specific Conductance - field	umhos/cm	223	3/26/18 11:19	CLT	SM2510-B
Temperature-field	oC	13.6	3/26/18 11:19	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	148	3/30/18 12:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	15.6	3/27/18 19:52	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

2481Z4

SAMPLING LOG

Date: 3/26/18
Site: ANSRWRF
Monitoring Well Permit No.: 258632 ✓

Sampler(s): Monica Bogen
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.93 Ft.
Well Number: 2F Casing intact? Yes ✓ No ____
Monitoring Well Cap Locked? Yes ✓ No ____
Casing Material: PVC X Steel ____ Other ____

M) Static DTW (TOC) 16.03 Ft.
N) Total Depth (TD) (TOC) 30.63 Ft.
O) Ht. H2O Column = (N-M) = ____ - ____ = 14.6 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.38 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 7.15 =gal. 5XE= ____ =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes ____ No ✓ After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? ____
Estimated depth samples were taken from= ____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:		
Temperature	12.9	oC	Temperature	13.6	oC
Sp. Cond.	237	umhos	Sp. Cond.	223	umhos
Dissolved Oxygen	7.69	mg/L	Dissolved Oxygen	7.47	mg/L
PH	4.37	S.U.	PH	4.37	S.U.
Start Time	11:16		Start Time	11:19	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: milky Odor: none Clarity: Cloudy became Clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

Monica Bogen 3/26/18 1505

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	251555	Matrix:	Ground Water	Sample Start:	5/14/18 0:36
Description:		Site:	MW - 2F [258632]	SampleEnd:	
Type:	Grab			Date Received:	5/14/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	5/14/18 15:25	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	5/14/18 15:25	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	5/23/18 12:41	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	5/23/18 12:41	JMW	EPA 200.8
Chromium	mg/L	<0.0010	5/23/18 12:41	JMW	EPA 200.8
Copper	mg/L	<0.0010	5/23/18 12:41	JMW	EPA 200.8
Iron	mg/L	<0.0010	5/23/18 12:41	JMW	EPA 200.8
Lead	mg/L	<0.0010	5/23/18 12:41	JMW	EPA 200.8
Manganese	mg/L	<0.0010	5/23/18 12:41	JMW	EPA 200.8
Mercury	mg/L	<0.00020	5/24/18 16:13	SLI	EPA 245.1
Nickel	mg/L	<0.0010	5/23/18 12:41	JMW	EPA 200.8
Selenium	mg/L	0.0010	5/23/18 12:41	JMW	EPA 200.8
Sodium	mg/L	0.0014	5/23/18 12:41	JMW	EPA 200.8
Zinc	mg/L	<0.0010	5/23/18 12:41	JMW	EPA 200.8
Minerals					
Chloride	mg/L	15.3	5/15/18 17:32	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	51.0	5/15/18 14:00	ML	SM2340-C
Sulfate	mg/L	13.1	5/15/18 17:32	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/17/18 13:33	CC	SM4500-NH3-G
Nitrate as N	mg/L	17.0	5/15/18 17:32	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/15/18 17:32	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.17	5/25/18 18:31	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.17	5/24/18 16:03	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	17.2	5/25/18 18:31	SLB	Calc
Total Phosphorus as P	mg/L	0.08	5/24/18 15:31	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	251555	Matrix:	Ground Water	Sample Start:	5/14/18 0:36
Description:		Site:	MW - 2F [258632]	SampleEnd:	
Type:	Grab			Date Received:	5/14/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	6.40	5/14/18 0:36	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	16.02	5/14/18 0:36	CLT	None
pH-field	SU	4.25	5/14/18 0:36	CLT	150.1
Specific Conductance - field	umhos/cm	220	5/14/18 0:36	CLT	SM2510-B
Temperature-field	oC	14.1	5/14/18 0:36	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	162	5/18/18 16:34	RON	SM2540-C
Total Suspended Solids @103-105 C	mg/L	10.8	5/15/18 14:20	RON	SM2540-D
QA/QC					
Copper (% Recovery)	% Rec.	98.0	5/23/18 12:41	JMW	EPA 200.8
Lead (% Recovery)	% Rec.	107.5	5/23/18 12:41	JMW	EPA 200.8

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

251555

SAMPLING LOG

Date: 5.14.18
Site: ANSRWRF
Monitoring Well Permit No.: 258632 ✓
Sampler(s): Monica Bonner
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.93 Ft.
Well Number: 2F ✓ Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 16.02 Ft.
N) Total Depth (TD) (TOC) 30.63 Ft.
O) Ht. H20 Column = (N-M) = - = 14.61 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.38 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 7.15 =gal. 5XE= =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 ½ GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:	
Temperature	15.3	oC	14.1	oC
Sp. Cond.	226	umhos	220	umhos
Dissolved Oxygen	6.77	mg/L	6.40	mg/L
PH	4.25	S.U.	4.25	S.U.
Start Time	12:33		12:36	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: grey became clear Odor: none Clarity: cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

R. Nudam 5/14/18
1451

ENVIROCORP LABS
SINCE 1981
51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238529	Matrix:	Ground Water	Sample Start:	10/18/17 13:24
Description:		Site:	MW - 2G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	2.0	10/18/17 15:45	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	10/30/17 10:50	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	10/30/17 10:50	JMW	EPA 200.8
Chromium	mg/L	<0.0010	10/30/17 10:50	JMW	EPA 200.8
Copper	mg/L	<0.0010	10/30/17 10:50	JMW	EPA 200.8
Iron	mg/L	0.415	10/30/17 10:50	JMW	EPA 200.8
Lead	mg/L	0.0064	10/30/17 10:50	JMW	EPA 200.8
Manganese	mg/L	0.025	10/30/17 10:50	JMW	EPA 200.8
Mercury	mg/L	<0.00020	11/3/17 17:30	SWL	EPA 245.1
Nickel	mg/L	0.0047	10/30/17 10:50	JMW	EPA 200.8
Selenium	mg/L	0.0011	10/30/17 10:50	JMW	EPA 200.8
Sodium	mg/L	10.0	10/30/17 10:50	JMW	EPA 200.8
Zinc	mg/L	0.016	10/30/17 10:50	JMW	EPA 200.8
Minerals					
Chloride	mg/L	30.7	10/19/17 15:34	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	93.0	10/20/17 15:55	ML	SM2340-C
Sulfate	mg/L	28.1	10/19/17 15:35	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	10/19/17 13:02	CC	SM4500-NH3-G
Nitrate as N	mg/L	16.7	10/19/17 15:34	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	10/19/17 15:34	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.14	10/25/17 10:07	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.14	10/24/17 16:43	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	16.8	10/25/17 10:07	RLF	Calc
Total Phosphorus as P	mg/L	0.05	10/24/17 16:23	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238529	Matrix:	Ground Water	Sample Start:	10/18/17 13:24
Description:		Site:	MW - 2G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.48	10/18/17 13:24	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	13.52	10/18/17 13:24	CLT	None
pH-field	SU	4.82	10/18/17 13:24	CLT	150.1
Specific Conductance - field	umhos/cm	321	10/18/17 13:24	CLT	SM2510-B
Temperature-field	oC	15.7	10/18/17 13:24	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	428	10/24/17 16:50	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	506	10/19/17 14:45	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

238529

SAMPLING LOG

Date: 10/18/17
Site: ANSRWRF
Monitoring Well Permit No.: 258628

Sampler(s): S.H. J.S.
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 2.05 Ft.
Well Number: 2G Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 13.52 Ft.
N) Total Depth (TD) (TOC) 31.73 Ft.
O) Ht. H2O Column = (N-M) = - 13.52 = 18.21 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.97 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 8.91 =gal. 3 MIN
5XE= =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No ✓
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 16.0 oC
Temperature (stabilized) 15.7 oC

Sp. Cond. (Initial) 318 umhos
Sp. Cond. (Stabilized) 321 umhos

Dissolved Oxygen (Initial) 9.34 mg/l
Dissolved Oxygen (Stabilized) 9.48 mg/l

PH (initial) 4.82 S.U.
PH (stabilized) 4.82 S.U.

Time Taken: 13:21S / 13:24E

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: LITE ORANGE Odor: No Clarity: Milky white @ Sampletime
Comments: Test for – Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc.

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247708	Matrix:	Ground Water	Sample Start:	3/19/18 11:09
Description:	258628	Site:	MW - 2G	SampleEnd:	
Type:	Grab			Date Received:	3/19/18 15:35

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	3/19/18 16:40	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	3/19/18 16:40	HM	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	3/29/18 10:57	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	3/29/18 10:57	JMW	EPA 200.8
Chromium	mg/L	<0.0010	3/29/18 10:57	JMW	EPA 200.8
Copper	mg/L	<0.0010	3/29/18 10:57	JMW	EPA 200.8
Iron	mg/L	0.187	3/29/18 10:57	JMW	EPA 200.8
Lead	mg/L	<0.0010	3/29/18 10:57	JMW	EPA 200.8
Manganese	mg/L	0.018	3/29/18 10:57	JMW	EPA 200.8
Mercury	mg/L	<0.00020	4/2/18 8:49	SLI	EPA 245.1
Nickel	mg/L	0.0031	3/29/18 10:57	JMW	EPA 200.8
Selenium	mg/L	0.0016	3/29/18 10:57	JMW	EPA 200.8
Sodium	mg/L	9.2	3/29/18 10:57	JMW	EPA 200.8
Zinc	mg/L	0.0069	3/29/18 10:57	JMW	EPA 200.8
Minerals					
Chloride	mg/L	31.5	3/20/18 17:44	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	108	3/20/18 14:21	ML	SM2340-C
Sulfate	mg/L	26.8	3/20/18 17:44	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/22/18 12:09	CC	SM4500-NH3-G
Nitrate as N	mg/L	18.1	3/20/18 17:44	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/20/18 17:44	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	3/28/18 10:47	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	3/27/18 16:09	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<18.2	3/28/18 10:47	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	3/27/18 14:25	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247708	Matrix:	Ground Water	Sample Start:	3/19/18 11:09
Description:	258628	Site:	MW - 2G	SampleEnd:	
Type:	Grab			Date Received:	3/19/18 15:35

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.10	3/19/18 11:09	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	11.81	3/19/18 11:09	CLT	None
pH-field	SU	5.22	3/19/18 11:09	CLT	150.1
Specific Conductance - field	umhos/cm	317	3/19/18 11:09	CLT	SM2510-B
Temperature-field	oC	14.7	3/19/18 11:09	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	204	3/22/18 17:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	96.0	3/21/18 13:57	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

247108

SAMPLING LOG

Date: 3/19/18
Site: ANSRWRF
Monitoring Well Permit No.: 258628 ✓
Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.05 Ft.
Well Number: 2G Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 11.81 Ft.
N) Total Depth (TD) (TOC) 31.73 Ft.
O) Ht. H2O Column = (N-M) = _____ - _____ = 19.92 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.25 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 9.75 =gal. 5XE= _____ =gal. 4 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 ✓ GPM
PUMPING RATE METHOD: Bucket and stop watch ✓

Did well go dry? Yes _____ No _____ After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:		**STABILIZED** FIELD PARAMETERS:	
Temperature	15.1 oC	Temperature	14.7 oC
Sp. Cond.	354 umhos	Sp. Cond.	317 umhos
Dissolved Oxygen	9.21 mg/L	Dissolved Oxygen	9.10 mg/L
PH	10.12 S.U.	PH	5.22 S.U.
Start Time	1105	Start Time	1109

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: Horange became clear Odor: none Clarity: cloudy

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249956	Matrix:	Ground Water	Sample Start:	4/20/18 11:54
Description:	258628	Site:	MW - 2G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HM	SM9222-B
Metals					
Arsenic	mg/L	0.0052	4/25/18 15:17	HJG3	EPA 200.8
Cadmium	mg/L	0.00096	4/25/18 15:17	HJG3	EPA 200.8
Chromium	mg/L	<0.0010	4/25/18 15:17	HJG3	EPA 200.8
Copper	mg/L	<0.0010	4/25/18 15:17	HJG3	EPA 200.8
Iron	mg/L	0.562	4/25/18 15:17	HJG3	EPA 200.8
Lead	mg/L	0.0017	4/25/18 15:17	HJG3	EPA 200.8
Manganese	mg/L	0.021	4/25/18 15:17	HJG3	EPA 200.8
Mercury	mg/L	<0.00020	5/8/18 11:20	SLI	EPA 245.1
Nickel	mg/L	0.0053	4/25/18 15:17	HJG3	EPA 200.8
Selenium	mg/L	<0.0010	4/25/18 15:17	HJG3	EPA 200.8
Sodium	mg/L	7.7	4/25/18 15:17	HJG3	EPA 200.8
Zinc	mg/L	0.0096	4/25/18 15:17	HJG3	EPA 200.8
Minerals					
Chloride	mg/L	30.4	4/20/18 22:25	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	120	4/21/18 13:31	ML	SM2340-C
Sulfate	mg/L	28.2	4/23/18 14:38	RLF	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	4/26/18 14:06	CC	SM4500-NH3-G
Nitrate as N	mg/L	20.4	4/20/18 22:25	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	4/20/18 22:25	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.22	5/2/18 14:30	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.22	5/2/18 12:12	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	20.6	5/2/18 14:30	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/2/18 14:49	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249956	Matrix:	Ground Water	Sample Start:	4/20/18 11:54
Description:	258628	Site:	MW - 2G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.77	4/20/18 11:54	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	11.77	4/20/18 11:54	CLT	None
pH-field	SU	4.90	4/20/18 11:54	CLT	150.1
Specific Conductance - field	umhos/cm	327	4/20/18 11:54	CLT	SM2510-B
Temperature-field	oC	13.7	4/20/18 11:54	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	260	4/26/18 11:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	179	4/24/18 13:54	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

249956

SAMPLING LOG

Date: 4/20/18
Site: ANSRWRF
Monitoring Well Permit No.: 258628 ✓
Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.05 Ft.
Well Number: 2G ✓ Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 11.77 Ft.
N) Total Depth (TD) (TOC) 31.73 Ft.
O) Ht. H2O Column = (N-M) = - = 19.96 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.26 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 9.77 =gal. 5XE= =gal. 4 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 ½ GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:	
Temperature	13.8 oC		Temperature	13.7 oC
Sp. Cond.	328 umhos		Sp. Cond.	327 umhos
Dissolved Oxygen	9.71 mg/L		Dissolved Oxygen	9.77 mg/L
PH	4.92 S.U.		PH	4.90 S.U.
Start Time	11:50		Start Time	11:54

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: lt. orange became lt. grey Odor: none Clarity: Cloudy became Clearer

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

4/20/18 1530 R. Neudam 4/20/18 1530

ENVIROCORP LABS SINCE 1981

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	225534	Matrix:	Ground Water	Sample Start:	3/30/17 13:13
Description:	254882	Site:	MW - 2	SampleEnd:	
Type:	Grab			Date Received:	3/30/17 15:08

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/30/17 16:05	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/30/17 16:05	RD	SM9222-B
Metals					
Sodium	mg/L	10.5	4/5/17 10:13	JW	SM3111-B
Minerals					
Chloride	mg/L	23.4	3/30/17 17:32	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	4/3/17 12:13	CC	SM4500-NH3-G
Nitrate as N	mg/L	15.1	3/30/17 17:32	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/30/17 17:32	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.17	4/6/17 15:54	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	15.3	4/7/17 8:55	KLS	Calc
Total Phosphorus as P	mg/L	<0.05	4/6/17 15:53	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.53	3/30/17 13:13	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	16.66	3/30/17 13:13	CLT	None
pH-field	SU	4.47	3/30/17 13:13	CLT	150.1
Specific Conductance - field	umhos/cm	328	3/30/17 13:13	CLT	SM2510-B
Temperature-field	oC	12.3	3/30/17 13:13	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	194	4/4/17 15:52	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

225534

SAMPLING LOG

Date: 3/30/17
Site: ANSWRF WWTP
Monitoring Well Permit No.: 254882

Sampler(s): MKondelis // R Plack
Company: Artesian Wastewater Management Inc.
Address: 664 Churchmans Rd. Newark DE 19702
Telephone: (302) 453 6900

Ht. TOC above ground surface: ~~2.46~~ 2.24 Ft.
Well Number: 2 Casing intact? Yes x No
Monitoring Well Cap Locked? Yes x No
Casing Material: PVC Steel Other

M) Static DTW (TOC) 16.66 Ft.
N) Total Depth (TD) (TOC) ~~35.67~~ 25.46 Ft.
O) Ht. H20 Column=B-A= ~~35.67~~ 25.46 - = 14.01 Ft. 8.8
P) Conversion factor from H2O column to gallons for 2 @ I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.101.44 gal.
R) Vol. H2O to remove from well=(Circle one used)
3XE= 4.31 9.30 =gal. 4.6 min 3 min
5XE= =gal.

EVACUATION METHOD: Pump Purge Type wp 4012 Rate 2 gpm
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No x
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 12.1 oC
Temperature (stabilized) 12.3 oC

Sp. Cond. (Initial) 282 umhos
Sp. Cond. (Stabilized) 328 umhos

D.O. (Inital) 9.37
D.O. (Stabilized) 9.53

pH (initial) 5.39 S.U.
pH (stabilized) 9.97 S.U.

Time Taken: 1309 / 1313

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: light tan Odor: n/A Clarity: cloudy

Comments: TEST for: Nitrate, Nitrite, TN, Ammonia, Total Phosphorus, Chloride, Sodium, Fecal Coliform, Total Coliform, TDS

ENVIROCORP LABS SINCE 1984

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID: 227917 | Matrix: Ground Water | Sample Start: 5/9/17 12:45
Description: | Site: MW - 2 | SampleEnd:
Type: Grab | Date Received: 5/9/17 14:14

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	5/9/17 16:00	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	5/9/17 16:00	RON	SM9222-B
Metals					
Sodium	mg/L	6.3	5/17/17 14:56	JW	SM3111-B
Minerals					
Chloride	mg/L	26.5	5/10/17 13:01	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/16/17 14:06	CC	SM4500-NH3-G
Nitrate as N	mg/L	16.9	5/10/17 13:01	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/10/17 13:01	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.17	5/17/17 13:55	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	17.1	5/17/17 15:44	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/17/17 12:38	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.38	5/9/17 12:45	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	16.90	5/9/17 12:45	CLT	None
pH-field	SU	4.89	5/9/17 12:45	CLT	150.1
Specific Conductance - field	umhos/cm	297	5/9/17 12:45	CLT	SM2510-B
Temperature-field	oC	13.4	5/9/17 12:45	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	206	5/11/17 11:30	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	227918	Matrix:	Ground Water	Sample Start:	5/9/17 12:45
Description:	Duplicate of 227917	Site:	MW - 2	SampleEnd:	
Type:	Grab			Date Received:	5/9/17 14:14

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	5/9/17 16:00	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	5/9/17 16:00	RON	SM9222-B
Metals					
Sodium	mg/L	6.3	5/17/17 14:56	JW	SM3111-B
Minerals					
Chloride	mg/L	25.4	5/10/17 13:01	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/16/17 14:06	CC	SM4500-NH3-G
Nitrate as N	mg/L	16.9	5/10/17 13:01	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/10/17 13:01	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.16	5/17/17 13:55	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	17.1	5/17/17 15:45	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/17/17 12:38	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.38	5/9/17 12:45	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	16.90	5/9/17 12:45	CLT	None
pH-field	SU	4.89	5/9/17 12:45	CLT	150.1
Specific Conductance - field	umhos/cm	297	5/9/17 12:45	CLT	SM2510-B
Temperature-field	oC	13.4	5/9/17 12:45	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	200	5/11/17 11:30	HM	SM2540-C
QA/QC					
Ammonia as N (% Recovery)	% Rec.	110.7	5/16/17 14:06	CC	SM4500-NH3-G
Chloride (% Recovery)	% Rec.	107.4	5/10/17 13:01	HJG	EPA 300.0
Nitrate as N (% Recovery)	% Rec.	105.2	5/10/17 13:01	HJG	EPA 300.0
Nitrite as N (% Recovery)	% Rec.	98.4	5/10/17 13:01	HJG	EPA 300.0

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	227918	Matrix:	Ground Water	Sample Start:	5/9/17 12:45
Description:	Duplicate of 227917	Site:	MW - 2	SampleEnd:	
Type:	Grab			Date Received:	5/9/17 14:14

Parameters	Units	Results	Analyzed	By	Method
QA/QC					
Sodium (% Recovery)	% Rec.	100.1	5/17/17 14:56	JW	SM3111-B
Total Kjeldahl Nitrogen (% Recovery)	% Rec.	89.2	5/17/17 13:55	CC	SM4500-Norg-C
Total Phosphorus as P (% Recovery)	% Rec.	89.7	5/17/17 12:38	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

227917/227918

SAMPLING LOG

Date: 5-9-17
Site: ANSWRF WWTP
Monitoring Well Permit No.: 254882
Sampler(s): RPL MKS
Company: Artesian Wastewater Management Inc.
Address: 664 Churchmans Rd. Newark DE 19702
Telephone: (302) 453 6900

Ht. TOC above ground surface: ~~2.46~~ 2.24 Ft.
Well Number: 2 Casing intact? Yes_____ No_____
Monitoring Well Cap Locked? Yes_____ No_____
Casing Material: PVC_____ Steel_____ Other_____

M) Static DTW (TOC) 16.90 Ft. 8.56
N) Total Depth (TD) (TOC) ~~35.67~~ 25.46 Ft.
O) Ht. H20 Column=B-A= ~~35.67~~ 25.46 - _____ = 16.77 Ft.
P) Conversion factor from H2O column to gallons for 2 @ I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= ~~3.06~~ 1.39 gal.
R) Vol. H2O to remove from well=(Circle one used) 4.6 min 2 min
3XE= ~~9.19~~ 4.19 =gal.
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type wp 4012 Rate 2 gpm
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes_____ No ✓
After how many gallons were removed?_____
If well went dry, how long did it take to recover before samples were taken?_____
Estimated depth samples were taken from=_____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 16.6 oC
Temperature (stabilized) 13.7 oC

Sp. Cond. (Initial) 283 umhos
Sp. Cond. (Stabilized) 297 umhos

D/S

D.O. (Inital) 8.86
D.O. (Stabilized) 9.38

pH (initial) 4.66 S.U.
pH (stabilized) 4.89 S.U.

Time Taken: 1240 / 1245

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: milky Odor: N/A Clarity: cloudy

Comments: TEST for: Nitrate, Nitrite, TN, Ammonia, Total Phosphorus, Chloride, Sodium, Fecal Coliform, Total Coliform, TDS

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	230315	Matrix:	Ground Water	Sample Start:	6/16/17 14:26
Description:		Site:	MW - 2	SampleEnd:	
Type:	Grab			Date Received:	6/16/17 15:14

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	6/16/17 15:30	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	6/16/17 15:30	HJG	SM9222-B
Metals					
Sodium	mg/L	4.3	6/19/17 12:53	JMW	SM3111-B
Minerals					
Chloride	mg/L	19.8	6/16/17 20:08	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	6/20/17 13:20	JMW	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	11.2	6/16/17 20:08	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.16	6/21/17 13:29	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	11.4	6/26/17 12:58	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	6/21/17 13:22	CC	SM4500-P-F(w/Dig)
Physical					
Total Dissolved Solids @ 180 C	mg/L	206	6/20/17 16:30	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

230815

SAMPLING LOG

Date: 6/14/17
Site: ANSWRF WWTP
Monitoring Well Permit No.: 254882

Sampler(s): MK
Company: Artesian Wastewater Management Inc.
Address: 664 Churchmans Rd. Newark DE 19702
Telephone: (302) 453 6900

Ht. TOC above ground surface: ~~2.46~~ 2.24 Ft.
Well Number: 2 Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC Steel Other

M) Static DTW (TOC) 16.46 Ft. 8.98
N) Total Depth (TD) (TOC) ~~35.67~~ 25.46 Ft.
O) Ht. H20 Column=B-A= ~~35.67~~ 25.46 - = 16.49 Ft.
P) Conversion factor from H2O column to gallons for 2 @ I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.13 1.47 gal.
R) Vol. H2O to remove from well=(Circle one used)
3XE= ~~9.80~~ 4.4 =gal. ~~4.5 min~~ 3 min
5XE= =gal.

EVACUATION METHOD: Pump Purge Type wp 4012 Rate 2 gpm
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No ✓
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 17.3 oC
Temperature (stabilized) 16.3 oC

Sp. Cond. (Initial) 310 umhos
Sp. Cond. (Stabilized) 272 umhos

D.O. (Inital) 8.31
D.O. (Stabilized) 8.71

pH (initial) 7.29 S.U.
pH (stabilized) 7.56 S.U.

Time Taken: 14:22 / 14:26

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: None Odor: N/A Clarity: Clear

Comments: TEST for: Nitrate, Nitrite, TN, Ammonia, Total Phosphorus, Chloride, Sodium, Fecal Coliform, Total Coliform, TDS

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID: 237147 | Matrix: Ground Water | Sample Start: 9/29/17 13:57
Description: | Site: MW - 2 | SampleEnd:
Type: Grab | Date Received: 9/29/17 15:20

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	9/29/17 16:00	HJG3	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	9/29/17 16:00	HJG3	SM9222-B
Metals					
Sodium	mg/L	12.0	10/4/17 16:38	JMW	SM3111-B
Minerals					
Chloride	mg/L	23.9	9/29/17 17:40	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	0.06	10/3/17 11:55	CC	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	12.7	9/29/17 17:40	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.27	10/4/17 12:32	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	13.0	10/6/17 10:38	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	10/4/17 12:36	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.57	9/29/17 13:57	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	17.03	9/29/17 13:57	CLT	None
pH-field	SU	4.65	9/29/17 13:57	CLT	150.1
Specific Conductance - field	umhos/cm	6.47	9/29/17 13:57	CLT	SM2510-B
Temperature-field	oC	17.2	9/29/17 13:57	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	162	10/5/17 18:19	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

237147

SAMPLING LOG

Date: 9/29/17
Site: ANSRWRF
Monitoring Well Permit No: 254882

Sampler(s): RP MK JS
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: ~~2.5~~ 2.24 Ft.
Well Number: 2 Casing intact? Yes X No
Monitoring Well Cap Locked? Yes Y No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 17.03 Ft.
N) Total Depth (TD) (TOC) ~~19.85~~ 25.46 Ft.
O) Ht. H20 Column= (N-M) = - = 8.43 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 1.37 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 4.12 =gal. 2 min
5XE= =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No X
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 17.4 oC
Temperature (stabilized) 17.2 oC

Sp. Cond. (Initial) 6.99 umhos
Sp. Cond. (Stabilized) 6.47 umhos

Dissolved Oxygen (Initial) 7.87 mg/l
Dissolved Oxygen (Stabilized) 8.57 mg/l

PH (initial) 7.57 S.U.
PH (stabilized) 4.65 S.U.

Time Taken: 1355 / 1357

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: Brown Odor: N/A Clarity: Cloudy
Comments: Test for – Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Coliforms Fecal Coliform, Total Phosphorus, Sodium, Chloride, Total Dissolved Solids

ENVIROCORP LABS SINCE 1984

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID: 240625 | Matrix: Ground Water | Sample Start: 11/16/17 11:17
Description: | Site: MW - 2L | SampleEnd:
Type: Grab | Date Received: 11/16/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	11/16/17 15:30	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	11/16/17 15:30	RD	SM9222-B
Metals					
Sodium	mg/L	13.7	11/30/17 16:09	JMW	SM3111-B
Minerals					
Chloride	mg/L	22.3	11/17/17 17:28	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	11/28/17 12:51	CC	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	16.9	11/17/17 17:28	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.19	11/30/17 16:22	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	17.1	12/1/17 10:16	RLF	Calc
Total Phosphorus as P	mg/L	0.08	11/30/17 16:10	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.59	11/16/17 11:17	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	17.49	11/16/17 11:17	CLT	None
pH-field	SU	5.06	11/16/17 11:17	CLT	150.1
Specific Conductance - field	umhos/cm	289	11/16/17 11:17	CLT	SM2510-B
Temperature-field	oC	16.1	11/16/17 11:17	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	226	11/22/17 14:45	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

240625

SAMPLING LOG

Date: 11/16/17
Site: ANSRWRF
Monitoring Well Permit No: 254882

Sampler(s): RR
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 2.24 Ft.
Well Number: 2L Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 17.49 Ft.
N) Total Depth (TD) (TOC) 25.46 Ft.
O) Ht. H20 Column= (N-M) = _____ - _____ = 7.97 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 1.3 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 3.9 =gal. 1.95
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No _____
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 16.1 oC
Temperature (stabilized) 16.1 oC

Sp. Cond. (Initial) 307 umhos
Sp. Cond. (Stabilized) 289 umhos

Dissolved Oxygen (Initial) 8.73 mg/l
Dissolved Oxygen (Stabilized) 8.69 mg/l

PH (initial) 5.87 S.U.
PH (stabilized) 5.06 S.U.

Time Taken: 1117

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: orange / brown Odor: none Clarity: cloudy
Comments: Test for – Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Coliforms, Fecal Coliform, Total Phosphorus, Sodium, Chloride, Total Dissolved Solids

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244882	Matrix:	Ground Water	Sample Start:	2/1/18 12:43
Description:	254882	Site:	MW - 2L	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	RD	SM9222-B
Metals					
Arsenic	mg/L	0.0052	2/7/18 10:46	JMW	EPA 200.8
Cadmium	mg/L	0.0046	2/7/18 10:46	JMW	EPA 200.8
Chromium	mg/L	0.0012	2/7/18 10:46	JMW	EPA 200.8
Copper	mg/L	0.014	2/7/18 10:46	JMW	EPA 200.8
Iron	mg/L	1.3	2/7/18 10:46	JMW	EPA 200.8
Lead	mg/L	0.036	2/7/18 10:46	JMW	EPA 200.8
Manganese	mg/L	0.109	2/7/18 10:46	JMW	EPA 200.8
Mercury	mg/L	<0.00020	2/21/18 15:50	SLI	EPA 245.1
Nickel	mg/L	0.0071	2/7/18 10:46	JMW	EPA 200.8
Selenium	mg/L	0.0049	2/7/18 10:46	JMW	EPA 200.8
Sodium	mg/L	7.8	2/7/18 10:46	JMW	EPA 200.8
Zinc	mg/L	0.052	2/7/18 10:46	JMW	EPA 200.8
Minerals					
Chloride	mg/L	22.5	2/2/18 13:37	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	94.0	2/2/18 14:51	RON	SM2340-C
Sulfate	mg/L	26.1	2/2/18 13:37	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	2/6/18 13:32	CC	SM4500-NH3-G
Nitrate as N	mg/L	17.5	2/2/18 13:37	HJG	EPA 300.0
Nitrite as N	mg/L	<0.10	2/2/18 13:37	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.41	2/13/18 13:45	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.41	2/12/18 15:49	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	17.9	2/13/18 13:45	SLB	Calc
Total Phosphorus as P	mg/L	0.58	2/12/18 15:33	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244882	Matrix:	Ground Water	Sample Start:	2/1/18 12:43
Description:	254882	Site:	MW - 2L	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.46	2/1/18 12:43	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	18.14	2/1/18 12:43	CLT	None
pH-field	SU	4.82	2/1/18 12:43	CLT	150.1
Specific Conductance - field	umhos/cm	312	2/1/18 12:43	CLT	SM2510-B
Temperature-field	oC	14.2	2/1/18 12:43	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	212	2/7/18 12:00	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	7950	2/7/18 14:52	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

254882

SAMPLING LOG

Date: 2/1/18
Site: ANSRWRF
Monitoring Well Permit No: 254882

Sampler(s): SH + MB
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.24 Ft.
Well Number: 2L Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 18.14 Ft.
N) Total Depth (TD) (TOC) 25.46 Ft.
O) Ht. H20 Column= (N-M) = _____ - 18.14 = 7.32 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 11.95 gal.
R) Vol. H2O to remove from well = (Circle one used) 2 min
3XE= 3.58 =gal.
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial)	13.9	oC
Temperature (stabilized)	14.2	oC
Sp. Cond. (Initial)	320	umhos
Sp. Cond. (Stabilized)	312	umhos
Dissolved Oxygen (Initial)	9.55	mg/l
Dissolved Oxygen (Stabilized)	8.46	mg/l
PH (initial)	4.86	S.U.
PH (stabilized)	4.82	S.U.
Time Taken:	5 12:41	12:43 F

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: LITE GRAY Odor: — Clarity: MURKY
~~Comments: Test for – Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Coliforms, Fecal Coliform, Total Phosphorus~~, Sodium, Chloride, Total Dissolved Solids

See attached for full listing of parameters

2/1/18 16:16 MBoyce
RNolan 2/1/18 1616

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	248127	Matrix:	Ground Water	Sample Start:	3/26/18 10:57
Description:	254882	Site:	MW - 2L	SampleEnd:	
Type:	Grab			Date Received:	3/26/18 15:05

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/26/18 16:45	HJG3	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/26/18 16:45	HJG3	SM9222-B
Metals					
Arsenic	mg/L	0.0042	4/5/18 10:52	JMW	EPA 200.8
Cadmium	mg/L	0.0032	4/5/18 10:52	JMW	EPA 200.8
Chromium	mg/L	0.0010	4/5/18 10:52	JMW	EPA 200.8
Copper	mg/L	0.011	4/5/18 10:52	JMW	EPA 200.8
Iron	mg/L	0.834	4/5/18 10:52	JMW	EPA 200.8
Lead	mg/L	0.026	4/5/18 10:52	JMW	EPA 200.8
Manganese	mg/L	0.11	4/5/18 10:52	JMW	EPA 200.8
Mercury	mg/L	<0.00020	4/2/18 15:53	SLI	EPA 245.1
Nickel	mg/L	0.0048	4/5/18 10:52	JMW	EPA 200.8
Selenium	mg/L	0.0033	4/5/18 10:52	JMW	EPA 200.8
Sodium	mg/L	7.1	4/5/18 10:52	JMW	EPA 200.8
Zinc	mg/L	0.036	4/5/18 10:52	JMW	EPA 200.8
Minerals					
Chloride	mg/L	26.7	3/27/18 16:43	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	103	3/27/18 12:30	HB	SM2340-C
Sulfate	mg/L	28.6	3/27/18 16:43	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/28/18 12:28	CC	SM4500-NH3-G
Nitrate as N	mg/L	17.1	3/27/18 16:43	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/27/18 16:43	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.25	4/3/18 14:29	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.25	4/2/18 13:54	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	17.4	4/3/18 14:29	RLF	Calc
Total Phosphorus as P	mg/L	0.36	4/2/18 15:40	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	248127	Matrix:	Ground Water	Sample Start:	3/26/18 10:57
Description:	254882	Site:	MW - 2L	SampleEnd:	
Type:	Grab			Date Received:	3/26/18 15:05

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.25	3/26/18 10:57	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	17.55	3/26/18 10:57	CLT	None
pH-field	SU	5.02	3/26/18 10:57	CLT	150.1
Specific Conductance - field	umhos/cm	314	3/26/18 10:57	CLT	SM2510-B
Temperature-field	oC	10.6	3/26/18 10:57	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	248	3/30/18 12:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	3440	3/27/18 19:52	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

248127

SAMPLING LOG

Date: 3/26/18
Site: ANSRWRF
Monitoring Well Permit No: 254882
Sampler(s): Morgan Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.24 Ft.
Well Number: 2L Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 17.55 Ft.
N) Total Depth (TD) (TOC) 25.46 Ft.
O) Ht. H20 Column= (N-M) = - = 7.91 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 1.29 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 3.87 =gal. 5XE= =gal. 2 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 ✓GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:	
Temperature	11.8	oC	10.6	oC
Sp. Cond.	359	umhos	314	umhos
Dissolved Oxygen	10.0	mg/L	9.25	mg/L
PH	4.93	S.U.	5.02	S.U.
Start Time	10.55		10:57	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: lt orange Odor: none Clarity: cloudy

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

Morgan Boyer 3/26/18 1505

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID: 250541 | Matrix: Ground Water | Sample Start: 5/1/18 11:50
Description: | Site: MW - 2L [254882] | SampleEnd:
Type: Grab | Date Received: 5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-B
Metals					
Arsenic	mg/L	0.0021	5/9/18 10:55	JMW	EPA 200.8
Cadmium	mg/L	0.0023	5/9/18 10:55	JMW	EPA 200.8
Chromium	mg/L	<0.0010	5/9/18 10:55	JMW	EPA 200.8
Copper	mg/L	0.0044	5/9/18 10:55	JMW	EPA 200.8
Iron	mg/L	0.350	5/9/18 10:55	JMW	EPA 200.8
Lead	mg/L	0.013	5/9/18 10:55	JMW	EPA 200.8
Manganese	mg/L	0.072	5/9/18 10:55	JMW	EPA 200.8
Mercury	mg/L	<0.00020	5/10/18 16:31	SWL	EPA 245.1
Nickel	mg/L	0.0045	5/9/18 10:55	JMW	EPA 200.8
Selenium	mg/L	0.0026	5/9/18 10:55	JMW	EPA 200.8
Sodium	mg/L	9.1	5/9/18 10:55	JMW	EPA 200.8
Zinc	mg/L	0.022	5/9/18 10:55	JMW	EPA 200.8
Minerals					
Chloride	mg/L	25.0	5/2/18 12:04	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	92.0	5/1/18 14:55	MJM	SM2340-C
Sulfate	mg/L	26.9	5/2/18 12:04	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/7/18 13:39	CC	SM4500-NH3-G
Nitrate as N	mg/L	15.9	5/2/18 12:04	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/2/18 12:04	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.08	5/11/18 14:11	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.08	5/9/18 14:32	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	16.0	5/11/18 14:11	RLF	Calc
Total Phosphorus as P	mg/L	0.09	5/9/18 16:13	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250541	Matrix:	Ground Water	Sample Start:	5/1/18 11:50
Description:		Site:	MW - 2L [254882]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.87	5/1/18 11:50	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	17.10	5/1/18 11:50	CLT	None
pH-field	SU	4.76	5/1/18 11:50	CLT	150.1
Specific Conductance - field	umhos/cm	301	5/1/18 11:50	CLT	SM2510-B
Temperature-field	oC	14.7	5/1/18 11:50	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	242	5/4/18 14:33	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	3330	5/2/18 10:21	HJG	SM2540-D
QA/QC					
Total Suspended Solids @103-105 C (Stan	% Var.	4.23	5/2/18 10:21	HJG	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

250841

SAMPLING LOG

Date: 5-1-18
Site: ANSRWRF
Monitoring Well Permit No: 254882 ✓
Sampler(s): Noreen Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.24 Ft.
Well Number: 2L ✓ Casing intact? Yes ✓ No ____
Monitoring Well Cap Locked? Yes ✓ No ____
Casing Material: PVC X Steel ____ Other ____

M) Static DTW (TOC) 17.10 Ft.
N) Total Depth (TD) (TOC) 25.46 Ft.
O) Ht. H20 Column= (N-M) = ____ - ____ = 8.36 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 1.36 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 4.09 =gal. 5XE= ____ =gal. 2 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes ____ No ✓ After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? ____
Estimated depth samples were taken from= ____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:	
Temperature	16.2 oC		Temperature	14.7 oC
Sp. Cond.	2816 umhos		Sp. Cond.	3.01 umhos
Dissolved Oxygen	8.36 mg/L		Dissolved Oxygen	8.87 mg/L
PH	4.80 S.U.		PH	4.76 S.U.
Start Time	11:48		Start Time	11:50

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: lt grey Odor: none Clarity: cloudy

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab
Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

5/1/18 1455

EW

ENVIROCORP LABS SINCE 1981

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244879	Matrix:	Ground Water	Sample Start:	2/1/18 13:24
Description:	258633	Site:	MW - 3F	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	RD	SM9222-B
Metals					
Arsenic	mg/L	0.0013	2/7/18 10:24	JMW	EPA 200.8
Cadmium	mg/L	0.00075	2/7/18 10:24	JMW	EPA 200.8
Chromium	mg/L	<0.0010	2/7/18 10:24	JMW	EPA 200.8
Copper	mg/L	0.0011	2/7/18 10:24	JMW	EPA 200.8
Iron	mg/L	0.344	2/7/18 10:24	JMW	EPA 200.8
Lead	mg/L	<0.0010	2/7/18 10:24	JMW	EPA 200.8
Manganese	mg/L	0.032	2/7/18 10:24	JMW	EPA 200.8
Mercury	mg/L	<0.00020	2/21/18 15:50	SLI	EPA 245.1
Nickel	mg/L	0.0061	2/7/18 10:24	JMW	EPA 200.8
Selenium	mg/L	0.0015	2/7/18 10:24	JMW	EPA 200.8
Sodium	mg/L	12.7	2/7/18 10:24	JMW	EPA 200.8
Zinc	mg/L	0.019	2/7/18 10:24	JMW	EPA 200.8
Minerals					
Chloride	mg/L	30.6	2/1/18 23:31	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	108	2/2/18 14:51	RON	SM2340-C
Sulfate	mg/L	38	2/1/18 23:31	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	2/6/18 13:32	CC	SM4500-NH3-G
Nitrate as N	mg/L	17.7	2/1/18 23:31	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	2/1/18 23:31	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.29	2/13/18 13:44	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.29	2/12/18 15:49	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	18.0	2/13/18 13:44	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	2/12/18 15:33	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244879	Matrix:	Ground Water	Sample Start:	2/1/18 13:24
Description:	258633	Site:	MW - 3F	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.74	2/1/18 13:24	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	15.09	2/1/18 13:24	CLT	None
pH-field	SU	4.66	2/1/18 13:24	CLT	150.1
Specific Conductance - field	umhos/cm	379	2/1/18 13:24	CLT	SM2510-B
Temperature-field	oC	14.7	2/1/18 13:24	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	254	2/7/18 12:00	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	<3.3	2/7/18 14:52	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

244879

SAMPLING LOG

Date: 2/1/19
Site: ANSRWRF
Monitoring Well Permit No.: 258633

Sampler(s): S. H + M.B
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.98 Ft.
Well Number: 3F Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 15.09 Ft.
N) Total Depth (TD) (TOC) 31.94 Ft.
O) Ht. H20 Column = (N-M) = 31.94 - 15.09 = 16.85 Ft.
P) Conversion factor from H2O column to gallons for 4" I.D. Well= 0.6528
Q) Vol. H2O in Well=CXD= 10.99 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 32.99 =gal.
5XE= =gal.

17 MIN.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No ✓
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 14.3 oC
Temperature (stabilized) 14.7 oC

Sp. Cond. (Initial) 383 umhos
Sp. Cond. (Stabilized) 379 umhos

Dissolved Oxygen (Initial) 8.04 mg/l
Dissolved Oxygen (Stabilized) 7.74 mg/l

PH (initial) 4.60 S.U.
PH (stabilized) 4.66 S.U.

Time Taken: 1:07 1:24

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: strong orange at start Odor: — Clarity: murky at start
Comments: Test for – Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc.

became clear a minute later

see attached for full list of parameters

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	248129	Matrix:	Ground Water	Sample Start:	3/26/18 11:43
Description:	258633	Site:	MW - 3F	SampleEnd:	
Type:	Grab			Date Received:	3/26/18 15:05

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/26/18 16:45	HJG3	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/26/18 16:45	HJG3	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	4/5/18 11:25	JMW	EPA 200.8
Cadmium	mg/L	0.00056	4/5/18 11:25	JMW	EPA 200.8
Chromium	mg/L	<0.0010	4/5/18 11:25	JMW	EPA 200.8
Copper	mg/L	<0.0010	4/5/18 11:25	JMW	EPA 200.8
Iron	mg/L	0.224	4/5/18 11:25	JMW	EPA 200.8
Lead	mg/L	<0.0010	4/5/18 11:25	JMW	EPA 200.8
Manganese	mg/L	0.035	4/5/18 11:25	JMW	EPA 200.8
Mercury	mg/L	<0.00020	4/2/18 16:07	SLI	EPA 245.1
Nickel	mg/L	0.0044	4/5/18 11:25	JMW	EPA 200.8
Selenium	mg/L	<0.0010	4/5/18 11:25	JMW	EPA 200.8
Sodium	mg/L	13.7	4/5/18 11:25	JMW	EPA 200.8
Zinc	mg/L	0.0099	4/5/18 11:25	JMW	EPA 200.8
Minerals					
Chloride	mg/L	35.2	3/27/18 16:43	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	113	3/27/18 12:30	HB	SM2340-C
Sulfate	mg/L	39.9	3/27/18 16:43	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/28/18 12:28	CC	SM4500-NH3-G
Nitrate as N	mg/L	22.3	3/27/18 16:43	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/27/18 16:43	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.16	4/3/18 14:29	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.16	4/2/18 13:54	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	22.5	4/3/18 14:29	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	4/2/18 15:40	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	248129	Matrix:	Ground Water	Sample Start:	3/26/18 11:43
Description:	258633	Site:	MW - 3F	SampleEnd:	
Type:	Grab			Date Received:	3/26/18 15:05

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.63	3/26/18 11:43	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	13.83	3/26/18 11:43	CLT	None
pH-field	SU	4.78	3/26/18 11:43	CLT	150.1
Specific Conductance - field	umhos/cm	399	3/26/18 11:43	CLT	SM2510-B
Temperature-field	oC	11.8	3/26/18 11:43	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	302	3/30/18 12:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	2.4	3/27/18 19:52	RON	SM2540-D
QA/QC					
Chloride (% Recovery)	% Rec.	87.0	3/27/18 16:43	HJG	EPA 300.0
Chloride (Standard Deviation)	% Var.	0.47	3/27/18 16:43	HJG	EPA 300.0
Nitrate as N (% Recovery)	% Rec.	83.6	3/27/18 16:43	HJG	EPA 300.0
Nitrate as N (Standard Deviation)	% Var.	0.44	3/27/18 16:43	HJG	EPA 300.0
Nitrite as N (% Recovery)	% Rec.	100.7	3/27/18 16:43	HJG	EPA 300.0
Sulfate (% Recovery)	% Rec.	86.5	3/27/18 16:43	HJG	EPA 300.0
Sulfate (Standard Deviation)	% Var.	0.77	3/27/18 16:43	HJG	EPA 300.0

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

SAMPLING LOG

248/29

Date: 3/26/18
Site: ANSRWRF
Monitoring Well Permit No.: 258633 ✓
Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.98 Ft.
Well Number: 3F Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 13.83 Ft.
N) Total Depth (TD) (TOC) 31.94 Ft.
O) Ht. H20 Column = (N-M) = _____ - _____ = 18.11 Ft.
P) Conversion factor from H2O column to gallons for 4" I.D. Well= 0.6528
Q) Vol. H2O in Well=CXD= 11.82 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 35.47 gal. 5XE= _____ =gal. 12 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 ℓ GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes _____ No ✓ After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:		
Temperature	9.2	oC	Temperature	11.8	oC
Sp. Cond.	398	umhos	Sp. Cond.	399	umhos
Dissolved Oxygen	9.47	mg/L	Dissolved Oxygen	8.63	mg/L
PH	4.81	S.U.	PH	4.78	S.U.
Start Time	11:31		Start Time	11:43	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: lt orange became clear Odor: none Clarity: cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

Monica Boyer 3/26/18 1505

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID: 251556 | Matrix: Ground Water | Sample Start: 5/14/18 12:17
Description: | Site: MW - 3F [258633] | SampleEnd:
Type: Grab | Date Received: 5/14/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	5/14/18 15:25	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	5/14/18 15:25	RD	SM9222-B
Metals					
Arsenic	mg/L	0.0026	5/23/18 12:52	JMW	EPA 200.8
Cadmium	mg/L	0.0012	5/23/18 12:52	JMW	EPA 200.8
Chromium	mg/L	0.0010	5/23/18 12:52	JMW	EPA 200.8
Copper	mg/L	<0.0010	5/23/18 12:52	JMW	EPA 200.8
Iron	mg/L	0.222	5/23/18 12:52	JMW	EPA 200.8
Lead	mg/L	0.0011	5/23/18 12:52	JMW	EPA 200.8
Manganese	mg/L	0.039	5/23/18 12:52	JMW	EPA 200.8
Mercury	mg/L	<0.00020	5/24/18 16:15	SLI	EPA 245.1
Nickel	mg/L	0.0044	5/23/18 12:52	JMW	EPA 200.8
Selenium	mg/L	<0.0010	5/23/18 12:52	JMW	EPA 200.8
Sodium	mg/L	14	5/23/18 12:52	JMW	EPA 200.8
Zinc	mg/L	0.013	5/23/18 12:52	JMW	EPA 200.8
Minerals					
Chloride	mg/L	35.0	5/15/18 17:32	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	118	5/15/18 14:00	ML	SM2340-C
Sulfate	mg/L	41.5	5/15/18 17:32	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/17/18 13:33	CC	SM4500-NH3-G
Nitrate as N	mg/L	21.8	5/15/18 17:32	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/15/18 17:32	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.2	5/25/18 18:31	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.20	5/24/18 16:03	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	22.0	5/25/18 18:31	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/24/18 15:31	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	251556	Matrix:	Ground Water	Sample Start:	5/14/18 12:17
Description:		Site:	MW - 3F [258633]	SampleEnd:	
Type:	Grab			Date Received:	5/14/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.90	5/14/18 12:17	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	13.86	5/14/18 12:17	CLT	None
pH-field	SU	4.64	5/14/18 12:17	CLT	150.1
Specific Conductance - field	umhos/cm	376	5/14/18 12:17	CLT	SM2510-B
Temperature-field	oC	13.3	5/14/18 12:17	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	266	5/18/18 16:34	RON	SM2540-C
Total Suspended Solids @103-105 C	mg/L	5.6	5/15/18 14:20	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

251556

SAMPLING LOG

Date: 5.14.18
Site: ANSRWRF
Monitoring Well Permit No.: 258633

Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.98 Ft.
Well Number: 3F Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 13.86 Ft.
N) Total Depth (TD) (TOC) 31.94 Ft.
O) Ht. H2O Column = (N-M) = _____ - _____ = 18.08 Ft.
P) Conversion factor from H2O column to gallons for 4" I.D. Well= 0.6528
Q) Vol. H2O in Well=CXD= 11.80 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE=35.40=gal. 5XE=_____=gal. 12 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3/2 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes _____ No ✓ After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from=_____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:		
Temperature	14.7	oC	Temperature	13.3	oC
Sp. Cond.	368	umhos	Sp. Cond.	376	umhos
Dissolved Oxygen	7.74	mg/L	Dissolved Oxygen	7.90	mg/L
PH	4.68	S.U.	PH	4.64	S.U.
Start Time	12:05		Start Time	12:17	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: Hi. orange became clear Odor: none Clarity: Cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

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ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238531	Matrix:	Ground Water	Sample Start:	10/18/17 13:14
Description:		Site:	MW - 3G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	10/30/17 11:02	JMW	EPA 200.8
Cadmium	mg/L	0.00056	10/30/17 11:02	JMW	EPA 200.8
Chromium	mg/L	<0.0010	10/30/17 11:02	JMW	EPA 200.8
Copper	mg/L	<0.0010	10/30/17 11:02	JMW	EPA 200.8
Iron	mg/L	0.405	10/30/17 11:02	JMW	EPA 200.8
Lead	mg/L	0.0043	10/30/17 11:02	JMW	EPA 200.8
Manganese	mg/L	0.023	10/30/17 11:02	JMW	EPA 200.8
Mercury	mg/L	<0.00020	11/3/17 17:30	SWL	EPA 245.1
Nickel	mg/L	0.0054	10/30/17 11:02	JMW	EPA 200.8
Selenium	mg/L	0.0012	10/30/17 11:02	JMW	EPA 200.8
Sodium	mg/L	9.2	10/30/17 11:02	JMW	EPA 200.8
Zinc	mg/L	0.013	10/30/17 11:02	JMW	EPA 200.8
Minerals					
Chloride	mg/L	27.5	10/19/17 15:34	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	113	10/20/17 15:55	ML	SM2340-C
Sulfate	mg/L	37.3	10/19/17 15:34	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	10/19/17 13:02	CC	SM4500-NH3-G
Nitrate as N	mg/L	13.3	10/19/17 15:34	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	10/19/17 15:34	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.12	10/25/17 10:12	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.12	10/24/17 16:43	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	13.4	10/25/17 10:12	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	10/24/17 16:23	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238531	Matrix:	Ground Water	Sample Start:	10/18/17 13:14
Description:		Site:	MW - 3G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	6.71	10/18/17 13:14	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	12.02	10/18/17 13:14	CLT	None
pH-field	SU	4.61	10/18/17 13:14	CLT	150.1
Specific Conductance - field	umhos/cm	311	10/18/17 13:14	CLT	SM2510-B
Temperature-field	oC	15.7	10/18/17 13:14	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	200	10/24/17 16:50	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	85.0	10/19/17 14:45	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

238531.

SAMPLING LOG

Date: 10/18/17
Site: ANSRWRF
Monitoring Well Permit No.: 258630

Sampler(s): SH. JS
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 1.89 Ft.
Well Number: 3G Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 12.02 Ft.
N) Total Depth (TD) (TOC) 31.71 Ft.
O) Ht. H20 Column = (N-M) = _____ - 12.02 = 19.69 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.21 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 9.64 =gal.
5XE= _____ =gal.

4 MIN.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial)	16.4 15.7	oC
Temperature (stabilized)	_____	oC
Sp. Cond. (Initial)	277 311	umhos
Sp. Cond. (Stabilized)	_____	umhos
Dissolved Oxygen (Initial)	5.93	mg/l
Dissolved Oxygen (Stabilized)	6.71	mg/l
PH (initial)	5.05 4.61	S.U.
PH (stabilized)	_____	S.U.
Time Taken:	13:10 S/ 13:14 E.	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: MULTI WHITE Odor: NO Clarity: CLEAR @ SAMPLE TIME
Comments: Test for – Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc.

ENVIROCORP LABS SINCE 1981

51 Clark St. Harrington, DE 19952
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ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247158	Matrix:	Ground Water	Sample Start:	3/9/18 11:53
Description:		Site:	MW - 3G	SampleEnd:	
Type:	Grab			Date Received:	3/9/18 15:13

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/9/18 16:03	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/9/18 16:03	HJG	SM9222-B
Metals					
Arsenic	mg/L	0.0011	3/15/18 10:11	JMW	EPA 200.8
Cadmium	mg/L	0.00061	3/15/18 10:11	JMW	EPA 200.8
Chromium	mg/L	<0.0010	3/15/18 10:11	JMW	EPA 200.8
Copper	mg/L	<0.0010	3/15/18 10:11	JMW	EPA 200.8
Iron	mg/L	0.252	3/15/18 10:11	JMW	EPA 200.8
Lead	mg/L	<0.0010	3/15/18 10:11	JMW	EPA 200.8
Manganese	mg/L	0.023	3/15/18 10:11	JMW	EPA 200.8
Mercury	mg/L	<0.00020	3/15/18 17:34	SLI	EPA 245.1
Nickel	mg/L	0.0051	3/15/18 10:11	JMW	EPA 200.8
Selenium	mg/L	0.002	3/15/18 10:11	JMW	EPA 200.8
Sodium	mg/L	10.4	3/15/18 10:11	JMW	EPA 200.8
Zinc	mg/L	0.012	3/15/18 10:11	JMW	EPA 200.8
Minerals					
Chloride	mg/L	41.5	3/13/18 16:52	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	126	3/13/18 12:00	HB	SM2340-C
Sulfate	mg/L	42.9	3/13/18 16:52	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/15/18 14:43	CC	SM4500-NH3-G
Nitrate as N	mg/L	14.7	3/10/18 20:24	ML	EPA 300.0
Nitrite as N	mg/L	<0.10	3/10/18 20:24	ML	EPA 300.0
Organic Nitrogen as N	mg/L	0.17	3/23/18 16:57	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.17	3/20/18 15:58	JW	SM4500-Norg-C
Total Nitrogen as N	mg/L	14.9	3/22/18 9:56	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	3/20/18 17:43	JW	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247158	Matrix:	Ground Water	Sample Start:	3/9/18 11:53
Description:		Site:	MW - 3G	SampleEnd:	
Type:	Grab			Date Received:	3/9/18 15:13

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.51	3/9/18 11:53	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	10.86	3/9/18 11:53	CLT	None
pH-field	SU	4.99	3/9/18 11:53	CLT	150.1
Specific Conductance - field	umhos/cm	375	3/9/18 11:53	CLT	SM2510-B
Temperature-field	oC	13.6	3/9/18 11:53	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	276	3/14/18 17:10	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	43.6	3/14/18 13:28	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

247158

SAMPLING LOG

Date: 3/9/18
Site: ANSRWRF
Monitoring Well Permit No.: 258630

Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.89 Ft.
Well Number: 3G Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 10.86 Ft.
N) Total Depth (TD) (TOC) 31.71 Ft.
O) Ht. H20 Column = (N-M) = 31.71 - 10.86 = 20.85 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.40 gal.
R) Vol. H2O to remove from well= (Circle one used) 4 mins
3XE= 10.21 =gal. 5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓ After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 13.3 oC
Temperature (stabilized) 13.6 oC

Sp. Cond. (Initial) 376 umhos
Sp. Cond. (Stabilized) 375 umhos

Dissolved Oxygen (Initial) 9.96 mg/l
Dissolved Oxygen (Stabilized) 9.51 mg/l

PH (initial) 4.96 S.U.
PH (stabilized) 4.99 S.U.

Time Taken: initial 11:49 stabilized time 11:53 AM

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: lt. Orange Odor: none Clarity: cloudy became clear
Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

R. Nunlan
3/9/18 1513

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249957	Matrix:	Ground Water	Sample Start:	4/20/18 11:39
Description:	258630	Site:	MW - 3G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HM	SM9222-B
Metals					
Arsenic	mg/L	0.0081	4/25/18 15:22	HJG3	EPA 200.8
Cadmium	mg/L	0.0019	4/25/18 15:22	HJG3	EPA 200.8
Chromium	mg/L	<0.0010	4/25/18 15:22	HJG3	EPA 200.8
Copper	mg/L	<0.0010	4/25/18 15:22	HJG3	EPA 200.8
Iron	mg/L	0.230	4/25/18 15:22	HJG3	EPA 200.8
Lead	mg/L	0.0013	4/25/18 15:22	HJG3	EPA 200.8
Manganese	mg/L	0.022	4/25/18 15:22	HJG3	EPA 200.8
Mercury	mg/L	<0.00020	5/8/18 11:20	SLI	EPA 245.1
Nickel	mg/L	0.0063	4/25/18 15:22	HJG3	EPA 200.8
Selenium	mg/L	0.0031	4/25/18 15:22	HJG3	EPA 200.8
Sodium	mg/L	9.4	4/25/18 15:22	HJG3	EPA 200.8
Zinc	mg/L	0.013	4/25/18 15:22	HJG3	EPA 200.8
Minerals					
Chloride	mg/L	42.2	4/20/18 22:25	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	140	4/21/18 13:31	ML	SM2340-C
Sulfate	mg/L	45.2	4/20/18 22:25	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	4/26/18 14:06	CC	SM4500-NH3-G
Nitrate as N	mg/L	17.5	4/20/18 22:25	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	4/20/18 22:25	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.29	5/2/18 14:30	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.29	5/2/18 12:12	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	17.8	5/2/18 14:30	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/2/18 14:49	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249957	Matrix:	Ground Water	Sample Start:	4/20/18 11:39
Description:	258630	Site:	MW - 3G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	6.01	4/20/18 11:39	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	10.64	4/20/18 11:39	CLT	None
pH-field	SU	4.92	4/20/18 11:39	CLT	150.1
Specific Conductance - field	umhos/cm	380	4/20/18 11:39	CLT	SM2510-B
Temperature-field	oC	13.7	4/20/18 11:39	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	260	4/26/18 11:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	24.2	4/24/18 13:54	RON	SM2540-D
QA/QC					
Total Suspended Solids @103-105 C (Stan	% Var.	4.96	4/24/18 13:54	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

2499567

SAMPLING LOG

Date: 4/20/18
Site: ANSRWRF
Monitoring Well Permit No.: 258630 ✓
Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.89 Ft.
Well Number: 3G ✓ Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 10.64 Ft.
N) Total Depth (TD) (TOC) 31.71 Ft.
O) Ht. H20 Column = (N-M) = - = 21.07 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.44 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 10.32 =gal. 5XE= =gal. 4 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 2/GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:		
Temperature	13.6	oC	Temperature	13.7	oC
Sp. Cond.	386	umhos	Sp. Cond.	380	umhos
Dissolved Oxygen	5.64	mg/L	Dissolved Oxygen	6.01	mg/L
PH	4.96	S.U.	PH	4.92	S.U.
Start Time	11:35		Start Time	11:39	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: milky white became lighter Odor: none Clarity: Cloudy became clearer

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	225535	Matrix:	Ground Water	Sample Start:	3/30/17 12:59
Description:	254883	Site:	MW - 3	SampleEnd:	
Type:	Grab			Date Received:	3/30/17 15:08

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/30/17 16:05	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/30/17 16:05	RD	SM9222-B
Metals					
Sodium	mg/L	7.06	4/5/17 10:13	JW	SM3111-B
Minerals					
Chloride	mg/L	28.0	3/31/17 19:41	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	4/3/17 12:13	CC	SM4500-NH3-G
Nitrate as N	mg/L	10.4	3/31/17 19:41	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/31/17 19:41	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.12	4/6/17 15:54	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	10.5	4/7/17 8:56	KLS	Calc
Total Phosphorus as P	mg/L	<0.05	4/6/17 15:53	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.28	3/30/17 12:59	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	12.33	3/30/17 12:59	CLT	None
pH-field	SU	4.77	3/30/17 12:59	CLT	150.1
Specific Conductance - field	umhos/cm	298	3/30/17 12:59	CLT	SM2510-B
Temperature-field	oC	11.5	3/30/17 12:59	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	188	4/4/17 15:52	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	225536	Matrix:	Ground Water	Sample Start:	3/30/17 12:59
Description:	Duplicate of 225535	Site:	MW - 3	SampleEnd:	
Type:	Grab			Date Received:	3/30/17 15:08

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/30/17 16:05	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/30/17 16:05	RD	SM9222-B
Metals					
Sodium	mg/L	7.06	4/5/17 10:13	JW	SM3111-B
Minerals					
Chloride	mg/L	27.7	3/31/17 19:41	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	4/3/17 12:13	CC	SM4500-NH3-G
Nitrate as N	mg/L	10.8	3/31/17 19:41	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/31/17 19:41	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.09	4/6/17 15:54	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	10.9	4/7/17 8:57	KLS	Calc
Total Phosphorus as P	mg/L	<0.05	4/6/17 15:53	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.28	3/30/17 12:59	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	12.33	3/30/17 12:59	CLT	None
pH-field	SU	4.77	3/30/17 12:59	CLT	150.1
Specific Conductance - field	umhos/cm	298	3/30/17 12:59	CLT	SM2510-B
Temperature-field	oC	11.5	3/30/17 12:59	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	180	4/4/17 15:52	HM	SM2540-C
QA/QC					
Ammonia as N (% Recovery)	% Rec.	104.4	4/3/17 12:13	CC	SM4500-NH3-G
Chloride (% Recovery)	% Rec.	96.4	3/31/17 19:41	HJG	EPA 300.0
Nitrate as N (% Recovery)	% Rec.	70.6	3/31/17 19:41	HJG	EPA 300.0
Nitrite as N (% Recovery)	% Rec.	97.8	3/31/17 19:41	HJG	EPA 300.0

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	225536	Matrix:	Ground Water	Sample Start:	3/30/17 12:59
Description:	Duplicate of 225535	Site:	MW - 3	SampleEnd:	
Type:	Grab			Date Received:	3/30/17 15:08

Parameters	Units	Results	Analyzed	By	Method
QA/QC					
Sodium (% Recovery)	% Rec.	104.7	4/5/17 10:13	JW	SM3111-B
Total Kjeldahl Nitrogen (% Recovery)	% Rec.	115.6	4/6/17 15:54	CC	SM4500-Norg-C
Total Phosphorus as P (% Recovery)	% Rec.	98.0	4/6/17 15:53	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

225535/225536

SAMPLING LOG

Date: 3/30/17
Site: ANSWRF WWTP
Monitoring Well Permit No.: ~~225~~ 257883

Sampler(s): MKondelis II RPlack
Company: Artesian Wastewater Management Inc.
Address: 664 Churcumans Rd. Newark DE. 19702
Telephone: (302) 453 6900

Ht. TOC above ground surface: ~~2.19~~ 1.91 Ft.
Well Number: 3 Casing intact? Yes X No
Monitoring Well Cap Locked? Yes X No
Casing Material: PVC Steel Other

M) Static DTW (TOC) 12.33 Ft.
N) Total Depth (TD) (TOC) ~~30.69~~ 25.51 Ft. 13.18
O) Ht. H20 Column=B-A= ~~30.69~~ 25.51 - = ~~18.36~~ Ft.
P) Conversion factor from H2O column to gallons for 2 @ I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= ~~2.99~~ 2.15 gal.
R) Vol. H2O to remove from well=(Circle one used)
3XE= ~~8.99~~ 6.45 =gal. 4.5 min 3.5 min
5XE= =gal.

EVACUATION METHOD: Pump Purge Type wp4012 Rate 2 gpm
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No X
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

D/S

Temperature (initial) 12.2 oC
Temperature (stabilized) 11.5 oC

Sp. Cond. (Initial) 240 umhos
Sp. Cond. (Stabilized) 254 umhos

D.O. (Inital) 9.04
D.O. (Stabilized) 5.28

pH (initial) 4.91 S.U.
pH (stabilized) 7.17 S.U.

Time Taken: 1255 / 1259

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: milky Odor: N/A Clarity: Cloudy

Comments: TEST for: Nitrate, Nitrite, TN, Ammonia, Total Phosphorus, Chloride, Sodium, Fecal Coliform, Total Coliform, TDS

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	227919	Matrix:	Ground Water	Sample Start:	5/9/17 12:18
Description:		Site:	MW - 3	SampleEnd:	
Type:	Grab			Date Received:	5/9/17 14:14

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	5/9/17 16:00	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	5/9/17 16:00	RON	SM9222-B
Metals					
Sodium	mg/L	4.9	5/17/17 14:56	JW	SM3111-B
Minerals					
Chloride	mg/L	25.2	5/10/17 13:01	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/16/17 14:06	CC	SM4500-NH3-G
Nitrate as N	mg/L	9.99	5/10/17 13:01	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/10/17 13:01	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.10	5/17/17 13:55	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	10.1	5/17/17 15:45	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/17/17 12:38	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.84	5/9/17 12:18	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	12.79	5/9/17 12:18	CLT	None
pH-field	SU	3.81	5/9/17 12:18	CLT	150.1
Specific Conductance - field	umhos/cm	333	5/9/17 12:18	CLT	SM2510-B
Temperature-field	oC	13.6	5/9/17 12:18	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	178	5/11/17 11:30	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

227919

SAMPLING LOG

Date: 5-9-17
Site: ANSWRF WWTP
Monitoring Well Permit No.: ~~21157~~ 25-41883

Sampler(s):
Company: Artesian Wastewater Management Inc.
Address: 664 Churcumans Rd. Newark DE. 19702
Telephone: (302) 453 6900

Ht. TOC above ground surface: ~~2.19~~ 1.91 Ft.
Well Number: 3 Casing intact? Yes No
Monitoring Well Cap Locked? Yes No
Casing Material: PVC Steel Other

M) Static DTW (TOC) 12.79 Ft. 1 12.72
N) Total Depth (TD) (TOC) ~~30.69~~ 25.51 Ft.
O) Ht. H20 Column=B-A= ~~30.69~~ 25.51 - = ~~17.9~~ Ft.
P) Conversion factor from H2O column to gallons for 2 @ I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= ~~2.92~~ 2.08 gal.
R) Vol. H2O to remove from well=(Circle one used) 4.38 3.5 min.
3XE= ~~8.76~~ 6.23 =gal.
5XE= =gal.

EVACUATION METHOD: Pump Purge Type wp4012 Rate 2 gpm
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No ✓
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 13.8 oC
Temperature (stabilized) 13.6 oC

Sp. Cond. (Initial) 272 umhos
Sp. Cond. (Stabilized) 303 umhos

D.O. (Inital) 8.77
D.O. (Stabilized) 8.84

pH (initial) 4.95 S.U.
pH (stabilized) 3.81 S.U.

Time Taken: 1214 1218

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: milky Odor: N/A Clarity: Cloudy

Comments: TEST for: Nitrate, Nitrite, TN, Ammonia, Total Phosphorus, Chloride, Sodium, Fecal Coliform, Total Coliform, TDS

R. Needam 5/9/17
1414

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	230316	Matrix:	Ground Water	Sample Start:	6/16/17 14:07
Description:		Site:	MW - 3	SampleEnd:	
Type:	Grab			Date Received:	6/16/17 15:14

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	6/16/17 15:30	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	6/16/17 15:30	HJG	SM9222-B
Metals					
Sodium	mg/L	7.6	6/19/17 12:53	JMW	SM3111-B
Minerals					
Chloride	mg/L	21.0	6/16/17 20:08	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	6/20/17 13:20	JMW	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	7.95	6/16/17 20:08	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.17	6/21/17 13:29	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	8.12	6/26/17 12:58	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	6/21/17 13:22	CC	SM4500-P-F(w/Dig)
Physical					
Total Dissolved Solids @ 180 C	mg/L	200	6/20/17 16:30	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	230317	Matrix:	Ground Water	Sample Start:	6/16/17 14:07
Description:	Duplicate of 230316	Site:	MW - 3	SampleEnd:	
Type:	Grab			Date Received:	6/16/17 15:14

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	6/16/17 15:30	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	6/16/17 15:30	HJG	SM9222-B
Metals					
Sodium	mg/L	7.6	6/19/17 12:53	JMW	SM3111-B
Minerals					
Chloride	mg/L	20.7	6/16/17 20:08	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	6/20/17 13:20	JMW	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	8.27	6/16/17 20:08	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.14	6/21/17 13:29	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	8.41	6/26/17 12:58	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	6/21/17 13:22	CC	SM4500-P-F(w/Dig)
Physical					
Total Dissolved Solids @ 180 C	mg/L	194	6/20/17 16:30	HM	SM2540-C
QA/QC					
Ammonia as N (% Recovery)	% Rec.	97.7	6/20/17 13:20	JMW	SM4500-NH3-G
Chloride (% Recovery)	% Rec.	91.6	6/16/17 20:08	HJG	EPA 300.0
Nitrate+Nitrite as N (% Recovery)	% Rec.	94.8	6/16/17 20:08	HJG	EPA 300.0
Sodium (% Recovery)	% Rec.	102.9	6/19/17 12:53	JMW	SM3111-B
Total Kjeldahl Nitrogen (% Recovery)	% Rec.	102.2	6/21/17 13:29	CC	SM4500-Norg-C
Total Phosphorus as P (% Recovery)	% Rec.	86.6	6/21/17 13:22	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

230316/230317

DUP

SAMPLING LOG

Date: 6/16/17
Site: ANSWRF WWTP
Monitoring Well Permit No.: ~~21157~~ 254863

Sampler(s): M/C
Company: Artesian Wastewater Management Inc.
Address: 664 Churcumans Rd. Newark DE. 19702
Telephone: (302) 453 6900

Ht. TOC above ground surface: ~~2.19~~ 1.91 Ft.
Well Number: 3 Casing intact? Yes X No
Monitoring Well Cap Locked? Yes X No
Casing Material: PVC Steel Other

M) Static DTW (TOC) 13.07 Ft.
N) Total Depth (TOC) ~~30.69~~ 25.51 Ft.
O) Ht. H20 Column=B-A= ~~30.69~~ 25.51 - 12.44 = ~~16.62~~ 17.52 Ft.
P) Conversion factor from H2O column to gallons for 2 @ I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= ~~4.87~~ 2.03 gal.
R) Vol. H2O to remove from well=(Circle one used)
3XE= ~~4.89~~ ~~5.71~~ 6.09 =gal. 2.5 min 3 min
5XE= =gal.

EVACUATION METHOD: Pump Purge Type wp4012 Rate 2 gpm
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes ~~XX~~ No X
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 16.8 oC
Temperature (stabilized) 16.6 oC

Sp. Cond. (Initial) 285 umhos
Sp. Cond. (Stabilized) 285 umhos

D.O. (Inital) 7.59
D.O. (Stabilized) 7.65

pH (initial) 4.53 S.U.
pH (stabilized) 4.46 S.U.

Time Taken: 1705 / 1707

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: light yellow Odor: n/A Clarity: cloudy

Comments: TEST for: Nitrate, Nitrite, TN, Ammonia, Total Phosphorus, Chloride, Sodium, Fecal Coliform, Total Coliform, TDS

ENVIROCORP LABS SINCE 1984

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	237148	Matrix:	Ground Water	Sample Start:	9/29/17 14:10
Description:		Site:	MW - 3	SampleEnd:	
Type:	Grab			Date Received:	9/29/17 15:20

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	9/29/17 16:00	HJG3	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	9/29/17 16:00	HJG3	SM9222-B
Metals					
Sodium	mg/L	5.9	10/4/17 16:38	JMW	SM3111-B
Minerals					
Chloride	mg/L	17.9	9/29/17 17:40	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	0.11	10/3/17 11:55	CC	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	5.91	9/29/17 17:40	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.38	10/4/17 12:32	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	6.29	10/5/17 18:41	KLS	Calc
Total Phosphorus as P	mg/L	<0.05	10/4/17 12:36	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.68	9/29/17 14:10	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	13.00	9/29/17 14:10	CLT	None
pH-field	SU	4.49	9/29/17 14:10	CLT	150.1
Specific Conductance - field	umhos/cm	5.70	9/29/17 14:10	CLT	SM2510-B
Temperature-field	oC	17.9	9/29/17 14:10	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	170	10/5/17 18:19	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

237148

SAMPLING LOG

Date: 9/27/17
Site: ANSRWRF
Monitoring Well Permit No: 254883

Sampler(s): RP MKJ JS
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: ~~2.8~~ 1.91 Ft.
Well Number: 3 Casing intact? Yes X No _____
Monitoring Well Cap Locked? Yes X No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 13.60 Ft.
N) Total Depth (TD) (TOC) ~~26.5~~ 25.51 Ft.
O) Ht. H20 Column= (N-M) = _____ - _____ = 12.51 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.04 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 6.12 =gal. 3 min
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No X
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 17.1 oC
Temperature (stabilized) 17.9 oC

Sp. Cond. (Initial) 5.66 umhos
Sp. Cond. (Stabilized) 5.70 umhos

Dissolved Oxygen (Initial) 7.65 mg/l
Dissolved Oxygen (Stabilized) 7.68 mg/l

PH (initial) 4.53 S.U.
PH (stabilized) 4.49 S.U.

Time Taken: 1407 / 1410

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: light Brown Odor: N/A Clarity: Cloudy
Comments: Test for – Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Coliforms Fecal Coliform, Total Phosphorus, Sodium, Chloride, Total Dissolved Solids

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	240626	Matrix:	Ground Water	Sample Start:	11/16/17 11:52
Description:		Site:	MW - 3L	SampleEnd:	
Type:	Grab			Date Received:	11/16/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	11/16/17 15:30	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	11/16/17 15:30	RD	SM9222-B
Metals					
Sodium	mg/L	7.4	11/30/17 16:09	JMW	SM3111-B
Minerals					
Chloride	mg/L	18.3	11/17/17 17:28	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	11/28/17 12:51	CC	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	7.44	11/17/17 17:28	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.13	11/30/17 16:22	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	7.57	12/1/17 10:16	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	11/30/17 16:10	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.07	11/16/17 11:52	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	1.91	11/16/17 11:52	CLT	None
pH-field	SU	5.02	11/16/17 11:52	CLT	150.1
Specific Conductance - field	umhos/cm	242	11/16/17 11:52	CLT	SM2510-B
Temperature-field	oC	15.8	11/16/17 11:52	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	164	11/22/17 14:45	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

240026

SAMPLING LOG

Date: 11/16/17
Site: ANSRWRF
Monitoring Well Permit No: 254883

Sampler(s): CR
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 1.91 Ft.
Well Number: 3L Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 13.06 Ft.
N) Total Depth (TD) (TOC) 25.51 Ft.
O) Ht. H20 Column= (N-M) = _____ - _____ = 12.45 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.03 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 6.09 =gal. 3 min
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 15.8 oC
Temperature (stabilized) _____ oC

Sp. Cond. (Initial) 242 umhos
Sp. Cond. (Stabilized) _____ umhos

Dissolved Oxygen (Initial) 7.07 mg/l
Dissolved Oxygen (Stabilized) _____ mg/l

PH (initial) 5.02 S.U.
PH (stabilized) _____ S.U.

Time Taken: 1149 / 1152

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: Lt Brown Odor: none Clarity: muddy
Comments: Test for – Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Coliforms, Fecal Coliform, Total Phosphorus, Sodium, Chloride, Total Dissolved Solids

ENVIROCORP LABS SINCE 1981

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244883	Matrix:	Ground Water	Sample Start:	2/1/18 12:28
Description:	254883	Site:	MW - 3L	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	RD	SM9222-B
Metals					
Arsenic	mg/L	0.0020	2/7/18 10:51	JMW	EPA 200.8
Cadmium	mg/L	0.0012	2/7/18 10:51	JMW	EPA 200.8
Chromium	mg/L	0.0017	2/7/18 10:51	JMW	EPA 200.8
Copper	mg/L	0.0055	2/7/18 10:51	JMW	EPA 200.8
Iron	mg/L	1.4	2/7/18 10:51	JMW	EPA 200.8
Lead	mg/L	0.0098	2/7/18 10:51	JMW	EPA 200.8
Manganese	mg/L	0.255	2/7/18 10:51	JMW	EPA 200.8
Mercury	mg/L	<0.00020	2/21/18 15:50	SLI	EPA 245.1
Nickel	mg/L	0.0056	2/7/18 10:51	JMW	EPA 200.8
Selenium	mg/L	<0.0010	2/7/18 10:51	JMW	EPA 200.8
Sodium	mg/L	5.1	2/7/18 10:51	JMW	EPA 200.8
Zinc	mg/L	0.042	2/7/18 10:51	JMW	EPA 200.8
Minerals					
Chloride	mg/L	16.8	2/2/18 13:37	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	70.0	2/2/18 14:51	RON	SM2340-C
Sulfate	mg/L	48.9	2/2/18 13:37	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	2/6/18 13:32	CC	SM4500-NH3-G
✓ Nitrate as N	mg/L	7.32	2/2/18 13:37	HJG	EPA 300.0
Nitrite as N	mg/L	<0.10	2/2/18 13:37	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.29	2/13/18 13:46	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.29	2/12/18 15:49	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	7.61	2/13/18 13:46	SLB	Calc
Total Phosphorus as P	mg/L	0.16	2/12/18 15:33	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244883	Matrix:	Ground Water	Sample Start:	2/1/18 12:28
Description:	254883	Site:	MW - 3L	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.29	2/1/18 12:28	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	13.71	2/1/18 12:28	CLT	None
pH-field	SU	4.93	2/1/18 12:28	CLT	150.1
Specific Conductance - field	umhos/cm	245	2/1/18 12:28	CLT	SM2510-B
Temperature-field	oC	13.4	2/1/18 12:28	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	162	2/7/18 12:00	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	10010	2/7/18 14:52	RON	SM2540-D
QA/QC					
Total Suspended Solids @103-105 C (Stan	% Var.	6.39	2/7/18 14:52	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

254883

SAMPLING LOG

Date: 2/1/18
Site: ANSRWRF
Monitoring Well Permit No: 254883

Sampler(s): S.A. B.A.
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: ✓ 1.91 Ft.
Well Number: 3L Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 13.71 Ft.
N) Total Depth (TD) (TOC) 25.51 Ft.
O) Ht. H20 Column= (N-M) = - 13.71 = 11.80 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 1.93 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 5.78 =gal.
5XE= =gal.

3 MIN

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No ✓
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial)	13.1	oC
Temperature (stabilized)	13.4	oC
Sp. Cond. (Initial)	243	umhos
Sp. Cond. (Stabilized)	245	umhos
Dissolved Oxygen (Initial)	8.36	mg/l
Dissolved Oxygen (Stabilized)	8.29	mg/l
PH (initial)	5.02	S.U.
PH (stabilized)	4.93	S.U.
Time Taken: S	12:25 / 12:28	

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: Milky grey Odor: — Clarity: became dk. orangy
Comments: ~~Test for: Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Coliforms, Fecal Coliform, Total Phosphorus, Sodium, Chloride, Total Dissolved Solids~~

see attached for full list of parameters

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247709	Matrix:	Ground Water	Sample Start:	3/19/18 14:07
Description:	254883	Site:	MW - 3L	SampleEnd:	
Type:	Grab			Date Received:	3/19/18 15:35

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	3/19/18 16:40	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	3/19/18 16:40	HM	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	3/29/18 11:19	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	3/29/18 11:19	JMW	EPA 200.8
Chromium	mg/L	0.0019	3/29/18 11:19	JMW	EPA 200.8
Copper	mg/L	0.0013	3/29/18 11:19	JMW	EPA 200.8
Iron	mg/L	0.905	3/29/18 11:19	JMW	EPA 200.8
Lead	mg/L	0.0012	3/29/18 11:19	JMW	EPA 200.8
Manganese	mg/L	0.140	3/29/18 11:19	JMW	EPA 200.8
Mercury	mg/L	<0.00020	4/2/18 8:49	SLI	EPA 245.1
Nickel	mg/L	0.0029	3/29/18 11:19	JMW	EPA 200.8
Selenium	mg/L	<0.0010	3/29/18 11:19	JMW	EPA 200.8
Sodium	mg/L	4.7	3/29/18 11:19	JMW	EPA 200.8
Zinc	mg/L	0.011	3/29/18 11:19	JMW	EPA 200.8
Minerals					
Chloride	mg/L	17.4	3/20/18 17:44	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	80.0	3/20/18 14:21	ML	SM2340-C
Sulfate	mg/L	47.6	3/20/18 17:44	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/22/18 12:09	CC	SM4500-NH3-G
Nitrate as N	mg/L	6.94	3/20/18 17:44	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/20/18 17:44	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	3/28/18 10:48	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	3/27/18 16:09	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<6.99	3/28/18 10:48	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	3/27/18 14:25	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

ENVIROCORP LABS SINCE 1981

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247709	Matrix:	Ground Water	Sample Start:	3/19/18 14:07
Description:	254883	Site:	MW - 3L	SampleEnd:	
Type:	Grab			Date Received:	3/19/18 15:35

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.89	3/19/18 14:07	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	13.89	3/19/18 14:07	CLT	None
pH-field	SU	4.65	3/19/18 14:07	CLT	150.1
Specific Conductance - field	umhos/cm	232	3/19/18 14:07	CLT	SM2510-B
Temperature-field	oC	11.8	3/19/18 14:07	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	150	3/22/18 17:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	513	3/21/18 13:57	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

247709

SAMPLING LOG

Date: 3/19/18
Site: ANSRWRF
Monitoring Well Permit No: 254883

Sampler(s): M Barger
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.91 Ft.
Well Number: 3L Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 13.89 Ft.
N) Total Depth (TD) (TOC) 25.51 Ft.
O) Ht. H20 Column= (N-M) = - = 11.62 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 1.90 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 5.69 =gal. 5XE= =gal. 2 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:

Temperature	11.8	oC
Sp. Cond.	233	umhos
Dissolved Oxygen	8.40	mg/L
PH	5.08	S.U.
Start Time	2:05	

STABILIZED FIELD PARAMETERS:

Temperature		oC
Sp. Cond.	232	umhos
Dissolved Oxygen	8.89	mg/L
PH	4.65	S.U.
Start Time	2:07	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: orange became clearer Odor: none Clarity: cloudy

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	uS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250542	Matrix:	Ground Water	Sample Start:	5/1/18 12:11
Description:		Site:	MW - 3L [254883]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	5/9/18 11:01	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	5/9/18 11:01	JMW	EPA 200.8
Chromium	mg/L	<0.0010	5/9/18 11:01	JMW	EPA 200.8
Copper	mg/L	<0.0010	5/9/18 11:01	JMW	EPA 200.8
Iron	mg/L	0.156	5/9/18 11:01	JMW	EPA 200.8
Lead	mg/L	<0.0010	5/9/18 11:01	JMW	EPA 200.8
Manganese	mg/L	0.172	5/9/18 11:01	JMW	EPA 200.8
Mercury	mg/L	<0.00020	5/10/18 16:31	SWL	EPA 245.1
Nickel	mg/L	0.0025	5/9/18 11:01	JMW	EPA 200.8
Selenium	mg/L	<0.0010	5/9/18 11:01	JMW	EPA 200.8
Sodium	mg/L	6.0	5/9/18 11:01	JMW	EPA 200.8
Zinc	mg/L	0.0058	5/9/18 11:01	JMW	EPA 200.8
Minerals					
Chloride	mg/L	13.2	5/2/18 12:04	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	60.0	5/1/18 14:55	MJM	SM2340-C
Sulfate	mg/L	56.0	5/4/18 14:40	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/7/18 13:39	CC	SM4500-NH3-G
Nitrate as N	mg/L	5.1	5/2/18 12:04	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/2/18 12:04	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.05	5/11/18 14:11	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.05	5/9/18 14:32	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	5.15	5/11/18 14:11	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	5/9/18 16:13	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250542	Matrix:	Ground Water	Sample Start:	5/1/18 12:11
Description:		Site:	MW - 3L [254883]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.56	5/1/18 12:11	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	12.83	5/1/18 12:11	CLT	None
pH-field	SU	4.96	5/1/18 12:11	CLT	150.1
Specific Conductance - field	umhos/cm	215.6	5/1/18 12:11	CLT	SM2510-B
Temperature-field	oC	14.4	5/1/18 12:11	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	166	5/4/18 14:33	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	1830	5/2/18 10:21	HJG	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

250542

SAMPLING LOG

Date: 5-1-18
Site: ANSRWRF
Monitoring Well Permit No: 254883 ✓
Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.91 Ft.
Well Number: 3L ✓ Casing intact? Yes ✓ No ____
Monitoring Well Cap Locked? Yes ✓ No ____
Casing Material: PVC X Steel ____ Other ____

M) Static DTW (TOC) 12.83 Ft.
N) Total Depth (TD) (TOC) 25.51 Ft.
O) Ht. H20 Column= (N-M) = ____ - ____ = 12.68 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.07 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 6.21 =gal. 5XE= ____ =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes ____ No ✓ After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? ____
Estimated depth samples were taken from= ____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:		
Temperature	16.9	oC	Temperature	14.4	oC
Sp. Cond.	219	umhos	Sp. Cond.	215.6	umhos
Dissolved Oxygen	8.27	mg/L	Dissolved Oxygen	9.56	mg/L
PH	4.99	S.U.	PH	4.96	S.U.
Start Time	12:08		Start Time	12:11	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: lt. orange became clearer Odor: none Clarity: Cloudy became clearer

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

5/1/18 1435

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244880	Matrix:	Ground Water	Sample Start:	2/1/18 11:58
Description:	258635	Site:	MW - 4F	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	2/7/18 10:29	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	2/7/18 10:29	JMW	EPA 200.8
Chromium	mg/L	<0.0010	2/7/18 10:29	JMW	EPA 200.8
Copper	mg/L	<0.0010	2/7/18 10:29	JMW	EPA 200.8
Iron	mg/L	0.287	2/7/18 10:29	JMW	EPA 200.8
Lead	mg/L	<0.0010	2/7/18 10:29	JMW	EPA 200.8
Manganese	mg/L	0.0096	2/7/18 10:29	JMW	EPA 200.8
Mercury	mg/L	<0.00020	2/21/18 15:50	SLI	EPA 245.1
Nickel	mg/L	0.0059	2/7/18 10:29	JMW	EPA 200.8
Selenium	mg/L	0.0013	2/7/18 10:29	JMW	EPA 200.8
Sodium	mg/L	5.8	2/7/18 10:29	JMW	EPA 200.8
Zinc	mg/L	0.019	2/7/18 10:29	JMW	EPA 200.8
Minerals					
Chloride	mg/L	23.9	2/1/18 23:31	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	124	2/2/18 14:51	RON	SM2340-C
Sulfate	mg/L	20.0	2/1/18 23:31	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	2/6/18 13:32	CC	SM4500-NH3-G
Nitrate as N	mg/L	24.3	2/2/18 13:37	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	2/1/18 23:31	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	2/13/18 13:45	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	2/12/18 15:49	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<24.4	2/13/18 13:45	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	2/12/18 15:33	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244880	Matrix:	Ground Water	Sample Start:	2/1/18 11:58
Description:	258635	Site:	MW - 4F	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	6.81	2/1/18 11:58	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	6.56	2/1/18 11:58	CLT	None
pH-field	SU	5.49	2/1/18 11:58	CLT	150.1
Specific Conductance - field	umhos/cm	339	2/1/18 11:58	CLT	SM2510-B
Temperature-field	oC	14.0	2/1/18 11:58	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	252	2/7/18 12:00	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	<3.0	2/7/18 14:52	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

24488O

SAMPLING LOG

Date: 2/1/13
Site: ANSRWRF
Monitoring Well Permit No.: 258635

Sampler(s): SH + MB
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.05 Ft.
Well Number: 4F Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 6.56 Ft.
N) Total Depth (TD) (TOC) 30.96 Ft.
O) Ht. H20 Column = (N-M) = 30.96 - 6.56 = 24.4 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.98 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 11.95 =gal.
5XE= _____ =gal.

6 MINS.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 13.4 oC
Temperature (stabilized) 14.0 oC

Sp. Cond. (Initial) 328 umhos
Sp. Cond. (Stabilized) 339 umhos

Dissolved Oxygen (Initial) 7.01 mg/l
Dissolved Oxygen (Stabilized) 6.81 mg/l

PH (initial) 5.62 S.U.
PH (stabilized) 5.49 S.U.

Time Taken: S 11:52 A / 11:58 F.

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: lt orange at start Odor: ✓ Clarity: became clear at sampletime
Comments: Test for – Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc.

See attached for complete listing of parameters

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	248130	Matrix:	Ground Water	Sample Start:	3/26/18 12:31
Description:	258635	Site:	MW - 4F	SampleEnd:	
Type:	Grab			Date Received:	3/26/18 15:05

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/26/18 16:45	HJG3	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/26/18 16:45	HJG3	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	4/5/18 11:36	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	4/5/18 11:36	JMW	EPA 200.8
Chromium	mg/L	<0.0010	4/5/18 11:36	JMW	EPA 200.8
Copper	mg/L	<0.0010	4/5/18 11:36	JMW	EPA 200.8
Iron	mg/L	0.196	4/5/18 11:36	JMW	EPA 200.8
Lead	mg/L	<0.0010	4/5/18 11:36	JMW	EPA 200.8
Manganese	mg/L	0.0087	4/5/18 11:36	JMW	EPA 200.8
Mercury	mg/L	<0.00020	4/2/18 15:57	SLI	EPA 245.1
Nickel	mg/L	0.0049	4/5/18 11:36	JMW	EPA 200.8
Selenium	mg/L	0.0016	4/5/18 11:36	JMW	EPA 200.8
Sodium	mg/L	5.1	4/5/18 11:36	JMW	EPA 200.8
Zinc	mg/L	0.0095	4/5/18 11:36	JMW	EPA 200.8
Minerals					
Chloride	mg/L	25.3	3/27/18 16:43	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	133	3/27/18 12:30	HB	SM2340-C
Sulfate	mg/L	20.1	3/27/18 16:43	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/28/18 12:28	CC	SM4500-NH3-G
Nitrate as N	mg/L	21.8	3/27/18 16:43	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/27/18 16:43	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	4/3/18 14:30	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	4/2/18 13:54	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<21.9	4/3/18 14:30	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	4/2/18 15:40	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	248130	Matrix:	Ground Water	Sample Start:	3/26/18 12:31
Description:	258635	Site:	MW - 4F	SampleEnd:	
Type:	Grab			Date Received:	3/26/18 15:05

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.51	3/26/18 12:31	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	5.29	3/26/18 12:31	CLT	None
pH-field	SU	5.61	3/26/18 12:31	CLT	150.1
Specific Conductance - field	umhos/cm	331	3/26/18 12:31	CLT	SM2510-B
Temperature-field	oC	12.5	3/26/18 12:31	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	252	3/30/18 12:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	7.2	3/27/18 19:52	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

248130

SAMPLING LOG

Date: 3/26/18
Site: ANSRWRF
Monitoring Well Permit No.: 258635 ✓
Sampler(s): Monica Bonzer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.05 Ft.
Well Number: 4F Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 5.29 Ft.
N) Total Depth (TD) (TOC) 30.96 Ft.
O) Ht. H2O Column = (N-M) = - = 25.67 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 4.19 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE=12.57 =gal. 5XE= =gal. 5 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:	
Temperature	11.2	oC	Temperature	12.5 oC
Sp. Cond.	319	umhos	Sp. Cond.	331 umhos
Dissolved Oxygen	6.85	mg/L	Dissolved Oxygen	7.51 mg/L
PH	5.01	S.U.	PH	5.61 S.U.
Start Time	12:26		Start Time	12:31

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: lt. orange became clear Odor: none Clarity: cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	uS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

Monica Bonzer 3/26/18 1505

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID: 251558 | Matrix: Ground Water | Sample Start: 5/14/18 11:34
Description: | Site: MW - 4F [258635] | SampleEnd:
Type: Grab | Date Received: 5/14/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	5/14/18 15:25	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	5/14/18 15:25	RD	SM9222-B
Metals					
Arsenic	mg/L	0.0025	5/23/18 13:03	JMW	EPA 200.8
Cadmium	mg/L	0.00050	5/23/18 13:03	JMW	EPA 200.8
Chromium	mg/L	<0.0010	5/23/18 13:03	JMW	EPA 200.8
Copper	mg/L	0.0042	5/23/18 13:03	JMW	EPA 200.8
Iron	mg/L	0.215	5/23/18 13:03	JMW	EPA 200.8
Lead	mg/L	<0.0010	5/23/18 13:03	JMW	EPA 200.8
Manganese	mg/L	0.0079	5/23/18 13:03	JMW	EPA 200.8
Mercury	mg/L	<0.00020	5/24/18 16:30	SLI	EPA 245.1
Nickel	mg/L	0.0049	5/23/18 13:03	JMW	EPA 200.8
Selenium	mg/L	0.0016	5/23/18 13:03	JMW	EPA 200.8
Sodium	mg/L	6.2	5/23/18 13:03	JMW	EPA 200.8
Zinc	mg/L	0.014	5/23/18 13:03	JMW	EPA 200.8
Minerals					
Chloride	mg/L	27.6	5/15/18 17:32	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	126	5/15/18 14:00	ML	SM2340-C
Sulfate	mg/L	20.2	5/15/18 17:32	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/17/18 13:33	CC	SM4500-NH3-G
Nitrate as N	mg/L	22.1	5/15/18 17:32	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/15/18 17:32	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.1	5/25/18 18:32	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.10	5/24/18 16:03	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	22.2	5/25/18 18:32	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/24/18 15:31	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	251558	Matrix:	Ground Water	Sample Start:	5/14/18 11:34
Description:		Site:	MW - 4F [258635]	SampleEnd:	
Type:	Grab			Date Received:	5/14/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.15	5/14/18 11:34	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	5.03	5/14/18 11:34	CLT	None
pH-field	SU	5.67	5/14/18 11:34	CLT	150.1
Specific Conductance - field	umhos/cm	315	5/14/18 11:34	CLT	SM2510-B
Temperature-field	oC	13.5	5/14/18 11:34	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	252	5/18/18 16:34	RON	SM2540-C
Total Suspended Solids @103-105 C	mg/L	20.4	5/15/18 14:20	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

SAMPLING LOG

251558

Date: 5.14.18
Site: ANSRWRF
Monitoring Well Permit No.: 258635

Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.05 Ft.
Well Number: 4F Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 5.03 Ft.
N) Total Depth (TD) (TOC) 30.96 Ft.
O) Ht. H20 Column = (N-M) = - = 25.93 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 4.23 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE=12.69 =gal. 5XE= =gal. 5 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3/2 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:		
Temperature	14.5	oC	Temperature	13.5	oC
Sp. Cond.	319	umhos	Sp. Cond.	315	umhos
Dissolved Oxygen	6.95	mg/L	Dissolved Oxygen	7.15	mg/L
PH	6.00	S.U.	PH	5.67	S.U.
Start Time	11:29 AM		Start Time	11:34 AM	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: Grey became clear Odor: none Clarity: Cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238534	Matrix:	Ground Water	Sample Start:	10/18/17 13:04
Description:		Site:	MW - 4G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	10/30/17 11:24	JMW	EPA 200.8
Cadmium	mg/L	0.00064	10/30/17 11:24	JMW	EPA 200.8
Chromium	mg/L	<0.0010	10/30/17 11:24	JMW	EPA 200.8
Copper	mg/L	<0.0010	10/30/17 11:24	JMW	EPA 200.8
Iron	mg/L	0.590	10/30/17 11:24	JMW	EPA 200.8
Lead	mg/L	0.0036	10/30/17 11:24	JMW	EPA 200.8
Manganese	mg/L	0.015	10/30/17 11:24	JMW	EPA 200.8
Mercury	mg/L	<0.00020	11/3/17 17:30	SWL	EPA 245.1
Nickel	mg/L	0.0065	10/30/17 11:24	JMW	EPA 200.8
Selenium	mg/L	0.0014	10/30/17 11:24	JMW	EPA 200.8
Sodium	mg/L	4.5	10/30/17 11:24	JMW	EPA 200.8
Zinc	mg/L	0.0032	10/30/17 11:24	JMW	EPA 200.8
Minerals					
Chloride	mg/L	15.1	10/19/17 15:34	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	118	10/20/17 15:55	ML	SM2340-C
Sulfate	mg/L	56.5	10/20/17 20:14	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	10/19/17 13:02	CC	SM4500-NH3-G
Nitrate as N	mg/L	7.76	10/19/17 15:34	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	10/19/17 15:34	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.14	10/25/17 10:15	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.14	10/24/17 16:43	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	7.9	10/25/17 10:15	RLF	Calc
Total Phosphorus as P	mg/L	0.08	10/24/17 16:23	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238534	Matrix:	Ground Water	Sample Start:	10/18/17 13:04
Description:		Site:	MW - 4G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.38	10/18/17 13:04	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	13.55	10/18/17 13:04	CLT	None
pH-field	SU	5.40	10/18/17 13:04	CLT	150.1
Specific Conductance - field	umhos/cm	281	10/18/17 13:04	CLT	SM2510-B
Temperature-field	oC	17.0	10/18/17 13:04	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	182	10/24/17 11:15	HJG	SM2540-C
Total Suspended Solids @103-105 C	mg/L	41.2	10/24/17 9:55	HJG	SM2540-D
QA/QC					
Total Dissolved Solids @ 180 C (Standard	% Var.	0.01	10/24/17 11:15	HJG	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

2385341

SAMPLING LOG

Date: 12/18/17
Site: ANSRWRF
Monitoring Well Permit No.: 258631

Sampler(s): SH, JS
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 2.17 Ft.
Well Number: 4G Casing intact? Yes Y No
Monitoring Well Cap Locked? Yes Y No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 13.55 Ft.
N) Total Depth (TD) (TOC) 31.91 Ft.
O) Ht. H2O Column = (N-M) = - 13.55 = 18.36 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.99 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 8.99 =gal.
5XE= =gal.

3 MIN

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 17.5 oC
Temperature (stabilized) 17.0 oC

Sp. Cond. (Initial) 286 umhos
Sp. Cond. (Stabilized) 281 umhos

Dissolved Oxygen (Initial) 8.26 mg/l
Dissolved Oxygen (Stabilized) 8.38 mg/l

PH (initial) 5.44 S.U.
PH (stabilized) 5.40 S.U.

Time Taken: 13:015 / 13:04 F

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: Cloudy/milky white Odor: No Clarity: clear @ sampletime
Comments: Test for – Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc.

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247159	Matrix:	Ground Water	Sample Start:	3/9/18 11:29
Description:		Site:	MW - 4G	SampleEnd:	
Type:	Grab			Date Received:	3/9/18 15:13

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/9/18 16:03	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/9/18 16:03	HJG	SM9222-B
Metals					
Arsenic	mg/L	0.0013	3/15/18 10:22	JMW	EPA 200.8
Cadmium	mg/L	0.0006	3/15/18 10:22	JMW	EPA 200.8
Chromium	mg/L	<0.0010	3/15/18 10:22	JMW	EPA 200.8
Copper	mg/L	<0.0010	3/15/18 10:22	JMW	EPA 200.8
Iron	mg/L	0.297	3/15/18 10:22	JMW	EPA 200.8
Lead	mg/L	0.001	3/15/18 10:22	JMW	EPA 200.8
Manganese	mg/L	0.013	3/15/18 10:22	JMW	EPA 200.8
Mercury	mg/L	<0.00020	3/15/18 17:36	SLI	EPA 245.1
Nickel	mg/L	0.0053	3/15/18 10:22	JMW	EPA 200.8
Selenium	mg/L	0.0022	3/15/18 10:22	JMW	EPA 200.8
Sodium	mg/L	4.1	3/15/18 10:22	JMW	EPA 200.8
Zinc	mg/L	0.0023	3/15/18 10:22	JMW	EPA 200.8
Minerals					
Chloride	mg/L	17.3	3/10/18 20:24	ML	EPA 300.0
Hardness, Total by Titration	mg/L	113	3/13/18 12:00	HB	SM2340-C
Sulfate	mg/L	55.0	3/10/18 20:24	ML	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/15/18 14:43	CC	SM4500-NH3-G
Nitrate as N	mg/L	8.24	3/10/18 20:24	ML	EPA 300.0
Nitrite as N	mg/L	<0.10	3/10/18 20:24	ML	EPA 300.0
Organic Nitrogen as N	mg/L	0.23	3/23/18 16:57	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.23	3/20/18 15:58	JW	SM4500-Norg-C
Total Nitrogen as N	mg/L	8.47	3/22/18 9:56	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	3/20/18 17:43	JW	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247159	Matrix:	Ground Water	Sample Start:	3/9/18 11:29
Description:		Site:	MW - 4G.	SampleEnd:	
Type:	Grab			Date Received:	3/9/18 15:13

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.69	3/9/18 11:29	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	13.54	3/9/18 11:29	CLT	None
pH-field	SU	5.59	3/9/18 11:29	CLT	150.1
Specific Conductance - field	umhos/cm	284	3/9/18 11:29	CLT	SM2510-B
Temperature-field	oC	13.5	3/9/18 11:29	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	202	3/14/18 17:10	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	49.2	3/14/18 13:28	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

247159

SAMPLING LOG

Date: 3/9/18
Site: ANSRWRF
Monitoring Well Permit No.: 258631

Sampler(s): Monica Boiven
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.17 Ft.
Well Number: 4G Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 13.54 Ft.
N) Total Depth (TD) (TOC) 31.91 Ft.
O) Ht. H20 Column = (N-M) = 31.91 - 13.54 = 18.37 (18.4) Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.003 gal. 3.00 mins
R) Vol. H2O to remove from well= (Circle one used)
3XE= 9.01 =gal. 5XE= =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 13.5 oC
Temperature (stabilized) 13.5 oC

Sp. Cond. (Initial) 291 umhos
Sp. Cond. (Stabilized) 284 umhos

Dissolved Oxygen (Initial) 10.26 mg/l
Dissolved Oxygen (Stabilized) 9.69 mg/l

PH (initial) 5.57 S.U.
PH (stabilized) 5.59 S.U.

Time Taken: start initial 11:26 am start stabilized 11:29 am

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: Mil Key Odor: none Clarity: ~~mildly~~ cloudy became clear at finish
Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

ENVIROCORP LABS SINCE 1981

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249958	Matrix:	Ground Water	Sample Start:	4/20/18 11:25
Description:	258631	Site:	MW - 4G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HM	SM9222-B
Metals					
Arsenic	mg/L	0.0088	4/25/18 15:28	HJG3	EPA 200.8
Cadmium	mg/L	0.0015	4/25/18 15:28	HJG3	EPA 200.8
Chromium	mg/L	<0.0010	4/25/18 15:28	HJG3	EPA 200.8
Copper	mg/L	<0.0010	4/25/18 15:28	HJG3	EPA 200.8
Iron	mg/L	0.300	4/25/18 15:28	HJG3	EPA 200.8
Lead	mg/L	0.0017	4/25/18 15:28	HJG3	EPA 200.8
Manganese	mg/L	0.013	4/25/18 15:28	HJG3	EPA 200.8
Mercury	mg/L	<0.00020	5/8/18 11:20	SLI	EPA 245.1
Nickel	mg/L	0.0069	4/25/18 15:28	HJG3	EPA 200.8
Selenium	mg/L	0.0022	4/25/18 15:28	HJG3	EPA 200.8
Sodium	mg/L	4.2	4/25/18 15:28	HJG3	EPA 200.8
Zinc	mg/L	0.0035	4/25/18 15:28	HJG3	EPA 200.8
Minerals					
Chloride	mg/L	18.6	4/20/18 22:25	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	122	4/21/18 13:31	ML	SM2340-C
Sulfate	mg/L	54.9	4/20/18 22:25	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	4/26/18 14:06	CC	SM4500-NH3-G
Nitrate as N	mg/L	9.31	4/20/18 22:25	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	4/20/18 22:25	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.24	5/2/18 14:31	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.24	5/2/18 12:12	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	9.55	5/2/18 14:31	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/2/18 14:49	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249958	Matrix:	Ground Water	Sample Start:	4/20/18 11:25
Description:	258631	Site:	MW - 4G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.35	4/20/18 11:25	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	12.32	4/20/18 11:25	CLT	None
pH-field	SU	5.56	4/20/18 11:25	CLT	150.1
Specific Conductance - field	umhos/cm	288	4/20/18 11:25	CLT	SM2510-B
Temperature-field	oC	13.6	4/20/18 11:25	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	246	4/26/18 11:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	24.8	4/24/18 13:54	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

249958

SAMPLING LOG

Date: 4/20/18
Site: ANSRWRF ✓
Monitoring Well Permit No.: 258631

Sampler(s): Morris Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.17 Ft.
Well Number: 4G ✓ Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 12.32 Ft.
N) Total Depth (TD) (TOC) 31.91 Ft.
O) Ht. H20 Column = (N-M) = _____ - _____ = 19.59 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.20 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 9.59 =gal. 5XE= _____ =gal. 4 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 ½ GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes _____ No ✓ After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			**STABILIZED** FIELD PARAMETERS:	
Temperature	13.5	oC	Temperature	13.6 oC
Sp. Cond.	289	umhos	Sp. Cond.	288 umhos
Dissolved Oxygen	8.32	mg/L	Dissolved Oxygen	8.35 mg/L
PH	5.65	S.U.	PH	5.56 S.U.
Start Time	~~11:21 A~~		Start Time	~~11:25 A~~

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:-
Color: milky white became clear Odor: none Clarity: cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

Scanned / reused
5/21/18
MB

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51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	225537	Matrix:	Ground Water	Sample Start:	3/30/17 12:45
Description:	254884	Site:	MW - 4	SampleEnd:	
Type:	Grab			Date Received:	3/30/17 15:08

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/30/17 16:05	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	10.0	3/30/17 16:05	RD	SM9222-B
Metals					
Sodium	mg/L	84.5	4/5/17 10:13	JW	SM3111-B
Minerals					
Chloride	mg/L	13.4	3/30/17 17:32	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	4/3/17 12:13	CC	SM4500-NH3-G
Nitrate as N	mg/L	8.75	3/30/17 17:32	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/30/17 17:32	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	1.10	4/6/17 15:54	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	9.85	4/7/17 8:57	KLS	Calc
Total Phosphorus as P	mg/L	0.16	4/6/17 15:53	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.59	3/30/17 12:45	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	6.87	3/30/17 12:45	CLT	None
pH-field	SU	5.54	3/30/17 12:45	CLT	150.1
Specific Conductance - field	umhos/cm	197	3/30/17 12:45	CLT	SM2510-B
Temperature-field	oC	16.9	3/30/17 12:45	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	232	4/4/17 15:52	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

3225537

SAMPLING LOG

Date: 3/16/17
Site: ANSWRF WWTP
Monitoring Well Permit No.: ~~211958~~ 254884

Sampler(s): MKondelis VI RPlack
Company: Artesian Wastewater Management Inc.
Address: 664 Churchmans Rd. Newark DE. 19702
Telephone: (302) 453 6900

Ht. TOC above ground surface: ~~3.12~~ 2.87 Ft.
Well Number: 4 Casing intact? Yes X No
Monitoring Well Cap Locked? Yes X No
Casing Material: PVC Steel Other

M) Static DTW (TOC) 6.87 Ft.
N) Total Depth (TD) (TOC) ~~24.95~~ 21.66 Ft.
O) Ht. H20 Column=B-A= ~~24.95~~ 21.66 - = 14.79 ~~18.08~~ Ft.
P) Conversion factor from H2O column to gallons for 2 @ I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= ~~2.95~~ 2.41 gal.
R) Vol. H2O to remove from well=(Circle one used)
3XE= ~~8.85~~ 7.24 =gal. 4.4 min 4 min
5XE= =gal.

EVACUATION METHOD: Pump Purge Type wp 4102 Rate 2 gpm
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No X
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 12.3 oC
Temperature (stabilized) 16.9 oC

Sp. Cond. (Initial) 214 umhos
Sp. Cond. (Stabilized) 197 umhos

D.O. (Inital) 9.26
D.O. (Stabilized) 8.59

pH (initial) 6.26 S.U.
pH (stabilized) 5.54 S.U.

Time Taken: 1241 / 1245

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: Orange Odor: N/A Clarity: None

Comments: TEST for: Nitrate, Nitrite, TN, Ammonia, Total Phosphorus, Chloride, Sodium, Fecal Coliform, Total Coliform, TDS

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	227920	Matrix:	Ground Water	Sample Start:	5/9/17 12:04
Description:		Site:	MW - 4	SampleEnd:	
Type:	Grab			Date Received:	5/9/17 14:14

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	5/9/17 16:00	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	5/9/17 16:00	RON	SM9222-B
Metals					
Sodium	mg/L	3.7	5/17/17 14:56	JW	SM3111-B
Minerals					
Chloride	mg/L	15.4	5/10/17 13:01	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/16/17 14:06	CC	SM4500-NH3-G
Nitrate as N	mg/L	8.52	5/10/17 13:01	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/10/17 13:01	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.66	5/17/17 13:55	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	9.18	5/17/17 15:45	SLB	Calc
Total Phosphorus as P	mg/L	0.06	5/17/17 12:38	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.22	5/9/17 12:04	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	7.00	5/9/17 12:04	CLT	None
pH-field	SU	5.80	5/9/17 12:04	CLT	150.1
Specific Conductance - field	umhos/cm	197.4	5/9/17 12:04	CLT	SM2510-B
Temperature-field	oC	14.1	5/9/17 12:04	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	298	5/11/17 11:30	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

227920

SAMPLING LOG

Date: 5-9-17
Site: ANSWRF WWTP
Monitoring Well Permit No.: ~~211958~~ 254884

Sampler(s): RMack MKS.
Company: Artesian Wastewater Management Inc.
Address: 664 Churchmans Rd. Newark DE. 19702
Telephone: (302) 453 6900

Ht. TOC above ground surface: ~~3.12~~ 2.81 Ft.
Well Number: 4 Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC Steel Other

M) Static DTW (TOC) 7.00 Ft. 14.66
N) Total Depth (TD) (TOC) ~~24.95~~ 21.66 Ft.
O) Ht. H20 Column=B-A= ~~24.95~~ 21.66 - = 17.95 Ft.
P) Conversion factor from H2O column to gallons for 2 @ I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= ~~2.93~~ 2.39 gal.
R) Vol. H2O to remove from well=(Circle one used)
3XE= 7.18 ~~8.79~~ =gal. 4.395 4 min
5XE= =gal.

EVACUATION METHOD: Pump Purge Type wp 4102 Rate 2 gpm
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No ✓
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 15.5 oC
Temperature (stabilized) 17.1 oC

Sp. Cond. (Initial) 280 umhos
Sp. Cond. (Stabilized) 147.7 umhos

D.O. (Inital) 8.14
D.O. (Stabilized) 7.22

pH (initial) 6.19 S.U.
pH (stabilized) 5.80 S.U.

Time Taken: 1159 1204

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: orange Odor: N/A Clarity: None

Comments: TEST for: Nitrate, Nitrite, TN, Ammonia, Total Phosphorus, Chloride, Sodium, Fecal Coliform, Total Coliform, TDS

ENVIROCORP LABS SINCE 1981

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID: 230318 | Matrix: Ground Water | Sample Start: 6/16/17 13:52
Description: | Site: MW - 4 | SampleEnd:
Type: Grab | Date Received: 6/16/17 15:14

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	6/16/17 15:30	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	6/16/17 15:30	HJG	SM9222-B
Metals					
Sodium	mg/L	4.7	6/19/17 12:53	JMW	SM3111-B
Minerals					
Chloride	mg/L	13.2	6/16/17 20:08	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	6/20/17 13:20	JMW	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	7.76	6/16/17 20:08	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	1.07	6/21/17 13:29	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	8.83	6/26/17 12:58	SLB	Calc
Total Phosphorus as P	mg/L	0.22	6/21/17 13:22	CC	SM4500-P-F(w/Dig)
Physical					
Total Dissolved Solids @ 180 C	mg/L	190	6/20/17 16:30	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

230318

SAMPLING LOG

Date: 5/14/17
Site: ANSWRF WWTP
Monitoring Well Permit No.: ~~211958~~ 254884

Sampler(s): MK
Company: Artesian Wastewater Management Inc.
Address: 664 Churchmans Rd. Newark DE. 19702
Telephone: (302) 453 6900

Ht. TOC above ground surface: ~~3.12~~ 2.87 Ft.
Well Number: 4 Casing intact? Yes X No
Monitoring Well Cap Locked? Yes X No
Casing Material: PVC Steel Other

M) Static DTW (TOC) 7.43 Ft.
N) Total Depth (TD) (TOC) ~~24.95~~ 21.66 Ft.
O) Ht. H20 Column=B-A= ~~24.95~~ 21.66 - = ~~17.52~~ 14.23 Ft.
P) Conversion factor from H2O column to gallons for 2 @ I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= ~~2.85~~ 2.32 gal.
R) Vol. H2O to remove from well=(Circle one used)
3XE= ~~5.56~~ 6.97 =gal. 4 min 3.5 min
5XE= =gal.

EVACUATION METHOD: Pump Purge Type wp 4102 Rate 2 gpm
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No Y
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 18.7 oC
Temperature (stabilized) 17.6 oC

Sp. Cond. (Initial) 236 umhos
Sp. Cond. (Stabilized) 227 umhos

D.O. (Inital) 6.11
D.O. (Stabilized) 5.93

pH (initial) 5.46 S.U.
pH (stabilized) 5.33 S.U.

Time Taken: 1348 / 1352

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: orange Odor: N/A Clarity: Not

Comments: TEST for: Nitrate, Nitrite, TN, Ammonia, Total Phosphorus, Chloride, Sodium, Fecal Coliform, Total Coliform, TDS

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	237149	Matrix:	Ground Water	Sample Start:	9/29/17 14:20
Description:		Site:	MW - 4	SampleEnd:	
Type:	Grab			Date Received:	9/29/17 15:20

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	9/29/17 16:00	HJG3	SM9222-D
Total Coliform Membrane Filter	#/100 mls	4.0	9/29/17 16:00	HJG3	SM9222-B
Metals					
Sodium	mg/L	6.9	10/4/17 16:38	JMW	SM3111-B
Minerals					
Chloride	mg/L	4.48	9/29/17 17:40	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	10/3/17 11:55	CC	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	9.75	9/29/17 17:40	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	2.64	10/4/17 12:32	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	12.4	10/5/17 18:41	KLS	Calc
Total Phosphorus as P	mg/L	0.63	10/4/17 12:36	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	5.55	9/29/17 14:20	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	7.33	9/29/17 14:20	CLT	None
pH-field	SU	5.41	9/29/17 14:20	CLT	150.1
Specific Conductance - field	umhos/cm	4.36	9/29/17 14:20	CLT	SM2510-B
Temperature-field	oC	18.6	9/29/17 14:20	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	176	10/5/17 18:19	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

237149

SAMPLING LOG

Date: 9/29/17
Site: ANSRWRF
Monitoring Well Permit No: 254884

Sampler(s): RP MKJr JS
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: ~~2.5~~ 2.67 Ft.
Well Number: 4 Casing intact? Yes X No ____
Monitoring Well Cap Locked? Yes X No ~~X~~
Casing Material: PVC ____X____ Steel ____ Other ____

M) Static DTW (TOC) 7.33 Ft.
N) Total Depth (TD) (TOC) ~~19.25~~ 21.66 Ft.
O) Ht. H20 Column= (N-M) = 21.66 - ____ = 14.33 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.34 gal.
R) Vol. H2O to remove from well = (Circle one used) 3.5 mins
3XE= 7.02 =gal.
5XE= ____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes ____ No X
After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? ____
Estimated depth samples were taken from= ____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 18.2 oC
Temperature (stabilized) 18.6 oC

Sp. Cond. (Initial) 4.11 umhos
Sp. Cond. (Stabilized) 4.36 umhos

Dissolved Oxygen (Initial) 6.04 mg/l
Dissolved Oxygen (Stabilized) 5.55 mg/l

PH (initial) 5.46 S.U.
PH (stabilized) 5.41 S.U.

Time Taken: 1417 / 1420

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: Orange Brown Odor: None Clarity: None
Comments: Test for – Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Coliforms Fecal Coliform, Total Phosphorus, Sodium, Chloride, Total Dissolved Solids

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID: 240627 Matrix: Ground Water Sample Start: 11/16/17 12:07
Description: Site: MW - 4L SampleEnd:
Type: Grab Date Received: 11/16/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	11/16/17 15:30	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	2.0	11/16/17 15:30	RD	SM9222-B
Metals					
Sodium	mg/L	6.0	11/30/17 16:09	JMW	SM3111-B
Minerals					
Chloride	mg/L	10.8	11/17/17 17:28	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	0.14	11/28/17 12:51	CC	SM4500-NH3-G
Nitrate+Nitrite as N	mg/L	9.02	11/17/17 17:28	HJG	EPA 300.0
Total Kjeldahl Nitrogen	mg/L	0.66	11/30/17 16:22	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	9.68	12/1/17 10:16	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	11/30/17 16:10	CC	SM4500-P-F(w/Dig)
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	5.83	11/16/17 12:07	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	7.18	11/16/17 12:07	CLT	None
pH-field	SU	5.73	11/16/17 12:07	CLT	150.1
Specific Conductance - field	umhos/cm	196.5	11/16/17 12:07	CLT	SM2510-B
Temperature-field	oC	16.4	11/16/17 12:07	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	146	11/22/17 14:45	HM	SM2540-C

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

240627

SAMPLING LOG

Date: 11/16/17
Site: ANSRWRF
Monitoring Well Permit No: 254884

Sampler(s): RM
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 2.87 Ft.
Well Number: 4L Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 7.16 Ft.
N) Total Depth (TD) (TOC) 21.66 Ft.
O) Ht. H20 Column= (N-M) = _____ - _____ = 14.50 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.37 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 7.11 =gal. 3.6 mM
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch ✓

Did well go dry? Yes _____ No _____
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 16.2 oC
Temperature (stabilized) 16.4 oC

Sp. Cond. (Initial) 180.7 umhos
Sp. Cond. (Stabilized) 196.5 umhos

Dissolved Oxygen (Initial) 6.83 mg/l
Dissolved Oxygen (Stabilized) 5.83 mg/l

PH (initial) 5.72 S.U.
PH (stabilized) 5.73 S.U.

Time Taken: 1203 1207

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: orany Odor: none Clarity: Cloudy
Comments: Test for – Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Coliforms Fecal Coliform, Total Phosphorus, Sodium, Chloride, Total Dissolved Solids

ENVIROCORP LABS SINCE 1981

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244884	Matrix:	Ground Water	Sample Start:	2/1/18 11:34
Description:	254884	Site:	MW - 4L	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	RD	SM9222-B
Metals					
Arsenic	mg/L	0.0015	2/7/18 10:57	JMW	EPA 200.8
Cadmium	mg/L	0.0012	2/7/18 10:57	JMW	EPA 200.8
Chromium	mg/L	0.0012	2/7/18 10:57	JMW	EPA 200.8
Copper	mg/L	0.0081	2/7/18 10:57	JMW	EPA 200.8
Iron	mg/L	1.2	2/7/18 10:57	JMW	EPA 200.8
Lead	mg/L	0.021	2/7/18 10:57	JMW	EPA 200.8
Manganese	mg/L	0.018	2/7/18 10:57	JMW	EPA 200.8
Mercury	mg/L	<0.00020	2/21/18 15:50	SLI	EPA 245.1
Nickel	mg/L	0.0045	2/7/18 10:57	JMW	EPA 200.8
Selenium	mg/L	0.0015	2/7/18 10:57	JMW	EPA 200.8
Sodium	mg/L	4.3	2/7/18 10:57	JMW	EPA 200.8
Zinc	mg/L	0.029	2/7/18 10:57	JMW	EPA 200.8
Minerals					
Chloride	mg/L	11.5	2/2/18 13:37	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	46.0	2/2/18 14:51	RON	SM2340-C
Sulfate	mg/L	29.8	2/2/18 13:37	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	2/6/18 13:32	CC	SM4500-NH3-G
Nitrate as N	mg/L	9.20	2/2/18 13:37	HJG	EPA 300.0
Nitrite as N	mg/L	<0.10	2/2/18 13:37	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.79	2/13/18 13:46	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.79	2/12/18 15:49	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	9.99	2/13/18 13:46	SLB	Calc
Total Phosphorus as P	mg/L	0.21	2/12/18 15:33	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244884	Matrix:	Ground Water	Sample Start:	2/1/18 11:34
Description:	254884	Site:	MW - 4L	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	5.61	2/1/18 11:34	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	7.43	2/1/18 11:34	CLT	None
pH-field	SU	5.65	2/1/18 11:34	CLT	150.1
Specific Conductance - field	umhos/cm	196.3	2/1/18 11:34	CLT	SM2510-B
Temperature-field	oC	10.9	2/1/18 11:34	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	130	2/7/18 12:00	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	3550	2/7/18 14:52	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

244884

SAMPLING LOG

Date: 2/1/18
Site: ANSRWRF
Monitoring Well Permit No: 254884

Sampler(s): SH + MB
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.87 Ft.
Well Number: 4L Casing intact? Yes ✓ No ____
Monitoring Well Cap Locked? Yes ✓ No ____
Casing Material: PVC X Steel ____ Other ____

M) Static DTW (TOC) 7.43 Ft.
N) Total Depth (TD) (TOC) 21.66 Ft.
O) Ht. H20 Column= (N-M) = 21.66 - 7.43 = 14.23 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.31 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 6.93 =gal.
5XE= =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes ____ No ✓
After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? ____
Estimated depth samples were taken from= ____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial)	11.4	oC
Temperature (stabilized)	10.9	oC
Sp. Cond. (Initial)	204.5	umhos
Sp. Cond. (Stabilized)	196.3	umhos
Dissolved Oxygen (Initial)	6.50	mg/l
Dissolved Oxygen (Stabilized)	5.61	mg/l
PH (initial)	5.77	S.U.
PH (stabilized)	5.65	S.U.
Time Taken:	11:30 A	11:34 F.

Decontamination Procedure:
Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: Strong orange Odor: at start ✓ Clarity: became light orange and less cloudy at sample time
Comments: Test for – Ammonia, Nitrate + Nitrite, Total Nitrogen, Total Coliforms Fecal Coliform, Total Phosphorus, Sodium, Chloride, Total Dissolved Solids

See attachment for full listing of parameters

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	248131	Matrix:	Ground Water	Sample Start:	3/26/18 12:50
Description:	254884	Site:	MW - 4L	SampleEnd:	
Type:	Grab			Date Received:	3/26/18 15:05

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/26/18 16:45	HJG3	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/26/18 16:45	HJG3	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	4/5/18 11:47	JMW	EPA 200.8
Cadmium	mg/L	0.00055	4/5/18 11:47	JMW	EPA 200.8
Chromium	mg/L	<0.0010	4/5/18 11:47	JMW	EPA 200.8
Copper	mg/L	0.0099	4/5/18 11:47	JMW	EPA 200.8
Iron	mg/L	0.516	4/5/18 11:47	JMW	EPA 200.8
Lead	mg/L	0.024	4/5/18 11:47	JMW	EPA 200.8
Manganese	mg/L	0.022	4/5/18 11:47	JMW	SM3111-B
Mercury	mg/L	0.000434	4/2/18 16:09	SLI	EPA 245.1
Nickel	mg/L	0.0030	4/5/18 11:47	JMW	EPA 200.8
Selenium	mg/L	<0.0010	4/5/18 11:47	JMW	EPA 200.8
Sodium	mg/L	3.1	4/5/18 11:47	JMW	SM3111-B
Zinc	mg/L	0.027	4/5/18 11:47	JMW	EPA 200.8
Minerals					
Chloride	mg/L	9.48	3/27/18 16:43	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	95.0	3/27/18 12:30	HB	SM2340-C
Sulfate	mg/L	25.4	3/27/18 16:43	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/28/18 12:28	CC	SM4500-NH3-G
Nitrate as N	mg/L	8.85	3/27/18 16:43	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/27/18 16:43	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.93	4/3/18 14:30	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.93	4/2/18 13:54	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	9.78	4/3/18 14:30	RLF	Calc
Total Phosphorus as P	mg/L	0.25	4/2/18 15:40	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	248131	Matrix:	Ground Water	Sample Start:	3/26/18 12:50
Description:	254884	Site:	MW - 4L	SampleEnd:	
Type:	Grab			Date Received:	3/26/18 15:05

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	5.94	3/26/18 12:50	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	7.53	3/26/18 12:50	CLT	None
pH-field	SU	5.7	3/26/18 12:50	CLT	150.1
Specific Conductance - field	umhos/cm	185	3/26/18 12:50	CLT	SM2510-B
Temperature-field	oC	9.6	3/26/18 12:50	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	130	3/30/18 12:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	6230	3/27/18 19:52	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

SAMPLING LOG

2458131

Date: 3/26/18
Site: ANSRWRF
Monitoring Well Permit No: 254884

Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.87 Ft.
Well Number: 4L Casing intact? Yes ✓ No ____
Monitoring Well Cap Locked? Yes ✓ No ____
Casing Material: PVC ____X____ Steel ____ Other ____

M) Static DTW (TOC) 7.53 Ft.
N) Total Depth (TD) (TOC) 21.66 Ft.
O) Ht. H20 Column= (N-M) = ____ - ____ = 14.13 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.31 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 6.92 =gal. 5XE= ____ =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3/2 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes ____ No ✓ After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? ____
Estimated depth samples were taken from= ____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:		
Temperature	9.1	oC	Temperature	9.6	oC
Sp. Cond.	170.4	umhos	Sp. Cond.	185	umhos
Dissolved Oxygen	6.8	mg/L	Dissolved Oxygen	5.94	mg/L
PH	5.96	S.U.	PH	5.7	S.U.
Start Time	12:47		Start Time	12:50	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: Orange Odor: none Clarity: Cloudy

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

Monica Boyer 3/26/18 15:05 EM

ENVIROCORP LABS SINCE 1981

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250543	Matrix:	Ground Water	Sample Start:	5/1/18 12:33
Description:		Site:	MW - 4L [254884]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	5/9/18 11:06	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	5/9/18 11:06	JMW	EPA 200.8
Chromium	mg/L	<0.0010	5/9/18 11:06	JMW	EPA 200.8
Copper	mg/L	0.0054	5/9/18 11:06	JMW	EPA 200.8
Iron	mg/L	0.276	5/9/18 11:06	JMW	EPA 200.8
Lead	mg/L	0.0083	5/9/18 11:06	JMW	EPA 200.8
Manganese	mg/L	0.013	5/9/18 11:06	JMW	EPA 200.8
Mercury	mg/L	<0.00020	5/10/18 16:31	SWL	EPA 245.1
Nickel	mg/L	0.0026	5/9/18 11:06	JMW	EPA 200.8
Selenium	mg/L	0.0016	5/9/18 11:06	JMW	EPA 200.8
Sodium	mg/L	4.6	5/9/18 11:06	JMW	EPA 200.8
Zinc	mg/L	0.011	5/9/18 11:06	JMW	EPA 200.8
Minerals					
Chloride	mg/L	9.0	5/2/18 12:04	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	50.0	5/1/18 14:55	MJM	SM2340-C
Sulfate	mg/L	26.7	5/2/18 12:04	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/7/18 13:39	CC	SM4500-NH3-G
Nitrate as N	mg/L	8.11	5/2/18 12:04	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/2/18 12:04	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.51	5/11/18 14:11	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.51	5/9/18 14:32	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	8.62	5/11/18 14:11	RLF	Calc
Total Phosphorus as P	mg/L	0.07	5/9/18 16:13	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250543	Matrix:	Ground Water	Sample Start:	5/1/18 12:33
Description:		Site:	MW - 4L [254884]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	5.21	5/1/18 12:33	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	7.17	5/1/18 12:33	CLT	None
pH-field	SU	5.48	5/1/18 12:33	CLT	150.1
Specific Conductance - field	umhos/cm	168.5	5/1/18 12:33	CLT	SM2510-B
Temperature-field	oC	12.0	5/1/18 12:33	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	128	5/4/18 14:33	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	1310	5/2/18 10:21	HJG	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

250543

SAMPLING LOG

Date: 5.1.18
Site: ANSRWRF
Monitoring Well Permit No: 254884

Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.87 Ft.
Well Number: 4L Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 7.17 Ft.
N) Total Depth (TD) (TOC) 21.66 Ft.
O) Ht. H20 Column= (N-M) = - = 14.49 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.36 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 7.09 =gal. 5XE= =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:		STABILIZED FIELD PARAMETERS:	
Temperature	14.6 oC	Temperature	12.0 oC
Sp. Cond.	146.7 umhos	Sp. Cond.	168.5 umhos
Dissolved Oxygen	6.36 mg/L	Dissolved Oxygen	5.21 mg/L
PH	5.62 S.U.	PH	5.48 S.U.
Start Time	12:30	Start Time	12:33

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: Orange Odor: None Clarity: Cloudy

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

END

5/1/18 1435

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244881	Matrix:	Ground Water	Sample Start:	2/1/18 12:13
Description:	258636	Site:	MW - 5F	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	2/1/18 16:30	RD	SM9222-B
Metals					
Arsenic	mg/L	0.0011	2/7/18 10:40	JMW	EPA 200.8
Cadmium	mg/L	0.00064	2/7/18 10:40	JMW	EPA 200.8
Chromium	mg/L	<0.0010	2/7/18 10:40	JMW	EPA 200.8
Copper	mg/L	<0.0010	2/7/18 10:40	JMW	EPA 200.8
Iron	mg/L	0.324	2/7/18 10:40	JMW	EPA 200.8
Lead	mg/L	<0.0010	2/7/18 10:40	JMW	EPA 200.8
Manganese	mg/L	0.019	2/7/18 10:40	JMW	EPA 200.8
Mercury	mg/L	<0.00020	2/21/18 15:50	SLJ	EPA 245.1
Nickel	mg/L	0.0052	2/7/18 10:40	JMW	EPA 200.8
Selenium	mg/L	0.0024	2/7/18 10:40	JMW	EPA 200.8
Sodium	mg/L	6.4	2/7/18 10:40	JMW	EPA 200.8
Zinc	mg/L	0.038	2/7/18 10:40	JMW	EPA 200.8
Minerals					
Chloride	mg/L	24.4	2/1/18 23:31	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	110	2/2/18 14:51	RON	SM2340-C
Sulfate	mg/L	25.1	2/1/18 23:31	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	2/6/18 13:32	CC	SM4500-NH3-G
Nitrate as N	mg/L	21.9	2/2/18 13:37	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	2/1/18 23:31	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.20	2/13/18 13:45	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.20	2/12/18 15:49	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	22.1	2/13/18 13:45	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	2/12/18 15:33	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	244881	Matrix:	Ground Water	Sample Start:	2/1/18 12:13
Description:	258636	Site:	MW - 5F	SampleEnd:	
Type:	Grab			Date Received:	2/1/18 16:16

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.10	2/1/18 12:13	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	13.36	2/1/18 12:13	CLT	None
pH-field	SU	4.98	2/1/18 12:13	CLT	150.1
Specific Conductance - field	umhos/cm	337	2/1/18 12:13	CLT	SM2510-B
Temperature-field	oC	14.7	2/1/18 12:13	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	222	2/7/18 12:00	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	4.7	2/7/18 14:52	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

244881

SAMPLING LOG

Date: 2/1/18
Site: ANSRWRF
Monitoring Well Permit No.: 258636

Sampler(s): S.H. & M.B
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.99 Ft.
Well Number: 5F Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 13.36 Ft.
N) Total Depth (TD) (TOC) 31.79 Ft.
O) Ht. H20 Column = (N-M) = 31.79 - 13.36 = 18.43 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.99 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 8.95 =gal.
5XE= =gal.

@ 5 MINS

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes No ✓
After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 14.4 oC
Temperature (stabilized) 14.7 oC

Sp. Cond. (Initial) 348 umhos
Sp. Cond. (Stabilized) 337 umhos

Dissolved Oxygen (Initial) 9.21 mg/l
Dissolved Oxygen (Stabilized) 9.10 mg/l

PH (initial) 5.03 S.U.
PH (stabilized) 4.98 S.U.

Time Taken: 5 12:08 / 12:13

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: lt. grey Odor: ✓ Clarity: milky grey
Comments: Test for – Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc.

See attached for complete listing of parameters

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	248132	Matrix:	Ground Water	Sample Start:	3/26/18 0:09
Description:	258636	Site:	MW - 5F	SampleEnd:	
Type:	Grab			Date Received:	3/26/18 15:05

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/26/18 16:45	HJG3	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/26/18 16:45	HJG3	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	4/5/18 14:46	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	4/5/18 14:46	JMW	EPA 200.8
Chromium	mg/L	<0.0010	4/5/18 14:46	JMW	EPA 200.8
Copper	mg/L	<0.0010	4/5/18 14:46	JMW	EPA 200.8
Iron	mg/L	0.207	4/5/18 14:46	JMW	EPA 200.8
Lead	mg/L	<0.0010	4/5/18 14:46	JMW	EPA 200.8
Manganese	mg/L	0.014	4/5/18 14:46	JMW	EPA 200.8
Mercury	mg/L	<0.00020	4/2/18 16:12	SLI	EPA 245.1
Nickel	mg/L	0.0035	4/5/18 14:46	JMW	EPA 200.8
Selenium	mg/L	0.0015	4/5/18 14:46	JMW	EPA 200.8
Sodium	mg/L	6.1	4/5/18 14:46	JMW	EPA 200.8
Zinc	mg/L	0.022	4/5/18 14:46	JMW	EPA 200.8
Minerals					
Chloride	mg/L	25.9	3/27/18 16:43	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	107	3/27/18 12:30	HB	SM2340-C
Sulfate	mg/L	25.7	3/27/18 16:43	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/28/18 12:28	CC	SM4500-NH3-G
Nitrate as N	mg/L	21.2	3/27/18 16:43	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/27/18 16:43	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.19	4/3/18 14:32	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.19	4/2/18 13:54	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	21.4	4/3/18 14:32	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	4/2/18 15:40	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	248132	Matrix:	Ground Water	Sample Start:	3/26/18 0:09
Description:	258636	Site:	MW - 5F	SampleEnd:	
Type:	Grab			Date Received:	3/26/18 15:05

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.81	3/26/18 0:09	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	12.98	3/26/18 0:09	CLT	None
pH-field	SU	5.05	3/26/18 0:09	CLT	150.1
Specific Conductance - field	umhos/cm	342	3/26/18 0:09	CLT	SM2510-B
Temperature-field	oC	13.0	3/26/18 0:09	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	250	3/30/18 12:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	20.8	3/27/18 19:52	RON	SM2540-D
QA/QC					
Total Kjeldahl Nitrogen (% Recovery)	% Rec.	105.6	4/2/18 13:54	CC	SM4500-Norg-C
Total Phosphorus as P (% Recovery)	% Rec.	96.4	4/2/18 15:40	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

SAMPLING LOG

2458132

Date: 3/26/18
Site: ANSRWRF
Monitoring Well Permit No.: 258636 ✓
Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.99 Ft.
Well Number: 5F Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 12.98 Ft.
N) Total Depth (TD) (TOC) 31.79 Ft.
O) Ht. H20 Column = (N-M) = - = 18.81 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.07 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 9.21 =gal. 5XE= =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 2/GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:		STABILIZED FIELD PARAMETERS:	
Temperature	11.9 oC	Temperature	13.0 oC
Sp. Cond.	356 umhos	Sp. Cond.	342 umhos
Dissolved Oxygen	9.56 mg/L	Dissolved Oxygen	9.81 mg/L
PH	5.03 S.U.	PH	5.05 S.U.
Start Time	12:06	Start Time	1209

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: milky Odor: none Clarity: cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

Monica Boyer 3/26/18 1505 hrs

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	251559	Matrix:	Ground Water	Sample Start:	5/14/18 11:51
Description:		Site:	MW - 5F [258636]	SampleEnd:	
Type:	Grab			Date Received:	5/14/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	5/14/18 15:25	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	5/14/18 15:25	RD	SM9222-B
Metals					
Arsenic	mg/L	0.0028	5/23/18 13:09	JMW	EPA 200.8
Cadmium	mg/L	0.00077	5/23/18 13:09	JMW	EPA 200.8
Chromium	mg/L	<0.0010	5/23/18 13:09	JMW	EPA 200.8
Copper	mg/L	0.0045	5/23/18 13:09	JMW	EPA 200.8
Iron	mg/L	0.169	5/23/18 13:09	JMW	EPA 200.8
Lead	mg/L	<0.0010	5/23/18 13:09	JMW	EPA 200.8
Manganese	mg/L	0.030	5/23/18 13:09	JMW	EPA 200.8
Mercury	mg/L	<0.00020	5/24/18 16:20	SLI	EPA 245.1
Nickel	mg/L	0.0042	5/23/18 13:09	JMW	EPA 200.8
Selenium	mg/L	0.0032	5/23/18 13:09	JMW	EPA 200.8
Sodium	mg/L	7.0	5/23/18 13:09	JMW	EPA 200.8
Zinc	mg/L	0.035	5/23/18 13:09	JMW	EPA 200.8
Minerals					
Chloride	mg/L	28.0	5/15/18 17:32	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	112	5/15/18 14:00	ML	SM2340-C
Sulfate	mg/L	29.2	5/15/18 17:32	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/17/18 13:33	CC	SM4500-NH3-G
Nitrate as N	mg/L	20.5	5/15/18 17:32	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/15/18 17:32	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.15	5/25/18 18:32	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.15	5/24/18 16:03	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	20.7	5/25/18 18:32	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/24/18 15:31	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	251559	Matrix:	Ground Water	Sample Start:	5/14/18 11:51
Description:		Site:	MW - 5F [258636]	SampleEnd:	
Type:	Grab			Date Received:	5/14/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	3.08	5/14/18 11:51	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	13.42	5/14/18 11:51	CLT	None
pH-field	SU	4.98	5/14/18 11:51	CLT	150.1
Specific Conductance - field	umhos/cm	9.17	5/14/18 11:51	CLT	SM2510-B
Temperature-field	oC	14.7	5/14/18 11:51	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	214	5/18/18 16:34	RON	SM2540-C
Total Suspended Solids @103-105 C	mg/L	7.2	5/15/18 14:20	RON	SM2540-D
QA/QC					
Chloride (% Recovery)	% Rec.	97.7	5/15/18 17:32	HJG	EPA 300.0
Chloride (Standard Deviation)	% Var.	0.13	5/15/18 17:32	HJG	EPA 300.0
Nitrate as N (% Recovery)	% Rec.	91.2	5/15/18 17:32	HJG	EPA 300.0
Nitrate as N (Standard Deviation)	% Var.	0.4	5/15/18 17:32	HJG	EPA 300.0
Nitrite as N (% Recovery)	% Rec.	102	5/15/18 17:32	HJG	EPA 300.0
Sulfate (% Recovery)	% Rec.	98.8	5/15/18 17:32	HJG	EPA 300.0
Sulfate (Standard Deviation)	% Var.	0.43	5/15/18 17:32	HJG	EPA 300.0

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

1251559

SAMPLING LOG

Date: 5.14.18
Site: ANSRWRF
Monitoring Well Permit No.: 258636

Sampler(s): Monica Bogan
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.99 Ft.
Well Number: 5F Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 13.42 Ft.
N) Total Depth (TD) (TOC) 31.79 Ft.
O) Ht. H20 Column = (N-M) = - = 18.37 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 299 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 8.99 =gal. 5XE= =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:		STABILIZED FIELD PARAMETERS:	
Temperature	15.3 oC	Temperature	14.7 oC
Sp. Cond.	313 umhos	Sp. Cond.	9.17 umhos
Dissolved Oxygen	8.79 mg/L	Dissolved Oxygen	308 mg/L
PH	5.05 S.U.	PH	4.98 S.U.
Start Time	11:48	Start Time	11:51

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: grey became clear Odor: none Clarity: Cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

ENVIROCORP LABS SINCE 1981
51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238535	Matrix:	Ground Water	Sample Start:	10/18/17 12:49
Description:		Site:	MW - 5G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	10/30/17 11:29	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	10/30/17 11:29	JMW	EPA 200.8
Chromium	mg/L	<0.0010	10/30/17 11:29	JMW	EPA 200.8
Copper	mg/L	0.0020	10/30/17 11:29	JMW	EPA 200.8
Iron	mg/L	0.471	10/30/17 11:29	JMW	EPA 200.8
Lead	mg/L	0.0040	10/30/17 11:29	JMW	EPA 200.8
Manganese	mg/L	0.022	10/30/17 11:29	JMW	EPA 200.8
Mercury	mg/L	<0.00020	11/3/17 17:30	SWL	EPA 245.1
Nickel	mg/L	0.0045	10/30/17 11:29	JMW	EPA 200.8
Selenium	mg/L	0.0011	10/30/17 11:29	JMW	EPA 200.8
Sodium	mg/L	8.1	10/30/17 11:29	JMW	EPA 200.8
Zinc	mg/L	0.0089	10/30/17 11:29	JMW	EPA 200.8
Minerals					
Chloride	mg/L	22.5	10/19/17 15:34	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	111	10/20/17 15:55	ML	SM2340-C
Sulfate	mg/L	27.5	10/19/17 15:34	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	10/19/17 13:02	CC	SM4500-NH3-G
Nitrate as N	mg/L	17.5	10/19/17 15:34	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	10/19/17 15:34	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.11	10/25/17 10:16	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.11	10/24/17 16:43	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	17.6	10/25/17 10:15	RLF	Calc
Total Phosphorus as P	mg/L	0.05	10/24/17 16:23	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238535	Matrix:	Ground Water	Sample Start:	10/18/17 12:49
Description:		Site:	MW - 5G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.23	10/18/17 12:49	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	13.62	10/18/17 12:49	CLT	None
pH-field	SU	5.15	10/18/17 12:49	CLT	150.1
Specific Conductance - field	umhos/cm	304	10/18/17 12:49	CLT	SM2510-B
Temperature-field	oC	15.5	10/18/17 12:49	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	210	10/24/17 11:15	HJG	SM2540-C
Total Suspended Solids @103-105 C	mg/L	201	10/24/17 9:55	HJG	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

238535

SAMPLING LOG

Date: 10/18/17
Site: ANSRWRF
Monitoring Well Permit No.: 258625

Sampler(s): SH, JS,
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 2.13 Ft.
Well Number: 5G Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 13.62 Ft.
N) Total Depth (TD) (TOC) 31.93 Ft.
O) Ht. H20 Column = (N-M) = 31.93 - 13.62 = 18.31 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.98 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 8.96 =gal. 3 Min
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 15.8 15.5 oC
Temperature (stabilized) _____ oC

Sp. Cond. (Initial) 308 304 umhos
Sp. Cond. (Stabilized) _____ umhos

Dissolved Oxygen (Initial) 9.03 9.23 mg/l
Dissolved Oxygen (Stabilized) _____ mg/l

PH (initial) 5.18 5.15 S.U.
PH (stabilized) _____ S.U.

Time Taken: 12:46S / 12:49F

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: _____ Odor: _____ Clarity: _____
Comments: Test for -- Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc.

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247160	Matrix:	Ground Water	Sample Start:	3/9/18 10:52
Description:		Site:	MW - 5G	SampleEnd:	
Type:	Grab			Date Received:	3/9/18 15:13

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/9/18 16:03	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/9/18 16:03	HJG	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	3/15/18 10:33	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	3/15/18 10:33	JMW	EPA 200.8
Chromium	mg/L	<0.0010	3/15/18 10:33	JMW	EPA 200.8
Copper	mg/L	0.0027	3/15/18 10:33	JMW	EPA 200.8
Iron	mg/L	0.198	3/15/18 10:33	JMW	EPA 200.8
Lead	mg/L	<0.0010	3/15/18 10:33	JMW	EPA 200.8
Manganese	mg/L	0.013	3/15/18 10:33	JMW	EPA 200.8
Mercury	mg/L	<0.00020	3/15/18 17:39	SLI	EPA 245.1
Nickel	mg/L	0.0037	3/15/18 10:33	JMW	EPA 200.8
Selenium	mg/L	0.0013	3/15/18 10:33	JMW	EPA 200.8
Sodium	mg/L	7.7	3/15/18 10:33	JMW	EPA 200.8
Zinc	mg/L	0.009	3/15/18 10:33	JMW	EPA 200.8
Minerals					
Chloride	mg/L	23.7	3/10/18 20:24	ML	EPA 300.0
Hardness, Total by Titration	mg/L	113	3/13/18 12:00	HB	SM2340-C
Sulfate	mg/L	28.9	3/10/18 20:24	ML	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/15/18 14:43	CC	SM4500-NH3-G
Nitrate as N	mg/L	16.4	3/10/18 20:24	ML	EPA 300.0
Nitrite as N	mg/L	<0.10	3/10/18 20:24	ML	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	3/22/18 9:57	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	3/20/18 15:58	JW	SM4500-Norg-C
Total Nitrogen as N	mg/L	<16.5	3/22/18 9:56	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	3/20/18 17:43	JW	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247160	Matrix:	Ground Water	Sample Start:	3/9/18 10:52
Description:		Site:	MW - 5G	SampleEnd:	
Type:	Grab			Date Received:	3/9/18 15:13

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	11.24	3/9/18 10:52	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	13.09	3/9/18 10:52	CLT	None
pH-field	SU	5.32	3/9/18 10:52	CLT	150.1
Specific Conductance - field	umhos/cm	311	3/9/18 10:52	CLT	SM2510-B
Temperature-field	oC	12.6	3/9/18 10:52	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	200	3/14/18 17:10	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	78.4	3/14/18 13:28	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

247160

SAMPLING LOG

Date: 3/9/18
Site: ANSRWRF
Monitoring Well Permit No.: 258625 ✓

Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.13 Ft.
Well Number: 5G Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 13.09 Ft.
N) Total Depth (TD) (TOC) 31.93 Ft.
O) Ht. H2O Column = (N-M) = 31.93 - 13.09 = 18.84 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= ~~0.1632~~ .1632
Q) Vol. H2O in Well=CXD= ~~3.07~~ 3.07 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 9.22 ~~30~~ =gal.
5XE= _____ =gal.

3 mins

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM 3
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓ After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 13.1 oC
Temperature (stabilized) 12.6 oC

Sp. Cond. (Initial) 330 umhos
Sp. Cond. (Stabilized) 311 umhos

Dissolved Oxygen (Initial) 9.01 mg/l
Dissolved Oxygen (Stabilized) 11.24 mg/l

PH (initial) 5.32 S.U.
PH (stabilized) 5.32 S.U.

Time Taken: initial/start 10:49 stabilized 10:52

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: ~~Red~~ lt. orange Odor: none Clarity: cloudy
Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249959	Matrix:	Ground Water	Sample Start:	4/20/18 11:05
Description:	258625	Site:	MW - 5G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HM	SM9222-B
Metals					
Arsenic	mg/L	0.0089	4/25/18 15:33	HJG3	EPA 200.8
Cadmium	mg/L	0.0014	4/25/18 15:33	HJG3	EPA 200.8
Chromium	mg/L	<0.0010	4/25/18 15:33	HJG3	EPA 200.8
Copper	mg/L	0.0012	4/25/18 15:33	HJG3	EPA 200.8
Iron	mg/L	0.241	4/25/18 15:33	HJG3	EPA 200.8
Lead	mg/L	0.0016	4/25/18 15:33	HJG3	EPA 200.8
Manganese	mg/L	0.011	4/25/18 15:33	HJG3	EPA 200.8
Mercury	mg/L	<0.00020	5/8/18 11:20	SLI	EPA 245.1
Nickel	mg/L	0.0050	4/25/18 15:33	HJG3	EPA 200.8
Selenium	mg/L	0.0020	4/25/18 15:33	HJG3	EPA 200.8
Sodium	mg/L	7.6	4/25/18 15:33	HJG3	EPA 200.8
Zinc	mg/L	0.011	4/25/18 15:33	HJG3	EPA 200.8
Minerals					
Chloride	mg/L	25.2	4/20/18 11:05	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	113	4/21/18 13:31	ML	SM2340-C
Sulfate	mg/L	27	4/20/18 22:25	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	4/26/18 14:06	CC	SM4500-NH3-G
Nitrate as N	mg/L	18.3	4/20/18 22:25	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	4/20/18 22:25	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.25	5/2/18 14:31	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.25	5/2/18 12:12	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	18.6	5/9/18 9:40	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/2/18 14:49	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249959	Matrix:	Ground Water	Sample Start:	4/20/18 11:05
Description:	258625	Site:	MW - 5G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.35	4/20/18 11:05	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	12.58	4/20/18 11:05	CLT	None
pH-field	SU	5.41	4/20/18 11:05	CLT	150.1
Specific Conductance - field	umhos/cm	300	4/20/18 11:05	CLT	SM2510-B
Temperature-field	oC	13.2	4/20/18 11:05	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	224	4/26/18 11:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	32.0	4/24/18 13:54	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

249959

SAMPLING LOG

Date: 4/20/18
Site: ANSRWRF
Monitoring Well Permit No.: 258625 ✓

Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.13 Ft.
Well Number: 5G ✓ Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 12.58 Ft.
N) Total Depth (TD) (TOC) 31.93 Ft.
O) Ht. H2O Column = (N-M) = - = 19.35 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.16 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 9.47 =gal. 5XE= =gal. 4 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3/2 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:	
Temperature	13.3 oC		Temperature	13.2 oC
Sp. Cond.	484 umhos		Sp. Cond.	300 umhos
Dissolved Oxygen	9.19 mg/L		Dissolved Oxygen	9.35 mg/L
PH	5.48 S.U.		PH	5.41 S.U.
Start Time	11:01 A		Start Time	11:05 A

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: grey - became clear Odor: none Clarity: cloudy became clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

ENVIROCORP LABS SINCE 1981
51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238536	Matrix:	Ground Water	Sample Start:	10/18/17 12:37
Description:		Site:	MW - 6G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	54.0	10/18/17 15:45	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	10/30/17 11:35	JMW	EPA 200.8
Cadmium	mg/L	0.0065	10/30/17 11:35	JMW	EPA 200.8
Chromium	mg/L	0.0014	10/30/17 11:35	JMW	EPA 200.8
Copper	mg/L	<0.0010	10/30/17 11:35	JMW	EPA 200.8
Iron	mg/L	0.356	10/30/17 11:35	JMW	EPA 200.8
Lead	mg/L	0.005	10/30/17 11:35	JMW	EPA 200.8
Manganese	mg/L	0.045	10/30/17 11:35	JMW	EPA 200.8
Mercury	mg/L	<0.00020	11/3/17 17:30	SWL	EPA 245.1
Nickel	mg/L	0.011	10/30/17 11:35	JMW	EPA 200.8
Selenium	mg/L	0.0034	10/30/17 11:35	JMW	EPA 200.8
Sodium	mg/L	6.3	10/30/17 11:35	JMW	EPA 200.8
Zinc	mg/L	0.066	10/30/17 11:35	JMW	EPA 200.8
Minerals					
Chloride	mg/L	25.3	10/19/17 15:34	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	96.0	10/20/17 15:55	ML	SM2340-C
Sulfate	mg/L	19.0	10/19/17 15:34	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	10/19/17 13:02	CC	SM4500-NH3-G
Nitrate as N	mg/L	14.3	10/19/17 15:34	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	10/19/17 15:34	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.09	10/25/17 10:16	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.09	10/24/17 16:43	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	14.4	10/25/17 10:16	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	10/24/17 16:23	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238536	Matrix:	Ground Water	Sample Start:	10/18/17 12:37
Description:		Site:	MW - 6G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.57	10/18/17 12:37	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	14.67	10/18/17 12:37	CLT	None
pH-field	SU	4.97	10/18/17 12:37	CLT	150.1
Specific Conductance - field	umhos/cm	261	10/18/17 12:37	CLT	SM2510-B
Temperature-field	oC	15.9	10/18/17 12:37	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	182	10/24/17 11:15	HJG	SM2540-C
Total Suspended Solids @103-105 C	mg/L	117	10/24/17 9:55	HJG	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

2385360

SAMPLING LOG

Date: 10/18/17
Site: ANSRWRF
Monitoring Well Permit No.: ~~238629~~ 258626 ✓ correct

Sampler(s): S.H., J.S.
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: -1.95 Ft.
Well Number: 6G Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 14.67 Ft.
N) Total Depth (TD) (TOC) ~~32.14~~ 32.12 Ft.
O) Ht. H2O Column = (N-M) = 32.12 - 14.67 = 17.45 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.85 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 8.55 =gal. 3 MIN
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 17.1 15.9 oC
Temperature (stabilized) 15.9 oC

Sp. Cond. (Initial) 263 261 umhos
Sp. Cond. (Stabilized) 261 umhos

Dissolved Oxygen (Initial) 7.89 7.57 mg/l
Dissolved Oxygen (Stabilized) 7.57 mg/l

PH (initial) 4.84 4.97 S.U.
PH (stabilized) 4.97 S.U.

Time Taken: 12:345 / 12:37 F.

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: NO Odor: NO Clarity: ~~SLIGHTLY~~ CLEAR @ SAMPLE TIME
Comments: Test for – Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc.

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247161	Matrix:	Ground Water	Sample Start:	3/9/18 12:38
Description:		Site:	MW - 6G	SampleEnd:	
Type:	Grab			Date Received:	3/9/18 15:13

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/9/18 16:03	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/9/18 16:03	HJG	SM9222-B
Metals					
Arsenic	mg/L	0.0011	3/15/18 10:56	JMW	EPA 200.8
Cadmium	mg/L	0.00062	3/15/18 10:56	JMW	EPA 200.8
Chromium	mg/L	<0.0010	3/15/18 10:56	JMW	EPA 200.8
Copper	mg/L	<0.0010	3/15/18 10:56	JMW	EPA 200.8
Iron	mg/L	0.18	3/15/18 10:56	JMW	EPA 200.8
Lead	mg/L	0.0011	3/15/18 10:56	JMW	EPA 200.8
Manganese	mg/L	0.037	3/15/18 10:56	JMW	EPA 200.8
Mercury	mg/L	<0.00020	3/15/18 17:41	SLI	EPA 245.1
Nickel	mg/L	0.011	3/15/18 10:56	JMW	EPA 200.8
Selenium	mg/L	0.0036	3/15/18 10:56	JMW	EPA 200.8
Sodium	mg/L	6.8	3/15/18 10:56	JMW	EPA 200.8
Zinc	mg/L	0.068	3/15/18 10:56	JMW	EPA 200.8
Minerals					
Chloride	mg/L	26.0	3/10/18 20:24	ML	EPA 300.0
Hardness, Total by Titration	mg/L	93.3	3/13/18 12:00	HB	SM2340-C
Sulfate	mg/L	18.4	3/10/18 20:24	ML	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/15/18 14:43	CC	SM4500-NH3-G
Nitrate as N	mg/L	14.3	3/10/18 20:24	ML	EPA 300.0
Nitrite as N	mg/L	<0.10	3/10/18 20:24	ML	EPA 300.0
Organic Nitrogen as N	mg/L	0.08	3/22/18 9:57	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.08	3/20/18 15:58	JW	SM4500-Norg-C
Total Nitrogen as N	mg/L	14.4	3/22/18 9:57	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	3/20/18 17:43	JW	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247161	Matrix:	Ground Water	Sample Start:	3/9/18 12:38
Description:		Site:	MW - 6G	SampleEnd:	
Type:	Grab			Date Received:	3/9/18 15:13

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	11.86	3/9/18 12:38	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	14.46	3/9/18 12:38	CLT	None
pH-field	SU	5.15	3/9/18 12:38	CLT	150.1
Specific Conductance - field	umhos/cm	264	3/9/18 12:38	CLT	SM2510-B
Temperature-field	oC	13.5	3/9/18 12:38	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	182	3/14/18 17:10	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	95.6	3/14/18 13:28	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

SAMPLING LOG

247161

Date: 3/9/18
Site: ANSRWRF ✓
Monitoring Well Permit No.: 258626

Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.95 Ft.
Well Number: 6G Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 14.46 Ft.
N) Total Depth (TD) (TOC) 32.12 Ft.
O) Ht. H20 Column = (N-M) = 32.12 - 14.46 = 17.66 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.88 gal.
R) Vol. H2O to remove from well= (Circle one used) 3mins
3XE= 8.65 =gal. 5XE= =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 2 GPM
Method of determining pumping rate: Bucket and stop watch ✓

Did well go dry? Yes No After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 12.7 oC
Temperature (stabilized) 13.5 oC

Sp. Cond. (Initial) ~~12~~ 276 umhos
Sp. Cond. (Stabilized) 264 umhos

Dissolved Oxygen (Initial) 12.05 mg/l
Dissolved Oxygen (Stabilized) 11.86 mg/l

PH (initial) 5.13 S.U.
PH (stabilized) 5.15 S.U.

Time Taken: initial 12:35 stabilized 12:38

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: Horange Odor: none Clarity: Cloudy
Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250544	Matrix:	Ground Water	Sample Start:	5/1/18 11:09
Description:		Site:	MW - 6G [258626]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	5/1/18 14:55	RD	SM9222-B
Metals					
Arsenic	mg/L	0.0012	5/9/18 11:12	JMW	EPA 200.8
Cadmium	mg/L	0.00069	5/9/18 11:12	JMW	EPA 200.8
Chromium	mg/L	0.0011	5/9/18 11:12	JMW	EPA 200.8
Copper	mg/L	0.0024	5/9/18 11:12	JMW	EPA 200.8
Iron	mg/L	0.210	5/9/18 11:12	JMW	EPA 200.8
Lead	mg/L	0.0016	5/9/18 11:12	JMW	EPA 200.8
Manganese	mg/L	0.049	5/9/18 11:12	JMW	EPA 200.8
Mercury	mg/L	<0.00020	5/10/18 16:31	SWL	EPA 245.1
Nickel	mg/L	0.012	5/9/18 11:12	JMW	EPA 200.8
Selenium	mg/L	0.0043	5/9/18 11:12	JMW	EPA 200.8
Sodium	mg/L	8.2	5/9/18 11:12	JMW	EPA 200.8
Zinc	mg/L	0.085	5/9/18 11:12	JMW	EPA 200.8
Minerals					
Chloride	mg/L	26.4	5/2/18 12:04	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	86.0	5/1/18 14:55	MJM	SM2340-C
Sulfate	mg/L	19.5	5/2/18 12:04	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	5/7/18 13:39	CC	SM4500-NH3-G
Nitrate as N	mg/L	16.3	5/2/18 12:04	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	5/2/18 12:04	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.05	5/11/18 14:12	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.05	5/9/18 14:32	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	16.4	5/11/18 14:12	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	5/9/18 16:13	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	250544	Matrix:	Ground Water	Sample Start:	5/1/18 11:09
Description:		Site:	MW - 6G [258626]	SampleEnd:	
Type:	Grab			Date Received:	5/1/18 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	7.50	5/1/18 11:09	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	13.94	5/1/18 11:09	CLT	None
pH-field	SU	5.10	5/1/18 11:09	CLT	150.1
Specific Conductance - field	umhos/cm	257	5/1/18 11:09	CLT	SM2510-B
Temperature-field	oC	14.3	5/1/18 11:09	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	188	5/4/18 14:33	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	178	5/2/18 10:21	HJG	SM2540-D
QA/QC					
Chloride (% Recovery)	% Rec.	95.8	5/2/18 12:04	HJG	EPA 300.0
Chloride (Standard Deviation)	% Var.	0.04	5/2/18 12:04	HJG	EPA 300.0
Nitrate as N (% Recovery)	% Rec.	93.5	5/2/18 12:04	HJG	EPA 300.0
Nitrate as N (Standard Deviation)	% Var.	0.08	5/2/18 12:04	HJG	EPA 300.0
Nitrite as N (% Recovery)	% Rec.	107.8	5/2/18 12:04	HJG	EPA 300.0
Sulfate (% Recovery)	% Rec.	103.2	5/2/18 12:04	HJG	EPA 300.0
Sulfate (Standard Deviation)	% Var.	0.16	5/2/18 12:04	HJG	EPA 300.0

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

258544

SAMPLING LOG

Date: 5-1-18
Site: ANSRWRF ✓
Monitoring Well Permit No.: 258626

Sampler(s): Monica Borja
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.95 Ft.
Well Number: 6G Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 13.94 Ft.
N) Total Depth (TD) (TOC) 32.12 Ft.
O) Ht. H20 Column = (N-M) = _____ - _____ = 18.18 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= ~~3~~ 2.97 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 8.9 =gal. 5XE= _____ =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 2 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes _____ No ✓ After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:	
Temperature	15.3	oC	14.3	oC
Sp. Cond.	257	umhos	257	umhos
Dissolved Oxygen	7.13	mg/L	7.50	mg/L
PH	5.12	S.U.	5.10	S.U.
Start Time	11:06		11:09	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: lt grey Odor: none Clarity: Cloudy

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

5-1-18 1435

51 Clark St. Harrington, DE 19952
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ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID: 238537 | Matrix: Ground Water | Sample Start: 10/18/17 12:19
Description: | Site: MW - 7G | SampleEnd:
Type: Grab | Date Received: 10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	10/30/17 11:40	JMW	EPA 200.8
Cadmium	mg/L	0.0018	10/30/17 11:40	JMW	EPA 200.8
Chromium	mg/L	<0.0010	10/30/17 11:40	JMW	EPA 200.8
Copper	mg/L	0.0014	10/30/17 11:40	JMW	EPA 200.8
Iron	mg/L	0.381	10/30/17 11:40	JMW	EPA 200.8
Lead	mg/L	0.0040	10/30/17 11:40	JMW	EPA 200.8
Manganese	mg/L	0.090	10/30/17 11:40	JMW	EPA 200.8
Mercury	mg/L	<0.00020	11/3/17 17:30	SWL	EPA 245.1
Nickel	mg/L	0.0065	10/30/17 11:40	JMW	EPA 200.8
Selenium	mg/L	0.0024	10/30/17 11:40	JMW	EPA 200.8
Sodium	mg/L	6.9	10/30/17 11:40	JMW	EPA 200.8
Zinc	mg/L	0.019	10/30/17 11:40	JMW	EPA 200.8
Minerals					
Chloride	mg/L	28.5	10/19/17 15:34	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	145	10/20/17 15:55	ML	SM2340-C
Sulfate	mg/L	44.3	10/19/17 15:34	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	10/19/17 13:02	CC	SM4500-NH3-G
Nitrate as N	mg/L	17.6	10/19/17 15:34	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	10/19/17 15:34	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.14	10/25/17 10:16	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	0.14	10/24/17 16:43	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	17.7	10/25/17 10:16	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	10/24/17 16:23	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
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51 Clark St. Harrington, DE 19952
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ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238537	Matrix:	Ground Water	Sample Start:	10/18/17 12:19
Description:		Site:	MW - 7G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.77	10/18/17 12:19	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	15.10	10/18/17 12:19	CLT	None
pH-field	SU	3.77	10/18/17 12:19	CLT	150.1
Specific Conductance - field	umhos/cm	471	10/18/17 12:19	CLT	SM2510-B
Temperature-field	oC	15.1	10/18/17 12:19	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	230	10/24/17 11:15	HJG	SM2540-C
Total Suspended Solids @103-105 C	mg/L	24.5	10/24/17 9:55	HJG	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

238537

SAMPLING LOG

Date: 10/18/17
Site: ANSRWRF
Monitoring Well Permit No.: 258627

Sampler(s): S.H., J.S
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 1.99 Ft.
Well Number: 7G Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 15.10 Ft.
N) Total Depth (TD) (TOC) 31.16 Ft.
O) Ht. H2O Column = (N-M) = 31.16 - 15.10 = 16.06 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.62 gal.
R) Vol. H2O to remove from well= (Circle one used) 3mins.
3XE= 7.86 =gal.
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 15.0 oC
Temperature (stabilized) 15.1 oC

Sp. Cond. (Initial) 363 umhos
Sp. Cond. (Stabilized) ~~1471~~ umhos

Dissolved Oxygen (Initial) 8.84 mg/l
Dissolved Oxygen (Stabilized) 8.77 mg/l

PH (initial) ~~12.19~~ 4.62 S.U.
PH (stabilized) 3.77 S.U.

Time Taken: 12:18 S / 12:19 F.

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: light Orange Odor: NO Clarity: became clear @ Sample time
Comments: Test for – Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc.

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ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247710	Matrix:	Ground Water	Sample Start:	3/19/18 12:05
Description:	258627	Site:	MW - 7G	SampleEnd:	
Type:	Grab			Date Received:	3/19/18 15:35

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	3/19/18 16:40	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	3/19/18 16:40	HM	SM9222-B
Metals					
Arsenic	mg/L	0.0013	3/29/18 11:30	JMW	EPA 200.8
Cadmium	mg/L	0.00098	3/29/18 11:30	JMW	EPA 200.8
Chromium	mg/L	<0.0010	3/29/18 11:30	JMW	EPA 200.8
Copper	mg/L	<0.0010	3/29/18 11:30	JMW	EPA 200.8
Iron	mg/L	0.193	3/29/18 11:30	JMW	EPA 200.8
Lead	mg/L	<0.0010	3/29/18 11:30	JMW	EPA 200.8
Manganese	mg/L	0.067	3/29/18 11:30	JMW	EPA 200.8
Mercury	mg/L	<0.00020	4/2/18 8:49	SLI	EPA 245.1
Nickel	mg/L	0.0043	3/29/18 11:30	JMW	EPA 200.8
Selenium	mg/L	0.0026	3/29/18 11:30	JMW	EPA 200.8
Sodium	mg/L	6.9	3/29/18 11:30	JMW	EPA 200.8
Zinc	mg/L	0.0074	3/29/18 11:30	JMW	EPA 200.8
Minerals					
Chloride	mg/L	31.2	3/20/18 17:44	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	140	3/20/18 14:21	ML	SM2340-C
Sulfate	mg/L	43.6	3/20/18 17:44	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/22/18 12:09	CC	SM4500-NH3-G
Nitrate as N	mg/L	19.2	3/20/18 17:44	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/20/18 17:44	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	3/28/18 10:48	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	3/27/18 16:09	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<19.3	3/28/18 10:48	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	3/27/18 14:25	CC	SM4500-P-F(w/Dig)

ND = Not Detected
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ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247710	Matrix:	Ground Water	Sample Start:	3/19/18 12:05
Description:	258627	Site:	MW - 7G	SampleEnd:	
Type:	Grab			Date Received:	3/19/18 15:35

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	8.58	3/19/18 12:05	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	14.32	3/19/18 12:05	CLT	None
pH-field	SU	4.80	3/19/18 12:05	CLT	150.1
Specific Conductance - field	umhos/cm	361	3/19/18 12:05	CLT	SM2510-B
Temperature-field	oC	14.1	3/19/18 12:05	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	224	3/22/18 17:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	17.6	3/21/18 13:57	RON	SM2540-D

ND = Not Detected
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SAMPLING LOG

247710

Date: 3/19/18
Site: ANSRWRF
Monitoring Well Permit No.: 258627

Sampler(s): Monica Berger
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.99 Ft.
Well Number: 7G Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 14.32 Ft.
N) Total Depth (TD) (TOC) 31.16 Ft.
O) Ht. H20 Column = (N-M) = - = 16.84 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.75 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 8.24 =gal. 5XE= =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 ℓ GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:		
Temperature	14.2	oC	Temperature	14.1	oC
Sp. Cond.	364	umhos	Sp. Cond.	361	umhos
Dissolved Oxygen	8.71	mg/L	Dissolved Oxygen	8.58	mg/L
PH	4.84	S.U.	PH	4.80	S.U.
Start Time	12:02		Start Time	12:05	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: orange then clear Odor: none Clarity: Cloudy then clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

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ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249960	Matrix:	Ground Water	Sample Start:	4/20/18 12:55
Description:	258627	Site:	MW - 7G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HM	SM9222-B
Metals					
Arsenic	mg/L	0.0095	4/25/18 15:39	HJG3	EPA 200.8
Cadmium	mg/L	0.0023	4/25/18 15:39	HJG3	EPA 200.8
Chromium	mg/L	<0.0010	4/25/18 15:39	HJG3	EPA 200.8
Copper	mg/L	<0.0010	4/25/18 15:39	HJG3	EPA 200.8
Iron	mg/L	0.235	4/25/18 15:39	HJG3	EPA 200.8
Lead	mg/L	0.0017	4/25/18 15:39	HJG3	EPA 200.8
Manganese	mg/L	0.065	4/25/18 15:39	HJG3	EPA 200.8
Mercury	mg/L	<0.00020	5/8/18 11:20	SLI	EPA 245.1
Nickel	mg/L	0.0069	4/25/18 15:39	HJG3	EPA 200.8
Selenium	mg/L	0.0023	4/25/18 15:39	HJG3	EPA 200.8
Sodium	mg/L	6.5	4/25/18 15:39	HJG3	EPA 200.8
Zinc	mg/L	0.0090	4/25/18 15:39	HJG3	EPA 200.8
Minerals					
Chloride	mg/L	33.3	4/20/18 22:25	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	154	4/21/18 13:31	ML	SM2340-C
Sulfate	mg/L	46.0	4/20/18 22:25	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	4/26/18 14:06	CC	SM4500-NH3-G
Nitrate as N	mg/L	19.6	4/20/18 22:25	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	4/20/18 22:25	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.20	5/2/18 14:31	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.20	5/2/18 12:12	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	19.8	5/2/18 14:31	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/2/18 14:49	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
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51 Clark St. Harrington, DE 19952
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ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249960	Matrix:	Ground Water	Sample Start:	4/20/18 12:55
Description:	258627	Site:	MW - 7G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.05	4/20/18 12:55	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	14.21	4/20/18 12:55	CLT	None
pH-field	SU	4.61	4/20/18 12:55	CLT	150.1
Specific Conductance - field	umhos/cm	367	4/20/18 12:55	CLT	SM2510-B
Temperature-field	oC	13.9	4/20/18 12:55	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	250	4/26/18 11:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	38.0	4/24/18 13:54	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

249960

SAMPLING LOG

Date: 4/2018
Site: ANSRWRF
Monitoring Well Permit No.: 258627 ✓

Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.99 Ft.
Well Number: 7G ✓ Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 14.21 Ft.
N) Total Depth (TD) (TOC) 31.16 Ft.
O) Ht. H20 Column = (N-M) = _____ - _____ = 16.95 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.77 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 8.30 =gal. 5XE= _____ =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3/2 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes _____ No ✓ After how many gallons were removed? ____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:

Temperature	14.3	oC
Sp. Cond.	371	umhos
Dissolved Oxygen	8.68	mg/L
PH	4.07	S.U.
Start Time	12:52	

STABILIZED FIELD PARAMETERS:

Temperature	13.9	oC
Sp. Cond.	367	umhos
Dissolved Oxygen	9.05	mg/L
PH	4.61	S.U.
Start Time	12:55	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: lt orange became clearer Odor: none Clarity: Cloudy became clearer

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238538	Matrix:	Ground Water	Sample Start:	10/18/17 12:05
Description:		Site:	MW - 8G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	10/18/17 15:45	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	2.0	10/18/17 15:45	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	10/30/17 11:46	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	10/30/17 11:46	JMW	EPA 200.8
Chromium	mg/L	<0.0010	10/30/17 11:46	JMW	EPA 200.8
Copper	mg/L	<0.0010	10/30/17 11:46	JMW	EPA 200.8
Iron	mg/L	0.196	10/30/17 11:46	JMW	EPA 200.8
Lead	mg/L	0.0041	10/30/17 11:46	JMW	EPA 200.8
Manganese	mg/L	0.094	10/30/17 11:46	JMW	EPA 200.8
Mercury	mg/L	<0.00020	11/3/17 17:30	SWL	EPA 245.1
Nickel	mg/L	0.0033	10/30/17 11:46	JMW	EPA 200.8
Selenium	mg/L	<0.0010	10/30/17 11:46	JMW	EPA 200.8
Sodium	mg/L	7.5	10/30/17 11:46	JMW	EPA 200.8
Zinc	mg/L	0.0061	10/30/17 11:46	JMW	EPA 200.8
Minerals					
Chloride	mg/L	17.5	10/19/17 15:34	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	58.0	10/20/17 15:55	ML	SM2340-C
Sulfate	mg/L	9.58	10/19/17 15:34	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	10/19/17 13:02	CC	SM4500-NH3-G
Nitrate as N	mg/L	11.2	10/19/17 15:34	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	10/19/17 15:34	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	10/25/17 10:17	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	10/24/17 16:43	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<11.3	10/25/17 10:17	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	10/24/17 16:23	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	238538	Matrix:	Ground Water	Sample Start:	10/18/17 12:05
Description:		Site:	MW - 8G	SampleEnd:	
Type:	Grab			Date Received:	10/18/17 15:00

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	5.84	10/18/17 12:05	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	16.85	10/18/17 12:05	CLT	None
pH-field	SU	5.27	10/18/17 12:05	CLT	150.1
Specific Conductance - field	umhos/cm	190.7	10/18/17 12:05	CLT	SM2510-B
Temperature-field	oC	15.3	10/18/17 12:05	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	138	10/24/17 11:15	HJG	SM2540-C
Total Suspended Solids @103-105 C	mg/L	4.8	10/24/17 9:55	HJG	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

238538

SAMPLING LOG

Date: 10/18/17
Site: ANSRWRF
Monitoring Well Permit No.: 258626 258629

Sampler(s): S.H., J.S.
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 2.01 Ft.
Well Number: 8G Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 16.85 Ft.
N) Total Depth (TD) (TOC) 31.44 Ft.
O) Ht. H20 Column = (N-M) = 31.44 - 16.85 = 14.59 Ft.
P) Conversion factor from H2O column to gallons for 4" I.D. Well= 0.6528
Q) Vol. H2O in Well=CXD= 9.52 gal.
R) Vol. H2O to remove from well= (Circle one used) 10 MIN
3XE= 28.57 =gal.
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 15.6 oC
Temperature (stabilized) 15.3 oC

Sp. Cond. (Initial) 245 umhos
Sp. Cond. (Stabilized) 1907 umhos

Dissolved Oxygen (Initial) 4.75 mg/l
Dissolved Oxygen (Stabilized) 5.84 mg/l

PH (initial) 5.15 S.U.
PH (stabilized) 5.27 S.U.

Time Taken: 11:555/ 12:05E.

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: NO Odor: NO Clarity: STAY CLEAR TO SAMPLE TIME,
Comments: Test for – Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc.

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247711	Matrix:	Ground Water	Sample Start:	3/19/18 12:35
Description:	258629	Site:	MW - 8G [258629]	SampleEnd:	
Type:	Grab			Date Received:	3/19/18 15:35

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2	3/19/18 16:40	HM	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2	3/19/18 16:40	HM	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	3/29/18 11:41	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	3/29/18 11:41	JMW	EPA 200.8
Chromium	mg/L	<0.0010	3/29/18 11:41	JMW	EPA 200.8
Copper	mg/L	<0.0010	3/29/18 11:41	JMW	EPA 200.8
Iron	mg/L	0.072	3/29/18 11:41	JMW	EPA 200.8
Lead	mg/L	<0.0010	3/29/18 11:41	JMW	EPA 200.8
Manganese	mg/L	0.057	3/29/18 11:41	JMW	EPA 200.8
Mercury	mg/L	<0.00020	4/2/18 8:49	SLI	EPA 245.1
Nickel	mg/L	0.0017	3/29/18 11:41	JMW	EPA 200.8
Selenium	mg/L	<0.0010	3/29/18 11:41	JMW	EPA 200.8
Sodium	mg/L	6.7	3/29/18 11:41	JMW	EPA 200.8
Zinc	mg/L	0.0015	3/29/18 11:41	JMW	EPA 200.8
Minerals					
Chloride	mg/L	15.4	3/20/18 17:44	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	47.0	3/20/18 14:21	ML	SM2340-C
Sulfate	mg/L	9.59	3/20/18 17:44	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/22/18 12:09	CC	SM4500-NH3-G
Nitrate as N	mg/L	9.45	3/20/18 17:44	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/20/18 17:44	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	3/28/18 10:49	RLF	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	3/27/18 16:09	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<9.50	3/28/18 10:49	RLF	Calc
Total Phosphorus as P	mg/L	<0.05	3/27/18 14:25	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247711	Matrix:	Ground Water	Sample Start:	3/19/18 12:35
Description:	258629	Site:	MW - 8G [258629]	SampleEnd:	
Type:	Grab			Date Received:	3/19/18 15:35

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	4.30	3/19/18 12:35	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	9.35	3/19/18 12:35	CLT	None
pH-field	SU	5.61	3/19/18 12:35	CLT	150.1
Specific Conductance - field	umhos/cm	157.2	3/19/18 12:35	CLT	SM2510-B
Temperature-field	oC	15.8	3/19/18 12:35	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	110	3/22/18 17:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	6.0	3/21/18 13:57	RON	SM2540-D
QA/QC					
Chloride (% Recovery)	% Rec.	99.5	3/20/18 17:44	HJG	EPA 300.0
Nitrate as N (% Recovery)	% Rec.	96.0	3/20/18 17:44	HJG	EPA 300.0
Nitrite as N (% Recovery)	% Rec.	99.6	3/20/18 17:44	HJG	EPA 300.0
Sulfate (% Recovery)	% Rec.	102.7	3/20/18 17:44	HJG	EPA 300.0

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

SAMPLING LOG

247711

Date: 3/19/18

Site: ANSRWRF

Monitoring Well Permit No.: 258629 ✓

Sampler(s): Monica Boyer

Company: Artesian Wastewater Management Inc.

Address: 664 Churchman's Rd. Newark DE 19702

Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.01 Ft.

Well Number: 8G Casing intact? Yes ✓ No _____

Monitoring Well Cap Locked? Yes ✓ No _____

Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 9.35 Ft.

N) Total Depth (TD) (TOC) 31.44 Ft.

O) Ht. H20 Column = (N-M) = _____ - _____ = 22.09 Ft.

P) Conversion factor from H2O column to gallons for 4" I.D. Well= ~~0.6528~~ .6524

Q) Vol. H2O in Well=CXD= 14.41 gal.

R) Vol. H2O to remove from well = (Circle one used)

3XE= 43.23 =gal. 5XE= _____ =gal. 15 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3/2 GPM

PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes _____ No ✓ After how many gallons were removed? ____

If well went dry, how long did it take to recover before samples were taken? _____

Estimated depth samples were taken from= _____ Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:		**STABILIZED** FIELD PARAMETERS:	
Temperature	15.1 oC	Temperature	15.8 oC
Sp. Cond.	222 umhos	Sp. Cond.	159.2 umhos
Dissolved Oxygen	5.22 mg/L	Dissolved Oxygen	4.30 mg/L
PH	5.40 S.U.	PH	5.61 S.U.
Start Time	12:20	Start Time	12:35

Decontamination Procedure: Pump and hose flushed with mild bleach solution.

Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:

Color: none Odor: none Clarity: clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249961	Matrix:	Ground Water	Sample Start:	4/20/18 13:23
Description:	258629	Site:	MW - 8G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HM	SM9222-B
Metals					
Arsenic	mg/L	0.0060	4/25/18 15:44	HJG3	EPA 200.8
Cadmium	mg/L	0.00096	4/25/18 15:44	HJG3	EPA 200.8
Chromium	mg/L	<0.0010	4/25/18 15:44	HJG3	EPA 200.8
Copper	mg/L	<0.0010	4/25/18 15:44	HJG3	EPA 200.8
Iron	mg/L	0.076	4/25/18 15:44	HJG3	EPA 200.8
Lead	mg/L	<0.0010	4/25/18 15:44	HJG3	EPA 200.8
Manganese	mg/L	0.079	4/25/18 15:44	HJG3	EPA 200.8
Mercury	mg/L	<0.00020	5/8/18 11:20	SLI	EPA 245.1
Nickel	mg/L	0.0029	4/25/18 15:44	HJG3	EPA 200.8
Selenium	mg/L	<0.0010	4/25/18 15:44	HJG3	EPA 200.8
Sodium	mg/L	6.2	4/25/18 15:44	HJG3	EPA 200.8
Zinc	mg/L	0.0033	4/25/18 15:44	HJG3	EPA 200.8
Minerals					
Chloride	mg/L	17.8	4/20/18 22:25	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	74.0	4/21/18 13:31	ML	SM2340-C
Sulfate	mg/L	11	4/20/18 22:25	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	4/26/18 14:06	CC	SM4500-NH3-G
Nitrate as N	mg/L	10.4	4/20/18 22:25	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	4/20/18 22:25	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.15	5/2/18 14:32	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.15	5/2/18 12:12	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	10.6	5/2/18 14:32	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/2/18 14:49	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249961	Matrix:	Ground Water	Sample Start:	4/20/18 13:23
Description:	258629	Site:	MW - 8G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	4.96	4/20/18 13:23	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	9.11	4/20/18 13:23	CLT	None
pH-field	SU	5.41	4/20/18 13:23	CLT	150.1
Specific Conductance - field	umhos/cm	166.7	4/20/18 13:23	CLT	SM2510-B
Temperature-field	oC	14.8	4/20/18 13:23	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	138	4/26/18 11:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	<2.0	4/24/18 13:54	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

249961

SAMPLING LOG

Date: 4/20/18
Site: ANSRWRF
Monitoring Well Permit No.: 258629 ✓

Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 2.01 Ft.
Well Number: 8G ✓ Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 9.11 Ft.
N) Total Depth (TD) (TOC) 31.44 Ft.
O) Ht. H20 Column = (N-M) = - = 22.33 Ft.
P) Conversion factor from H2O column to gallons for 4" I.D. Well= 0.6524
Q) Vol. H2O in Well=CXD= 14.57 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE=43.70 =gal. 5XE= =gal. 15 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:

Temperature	14.7	oC
Sp. Cond.	236	umhos
Dissolved Oxygen	4.88	mg/L
PH	5.23	S.U.
Start Time	13:08	

STABILIZED FIELD PARAMETERS:

Temperature	14.8	oC
Sp. Cond.	166.7	umhos
Dissolved Oxygen	4.96	mg/L
PH	5.41	S.U.
Start Time	13:23	

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: Clear Odor: none Clarity: Clear

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	240526	Matrix:	Ground Water	Sample Start:	11/15/17 13:53
Description:		Site:	MW - 9G	SampleEnd:	
Type:	Grab			Date Received:	11/15/17 14:55

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	11/15/17 16:20	RD	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	11/15/17 16:20	RD	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	11/29/17 10:40	JMW	EPA 200.8
Cadmium	mg/L	0.00058	11/29/17 10:40	JMW	EPA 200.8
Chromium	mg/L	<0.0010	11/29/17 10:40	JMW	EPA 200.8
Copper	mg/L	<0.0010	11/29/17 10:40	JMW	EPA 200.8
Iron	mg/L	0.362	11/29/17 10:40	JMW	EPA 200.8
Lead	mg/L	<0.0010	11/29/17 10:40	JMW	EPA 200.8
Manganese	mg/L	0.156	11/29/17 10:40	JMW	EPA 200.8
Mercury	mg/L	<0.00020	11/21/17 10:54	SLI	EPA 245.1
Nickel	mg/L	0.0057	11/29/17 10:40	JMW	EPA 200.8
Selenium	mg/L	0.0016	11/29/17 10:40	JMW	EPA 200.8
Sodium	mg/L	8.0	11/29/17 10:40	JMW	EPA 200.8
Zinc	mg/L	0.0073	11/29/17 10:40	JMW	EPA 200.8
Minerals					
Chloride	mg/L	21.4	11/16/17 15:19	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	103	11/16/17 16:02	ML	SM2340-C
Sulfate	mg/L	41.8	11/16/17 15:19	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	11/27/17 12:50	CC	SM4500-NH3-G
Nitrate as N	mg/L	14.2	11/16/17 15:19	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	11/16/17 15:19	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	<0.05	11/29/17 9:14	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	<0.05	11/28/17 16:30	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	<14.3	11/29/17 9:14	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	11/28/17 15:32	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

Printed: Dec 4 2017 1:05PM

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ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	240526	Matrix:	Ground Water	Sample Start:	11/15/17 13:53
Description:		Site:	MW - 9G	SampleEnd:	
Type:	Grab			Date Received:	11/15/17 14:55

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.46	11/15/17 13:53	CLT	SM4500-O-G
Physical					
Depth - Top of Casing-field	Ft.	12.88	11/15/17 13:53	CLT	None
pH-field	SU	5.44	11/15/17 13:53	CLT	150.1
Temperature-field	oC	14.9	11/15/17 13:53	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	194	11/21/17 22:08	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	45.6	11/21/17 10:50	HJG3	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

240526

SAMPLING LOG

Date: 11/15/17
Site: ANSRWRF
Monitoring Well Permit No.: 258624

Sampler(s): RC
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC above ground surface: 2.47 1.98 Ft.
Well Number: 9G Casing intact? Yes ✓ No _____
Monitoring Well Cap Locked? Yes ✓ No _____
Casing Material: PVC X Steel _____ Other _____

M) Static DTW (TOC) 12.88 Ft.
N) Total Depth (TD) (TOC) 30.98 Ft.
O) Ht. H20 Column = (N-M) = _____ - _____ = 18.1 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 2.95 gal.
R) Vol. H2O to remove from well= (Circle one used)
3XE= 8.85 =gal. 4.4
5XE= _____ =gal.

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
Method of determining pumping rate: Bucket and stop watch

Did well go dry? Yes _____ No ✓
After how many gallons were removed? _____
If well went dry, how long did it take to recover before samples were taken? _____
Estimated depth samples were taken from= _____ Ft. BGS (TOC)

FIELD PARAMETERS:

Temperature (initial) 14.8 oC
Temperature (stabilized) 14.9 oC

Sp. Cond. (Initial) 251 umhos
Sp. Cond. (Stabilized) 295 umhos

Dissolved Oxygen (Initial) 8.63 mg/l
Dissolved Oxygen (Stabilized) 9.46 mg/l

PH (initial) 5.65 S.U.
PH (stabilized) 5.41 S.U.

Time Taken: 1347/ 1353

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.
Visual characteristics of samples:
Color: None Odor: None Clarity: Clear
Comments: Test for – Ammonia Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Copper, Fecal Coliform, Hardness, Iron, Lead, Manganese, Mercury, Nickle, Nitrate, Nitrite, Organic Nitrogen, Selenium, Sodium, Sulfate, Total Dissolved Solids, Total Nitrogen, Total Coliforms, Total Phosphorus, Total Suspended Solids, Zinc

R. Nuelen
11/15/17 1455

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247564	Matrix:	Ground Water	Sample Start:	3/15/18 14:50
Description:	258624	Site:	MW - 9G	SampleEnd:	
Type:	Grab			Date Received:	3/15/18 16:14

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	3/15/18 17:21	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	3/15/18 17:21	HJG	SM9222-B
Metals					
Arsenic	mg/L	<0.0010	3/21/18 11:13	JMW	EPA 200.8
Cadmium	mg/L	<0.00050	3/21/18 11:13	JMW	EPA 200.8
Chromium	mg/L	<0.0010	3/21/18 11:13	JMW	EPA 200.8
Copper	mg/L	<0.0010	3/21/18 11:13	JMW	EPA 200.8
Iron	mg/L	0.302	3/21/18 11:13	JMW	EPA 200.8
Lead	mg/L	0.0014	3/21/18 11:13	JMW	EPA 200.8
Manganese	mg/L	0.149	3/21/18 11:13	JMW	SM3111-B
Mercury	mg/L	<0.00020	4/2/18 8:49	SLI	EPA 245.1
Nickel	mg/L	0.0043	3/21/18 11:13	JMW	EPA 200.8
Selenium	mg/L	0.0014	3/21/18 11:13	JMW	EPA 200.8
Sodium	mg/L	6.7	3/21/18 11:13	JMW	SM3111-B
Zinc	mg/L	0.0090	3/21/18 11:13	JMW	EPA 200.8
Minerals					
Chloride	mg/L	23.6	3/16/18 22:54	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	122	3/16/18 15:10	MJM	SM2340-C
Sulfate	mg/L	36.1	3/16/18 22:54	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	3/20/18 15:18	JW	SM4500-NH3-G
Nitrate as N	mg/L	14.3	3/16/18 22:54	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	3/16/18 22:54	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.06	3/24/18 8:20	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.06	3/23/18 13:35	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	14.4	3/24/18 8:20	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	3/23/18 13:38	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	247564	Matrix:	Ground Water	Sample Start:	3/15/18 14:50
Description:	258624	Site:	MW - 9G	SampleEnd:	
Type:	Grab			Date Received:	3/15/18 16:14

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	10.37	3/15/18 14:50	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	12.40	3/15/18 14:50	CLT	None
pH-field	SU	5.09	3/15/18 14:50	CLT	150.1
Specific Conductance - field	umhos/cm	290	3/15/18 14:50	CLT	SM2510-B
Temperature-field	oC	13.4	3/15/18 14:50	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	198	3/20/18 17:15	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	124	3/20/18 15:00	RON	SM2540-D

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

247564

SAMPLING LOG

Date: 3/15/18
Site: ANSRWRF
Monitoring Well Permit No.: 258624 ✓
Sampler(s): M Boyce R Plack
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.98 Ft.
Well Number: 9G Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 12.40 Ft.
N) Total Depth (TD) (TOC) 30.98 Ft.
O) Ht. H20 Column = (N-M) = - = 18.58 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.03 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 9.10 =gal. 5XE= =gal. 5 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 2 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:
Temperature 12.98 oC
Sp. Cond. 349 umhos
Dissolved Oxygen 10.55 mg/L
PH 5.39 S.U.
Start Time 14.45

STABILIZED FIELD PARAMETERS:
Temperature 13.4 oC
Sp. Cond. 290 umhos
Dissolved Oxygen 10.37 mg/L
PH 5.09 S.U.
Start Time 14.50

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: grey Odor: none Clarity: cloudy became clearer

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

1614 3-15-18

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249962	Matrix:	Ground Water	Sample Start:	4/20/18 12:39
Description:	258624	Site:	MW - 9G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Biological					
Fecal Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HJG	SM9222-D
Total Coliform Membrane Filter	#/100 mls	<2.0	4/20/18 16:45	HM	SM9222-B
Metals					
Arsenic	mg/L	0.0049	4/25/18 15:50	HJG3	EPA 200.8
Cadmium	mg/L	0.0013	4/25/18 15:50	HJG3	EPA 200.8
Chromium	mg/L	<0.0010	4/25/18 15:50	HJG3	EPA 200.8
Copper	mg/L	<0.0010	4/25/18 15:50	HJG3	EPA 200.8
Iron	mg/L	0.324	4/25/18 15:50	HJG3	EPA 200.8
Lead	mg/L	0.0023	4/25/18 15:50	HJG3	EPA 200.8
Manganese	mg/L	0.139	4/25/18 15:50	HJG3	EPA 200.8
Mercury	mg/L	<0.00020	5/8/18 11:20	SLI	EPA 245.1
Nickel	mg/L	0.0050	4/25/18 15:50	HJG3	EPA 200.8
Selenium	mg/L	<0.0010	4/25/18 15:50	HJG3	EPA 200.8
Sodium	mg/L	5.2	4/25/18 15:50	HJG3	EPA 200.8
Zinc	mg/L	0.011	4/25/18 15:50	HJG3	EPA 200.8
Minerals					
Chloride	mg/L	24.4	4/20/18 22:25	HJG	EPA 300.0
Hardness, Total by Titration	mg/L	124	4/21/18 13:31	ML	SM2340-C
Sulfate	mg/L	39.5	4/20/18 22:25	HJG	EPA 300.0
Nutrient					
Ammonia as N	mg/L	<0.05	4/26/18 14:06	CC	SM4500-NH3-G
Nitrate as N	mg/L	16.1	4/20/18 22:25	HJG	EPA 300.0
Nitrite as N	mg/L	<0.1	4/20/18 22:25	HJG	EPA 300.0
Organic Nitrogen as N	mg/L	0.21	5/2/18 14:32	SLB	Calc
Total Kjeldahl Nitrogen	mg/L	0.21	5/2/18 12:12	CC	SM4500-Norg-C
Total Nitrogen as N	mg/L	16.3	5/2/18 14:32	SLB	Calc
Total Phosphorus as P	mg/L	<0.05	5/2/18 14:49	CC	SM4500-P-F(w/Dig)

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

51 Clark St. Harrington, DE 19952
PH: 302.398.4313 FX: 302.398.4312
ANALYTICAL SERVICES: NPDES, RCRA, GROUND WATER MONITORING

ANALYTICAL RESULTS

AWMI [ANSWRF]
28322 Lewes Georgetown Highway
Milton, DE 19968

Attention: Mark Kondelis

Lab ID:	249962	Matrix:	Ground Water	Sample Start:	4/20/18 12:39
Description:	258624	Site:	MW - 9G	SampleEnd:	
Type:	Grab			Date Received:	4/20/18 15:20

Parameters	Units	Results	Analyzed	By	Method
Oxygen Demand					
Dissolved Oxygen-Field	mg/L	9.62	4/20/18 12:39	CLT	SM4500-O-G
Physical					
Depth - Top of Casing	Ft.	12.16	4/20/18 12:39	CLT	None
pH-field	SU	4.99	4/20/18 12:39	CLT	150.1
Specific Conductance - field	umhos/cm	297	4/20/18 12:39	CLT	SM2510-B
Temperature-field	oC	13.4	4/20/18 12:39	CLT	SM2550-B
Total Dissolved Solids @ 180 C	mg/L	206	4/26/18 11:30	HM	SM2540-C
Total Suspended Solids @103-105 C	mg/L	277	4/24/18 13:54	RON	SM2540-D
QA/QC					
Chloride (% Recovery)	% Rec.	101.4	4/20/18 22:25	HJG	EPA 300.0
Chloride (Standard Deviation)	% Var.	0.04	4/20/18 22:25	HJG	EPA 300.0
Nitrate as N (% Recovery)	% Rec.	101.8	4/20/18 22:25	HJG	EPA 300.0
Nitrate as N (Standard Deviation)	% Var.	0.04	4/20/18 22:25	HJG	EPA 300.0
Nitrite as N (% Recovery)	% Rec.	95.7	4/20/18 22:25	HJG	EPA 300.0
Sulfate (% Recovery)	% Rec.	101.4	4/20/18 22:25	HJG	EPA 300.0
Sulfate (Standard Deviation)	% Var.	0.00	4/20/18 22:05	HJG	EPA 300.0

ND = Not Detected
* = Above Specified Limit
** = Above Client Limit

249962

SAMPLING LOG

Date: 4/20/18
Site: ANSRWRF
Monitoring Well Permit No.: 258624 ✓

Sampler(s): Monica Boyer
Company: Artesian Wastewater Management Inc.
Address: 664 Churchman's Rd. Newark DE 19702
Telephone: 302-453-6900

Ht. TOC measured from INNER CASING, above ground surface: 1.98 Ft.
Well Number: 9G ✓ Casing intact? Yes ✓ No
Monitoring Well Cap Locked? Yes ✓ No
Casing Material: PVC X Steel Other

M) Static DTW (TOC) 12.16 Ft.
N) Total Depth (TD) (TOC) ~~30.98~~ Ft.
O) Ht. H20 Column = (N-M) = - = 18.82 Ft.
P) Conversion factor from H2O column to gallons for 2" I.D. Well= 0.1632
Q) Vol. H2O in Well=CXD= 3.07 gal.
R) Vol. H2O to remove from well = (Circle one used)
3XE= 9.21 =gal. 5XE= =gal. 3 Minutes

EVACUATION METHOD: Pump Purge Type 12 VDC Rate 3 GPM
PUMPING RATE METHOD: Bucket and stop watch

Did well go dry? Yes No ✓ After how many gallons were removed?
If well went dry, how long did it take to recover before samples were taken?
Estimated depth samples were taken from= Ft. BGS (TOC)

INITIAL FIELD PARAMETERS:			STABILIZED FIELD PARAMETERS:	
Temperature	15.8 oC		Temperature	13.4 oC
Sp. Cond.	289 umhos		Sp. Cond.	291 umhos
Dissolved Oxygen	9.23 mg/L		Dissolved Oxygen	9.62 mg/L
PH	5.14 S.U.		PH	4.99 S.U.
Start Time	12:36		Start Time	12:39

Decontamination Procedure: Pump and hose flushed with mild bleach solution.
Preservation Methods: Sample bottles prepared by private lab and iced after sample pulled. Bottles Plastic.

Visual characteristics of samples:
Color: grey Odor: none Clarity: cloudy

Comments: Test for Ambient Groundwater Quality

Parameter	Unit Measurement	Sample Type
pH	S.U.	Field Test
Temperature	°F	Field Test
Specific Conductance	µS/cm	Field Test
Dissolved Oxygen Or Oxidation Reduction Potential	mg/L or mv	Field Test
Depth to Water Table	Hundredth of a foot	Field Test
Ammonia Nitrogen	mg/L	Grab
Arsenic	mg/L	Grab
Cadmium	mg/L	Grab
Chloride	mg/L	Grab
Chromium	mg/L	Grab
Copper	mg/L	Grab
Fecal Coliform	Col/100 ml	Grab
Hardness	mg/L	Grab
Iron	mg/L	Grab

Lead	mg/L	Grab
Manganese	mg/L	Grab
Mercury	mg/L	Grab
Nickel	mg/L	Grab
Nitrate as Nitrogen	mg/L	Grab
Nitrite as Nitrogen	mg/L	Grab
Organic Nitrogen	mg/L	Grab
Selenium	mg/L	Grab
Sodium	mg/L	Grab
Sulfate	mg/L	Grab
Total Dissolved Solids	mg/L	Grab
Total Nitrogen	mg/L	Grab
Total Coliforms	Col/100 ml	Grab
Total Phosphorus	mg/L	Grab
Total Suspended Solids	mg/L	Grab
Zinc	mg/L	Grab

BrightFields, Inc.
Environmental Services

Appendix F

See Section 3.1.3 of this Operations Permit Re-Issuance Document

BrightFields, Inc.
Environmental Services

Appendix G

Vegetative Management Plan

November 8, 2024

Mr. Daniel Konstanski
Vice President of Engineering
Artesian Water Company
664 Churchmans Road
Newark, DE 19702

Daniel,

Per your request, I am providing this letter in regards to the Vegetative Management Plan (VMP) that we prepared back in 2017 for the Sussex Regional Recharge Facility (SRRF) – formerly referred to as the Artesian Northern Sussex Regional Water Recharge Facility (ANSRWRF) located outside Milton, DE. You inquired as to whether that VMP is still "current". I have reviewed that plan and my opinion is that it is reflective of the current state of operations at the facility. Should operations change (crop scenarios, etc.) significantly in the future the VMP should be reviewed and adjusted as necessary to reflect the operations of the SRRF.

In conclusion, there is no justification for modifications to the VMP at this time. Should the need arise in the future, Keen Consulting will be happy to assist you with any necessary updates.

As always, please don't hesitate to contact me with any questions and/or concerns that you may have.

Sincerely,

Todd A. "Tak" Keen
President

26229 Prettyman Road
Georgetown, DE 19947

Tak Cell: (302) 236-3722
takkeen@comcast.net